

GRATIOT COUNTY CENTRAL DISPATCH AUTHORITY (GCCDA)

REQUEST FOR PROPOSALS (RFP) FOR:

Integrated Computer Aided Dispatch and Mobile Data System with
Requisite Interfaces



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1 Notice to Proposers

The Gratiot County Central Dispatch Authority (GCCDA) is seeking proposals from qualified vendors to design, deliver, implement, and support a fully Integrated Public Safety System (System) comprised of the following:

- Computer Aided Dispatch (CAD) with fully integrated GIS based mapping that supports interoperability with GCCDA's ESRI (ArcGIS) environment
- Mobile Data System (MDS) integrated with CAD
- Interface to the Law Enforcement Records Management Systems (LERMS) used by stakeholder agencies
- Interfaces to the Fire Records Management System(s) (FRMS) used by the stakeholder agencies
- CAD-to-CAD capabilities for future consideration/implementation (specific PSAPs/agencies/counties undetermined at this time)
- Automatic Vehicle Location (AVL)
- Other required Interfaces for CAD and MDS

The specifications set forth in this RFP establish the minimum functional, technical and performance requirements for the proposed System.

1.1 Introduction

GCCDA invites proposals from qualified firms possessing the experience, technical expertise, and organizational capacity to provide a fully integrated CAD, MDS, and associated applications and interfaces. The collective components, applications and interfaces are hereinafter referred to as "the System." The specific services and deliverables requested are detailed in [Section 4](#).

The proposed System shall comply with all applicable federal, state, and local laws, regulations, standards, and protocols governing the collection, transmission, storage, and security of public safety information. This includes, but is not limited to, the Health Insurance Portability and Accountability Act (HIPAA), Criminal Justice Information Services (CJIS) Security Policy requirements, the National Information Exchange Model (NIEM), and any other applicable public safety data standards.

GCCDA requires a modern, fully integrated CAD System that serves as the core operational platform for emergency response activities in and around Gratiot County. The System shall support efficient call intake, structured dispatcher workflows, real-time resource allocation, and coordinated incident management to ensure timely and effective response to incidents throughout the County.

GCCDA requires an MDS application that provides first responders with secure real-time access to critical incident information, status updates, mapping, messaging, and related operational tools while in the field. The MDS shall enhance situational awareness, support informed decision making, and enable seamless data exchange between dispatch and units in the field. The MDS application must include an AVL solution to track the precise location of emergency response vehicles. This technology is expected to improve response times, optimize routing and recommendations, and enhance overall situational awareness.

The primary objective of this project is to modernize, integrate, and improve the efficiency of emergency response operations throughout Gratiot County. GCCDA intends to select a qualified vendor with demonstrated experience delivering integrated public safety solutions in multi-agency environments. Proposals shall address the operational needs and challenges of the service area and provide a comprehensive approach to System implementation, training, transition, and ongoing support.

GCCDA's priorities for this procurement include:

- High System reliability and availability
- Responsive, high-quality support services backed by measurable performance standards
- A flexible, configurable, and user-friendly System that enhances operational efficiency and reduces training complexity
- A vendor committed to continuous innovation and technological advancement to ensure long-term System viability
- A collaborative, long-term partnership approach that supports GCCDA's evolving operational and strategic needs for years to come

2 Background

Gratiot County encompasses the geographical center of Michigan's Lower Peninsula and is blessed with a heritage of abundant natural resources. Settled in the mid-1800s, Gratiot County was named for Army Captain Charles Gratiot. The county seat is Ithaca, although its most populous city is Alma. At a population of 41,761 (according to the 2020 US Census), Gratiot County maintains a small but stable community. According to the U.S. Census Bureau, the county has a total area of 572 square miles, of which 568 square miles is land and 3.1 square miles is water. It is considered to be part of Central Michigan.

In June 2012, the 212.8 MW Gratiot County Wind Project opened, the largest wind power installation in the state. Located on approximately 30,000 acres of private land in the Michigan townships of Wheeler, Bethany, Emerson, and Lafayette, the project features 133 1.6 MW GE wind turbines and generates enough renewable energy to power more than 50,000 Michigan homes. Sixty-four of the turbines are owned by DTE Energy, and 69 turbines are owned by

Gratiot Wind LLC, an affiliate of Invenergy Wind LLC. DTE Energy will purchase the power from Invenergy's turbines under a 20-year power purchase agreement.

Gratiot County is home to significant commercial agriculture operations that use the latest technology and best production practices to take the lead on being environmentally sound and community minded. In addition to strong commercial agriculture, Gratiot County is also home to several certified organic operations. Gratiot County also has several agribusinesses that support the agricultural community and Gratiot economy.

Gratiot County's diverse and stable economy leverages its agriculture, wind farms, and manufacturing – along with its inherent sense of community – has it strategically positioned for continued growth and innovation.

Table 1

Table 1 PSAP Annual Calls for Service (Incidents Dispatched)				
Discipline	2022	2023	2024	2025 TD
LAW	36,256	30,236	29,303	28,736
FIRE	2,682	2,346	2,861	3,230
EMS	4,111	3,964	3,753	4,440

Table 2

Gratiot County Demographics				
Population	Total Square Miles	Townships	Cities	Villages
41,310	573	16	3	3

Table 3

Dispatch Personnel	
Description	Details
PSAP Full-time Personnel	11
PSAP Part-time Personnel	2
Dispatchers staffed during peak hours of day	3
Additional personnel logged in to CAD during peak hours	1
Maximum concurrent users	4

Table 4

Agencies Dispatched	
Agency	Total
Law Enforcement	7
Fire Departments	8
EMS Agencies	1

Table 5

Current Records Solution	
Records	Vendor
Law RMS	Talon (TIMS)
Fire RMS	EPR Fireworks, ESO, First Due
Mobile Data	Motorola

Table 6

Mobile & Smart Devices Needed		
Discipline	# of Mobiles	# of Smart Devices Optional
Law Enforcement	30	20
Fire	15	0
EMS	0	0
Total Needed	45	20

2.1 Current Technology

911 services are provided to the primary Public Safety Answering Point (PSAP), which is connected to an ESInet System. There are five (5) answering positions at the primary PSAP (four (4) that include radio capabilities). This location houses the primary server cluster for the System. The current System in use by GCCDA was purchased from Caliber Public Safety in 2018.

Current disaster recovery/back-up procedures require GCCDA to work from one of four surrounding counties in the case of an emergency that requires center evacuation. specifically, Isabella County, Midland County, Saginaw County, or Montcalm County.

GCCDA provides dispatching operations for seven (7) law enforcement agencies, and eight (8) volunteer fire departments throughout the county, and they transfer medical calls to one (1) EMS agency.

Table 7

Agencies Dispatched	
Discipline	Agency
Law Enforcement	Alma DPS, St Louis PD, Breckenridge PD, Ithaca PD, Gratiot County Sheriff's Office, Michigan State Police, Michigan DNR
Fire Departments	Alma FD, St Louis FD, Breckenridge/Wheeler FD, Ithaca FD, Perrington FD, Ashley FD, Maple Rapids FD, Carson City FD
EMS Agencies	MMR

2.2 Other County and State Agencies and Support Provider(s)

There are currently a number of city, county, and state service providers (including both public safety and non-public safety agencies) whose activity is entered and tracked via the CAD System. The specific agencies are listed in Table 8 below.

Table 8

Other County Agencies and Support Providers
Michigan State Police
Department of Natural Resources
Department of Natural Resources-Fire Division
County Dive Teams
County Tactical Teams
County Search and Rescue Teams

2.3 Support Services

GCCDA currently receives IT support from Net Source One (<https://nsoit.com>) which provides support for telecommunications equipment, servers, workstations, printers, virtual environments, network infrastructure, backup Systems, and disaster recovery operations across multiple locations. NSO also provides end-user technical support.

The selected vendor shall coordinate and collaborate with Net Source One throughout System design, implementation, configuration, testing, training, and ongoing support. Net Source One personnel shall be included in technical training related to System administration, infrastructure configuration, high availability, disaster recovery, and ongoing System management.

GCCDA's existing infrastructure includes Microsoft Hyper-V-based virtual environments, servers, network Systems, and client hardware supporting public safety operations. The proposed System shall be compatible with this environment unless otherwise proposed and justified by the vendor.

Given the mission-critical nature of 911 operations, the proposed System shall support high availability and disaster recovery functionality designed to minimize service interruption and ensure operational continuity. The vendor shall clearly define its High Availability and Disaster Recovery architecture, including failover capabilities, redundancy design, recovery time objectives, and recovery point objectives.

High availability and disaster recovery functions will be monitored by Net Source One in coordination with the selected vendor. The vendor shall clearly define roles and responsibilities for ongoing monitoring, incident response, and System restoration.

A hybrid cloud or hosted deployment model is acceptable in lieu of traditional on-premises infrastructure, provided the proposed architecture meets or exceeds GCCDA's operational, availability, security, and disaster recovery requirements.

3 Objectives and Outcomes

The overall goals for the procurement of a new System include:

- a. Ability to implement and bring live the CAD and Mobile applications by the beginning of 2028
- b. Having a true multi-agency, multi-discipline, multi-jurisdictional CAD System
- c. Having a System where CAD and MDS are fully integrated Systems and operate on one platform that does not require third party vendor software
- d. Reliability, including maintaining a 99.99% System availability
- e. Improved ease of use with a flexible and customizable product
- f. Expandability to grow with GCCDA's needs and change as technology changes
- g. Conversion, integration, or overall availability of key segments of existing data into the new System (via a data conversion process and/or archival access), to include premise alerts, pre-plans (convert), and call for service data
- h. A forward-thinking company that will grow and change as technology changes
- i. A company that provides excellent support services (as reflected by its customers)
- j. Improvement of the overall level of service to GCCDA's citizens and the emergency responders

Key functionality and features being sought as part of this procurement include:

- a. The ability to share CAD information with various surrounding PSAPs/agencies/counties.
- b. Access to alerts, hazards, and notifications across all public safety agencies and all applications. Alerts must be configurable by type and associated with locations, subjects, and vehicles. This information must be available to CAD and Mobile users of the System.
- c. Mapping must be fully integrated into all applications being sought to ensure consistent validation and presentation of address information and other location data, and must comply with the GIS Mapping and ESRI Interoperability Requirements defined in Section 4.1.1.
- d. The ability to see the location of any unit or apparatus on the CAD map at any time.

- e. A more modern user interface (UI) that is easier to use and train.
- f. Ability to customize views, filters, and windows/screens.
- g. The elimination of redundant data entry.
- h. A mobile solution that allows for the use of e-Citation and mobile accident report submission to the State of Michigan.

4 Scope of Work

GCCDA intends to acquire fixed price proposals for an interoperable CAD and MDS with integrated GIS-based mapping capabilities, and various ancillary interfaces to other public safety System(s) in use. The System should be fully functional, integrated, and currently deployed and in use at multiple sites with comparable composition to GCCDA. The System provider's solution must specify all required hardware, software, and professional services. Hosted or cloud solutions must include the logical architecture and include the location of any data centers, how the solution provides High Availability/Disaster Recovery (HA/DR) functions, and any required network routing. The System must be able to be implemented and brought live by the first quarter of 2028.

Although GCCDA would prefer established, implemented Systems with a proven track record and implementation history, vendors are not excluded, or otherwise discouraged, from submitting proposals that may leverage emerging technologies and delivery mechanisms.

The successful firm shall be capable of providing a fully integrated and interoperable turnkey System that includes installation, training, testing, user documentation, acceptance testing support, and go-live support. Conversion services, System warranty, and software maintenance must also be part of the firm's response.

GCCDA expects to award a maintenance contract for five (5) years. Submitted proposals should also include pricing for five (5) one-year maintenance renewal options or another five (5) year maintenance package.

The multi-jurisdictional CAD System is expected to support the dispatching needs of the PSAP and improve technological cooperation and coordination with surrounding public safety agencies.

The following high-level requirements have been identified for this procurement:

- a. Solution has been successfully implemented in at least five (5) sites; two (2) of which are similar in size and requirements to GCCDA's public safety environment
- b. The ability to operate efficiently through automated workflow

- c. Fully integrated across the CAD and MDS applications
- d. The ability to meet applicable state and federal reporting requirements
- e. Data analytics and ad-hoc reporting designed for use by end users
- f. Includes System administration and user documentation
- g. Available, high quality technical and end user support (24/7 call center)
- h. Allows for exporting data to other applications including MS Office and Adobe PDF
- i. Is scalable and can be expanded to include additional modules, functionality, interfaces, and additional participating entities
- j. Has dashboard reporting capabilities
- k. Fully interoperable and supports information sharing across departments and agencies
- l. Software is regularly updated and actively maintained

GCCDA prefers the following technical environment:

- a. Browser-based client with multi-task capabilities*
- b. Solution that can be deployed via internet/intranet/WAN
- c. Microsoft SQL Server database
- d. Capability for searching unstructured/binary data (e.g., file attachments)
- e. Modern solution built using industry standards and best practices
- f. Can support a HA/DR deployment
- g. Supports single sign on capabilities (Active Directory, LDAP)
- h. Integration with Microsoft Office
- i. Integration with Google applications

**GCCDA will consider client-server solutions that use a modern UI and can support application delivery via virtual desktop infrastructure (VDI).*

4.1 Software Modules or Components

GCCDA and the agencies it serves are seeking a multi-jurisdictional, multi-discipline interoperable CAD System which:

- Leverages an integrated GIS-based mapping platform that fully complies with the GIS Mapping and ESRI Interoperability Requirements defined in Section 4.1.1, including support for agency-managed GIS data, location validation, and interoperability with GCCDA's existing ESRI (ArcGIS) environment.
- Leverages AVL to improve unit location and status tracking

- Provides a UI that is highly configurable, supports an intuitive call entry and call management process, and provides a modern look and feel
- Is tightly integrated with the proposed law and fire mobile solution
- Interfaces to/with all identified ancillary Systems outlined in [Section 4.3](#)

4.1.1 GIS Mapping and ESRI Interoperability Requirements

The CAD solution shall include integrated GIS-based mapping functionality and required interfaces to ancillary public safety Systems.

The proposed mapping solution must demonstrate the ability to integrate with existing ESRI (ArcGIS) environments, including the ability to consume ESRI map services, support ESRI data formats, maintain synchronization with agency-managed GIS data, and support location validation processes currently achieved through ESRI-managed map data.

The System must provide accurate address and location validation capabilities to ensure consistency with GCCDA's GIS datasets and public safety operational requirements.

If the proposed solution does not natively utilize ESRI technology, the vendor must clearly describe how interoperability with GCCDA's ESRI-based GIS environment will be achieved, including how location validation functionality will be maintained, as well as any required middleware, data translation processes, or additional licensing requirements.

4.2 Licensing

Licensing expectations for this project may be impacted by the ability of the selected System to interface/integrate with other outside public safety entities that respond within Gratiot County. A site license might be the preferred option if it provides a more conducive environment for external integrations and/or surrounding county integrations. Proposing vendors should submit pricing using the license model that best minimizes the cost to GCCDA without being too restrictive related to future growth and interoperability.

The information typically needed for licensing costs is contained in Table 8 and Table 9 below and is shown by agency and discipline. Additionally, they are broken down into mobile computers and smart devices, as well as by discipline. See [Exhibit D](#) for the required cost sheet, which also includes the total licensing/device count.

If a vendor uses another approach for licensing, please submit this information by the question cutoff date so it can be addressed.

4.3 Interfaces

The following interfaces listed in Table 9 are currently being used by GCCDA and have been identified as a part of this project.

Table 9

Interfaces	Current Solution Provider
E-911 Interface	Intrado Viper (release v7)
Fire RMS Interface	EPR Fireworks, ESO, First Due
Law RMS Interface	TALON (TIMS)
Public notification/reverse 911	Rapid SOS / RAVE
Fire/EMS Run Notification	IAmResponding
Text/TTY Interface	Texty (INdigital)
Master Time Interface	Net Clock
Logging Recorder Interface	Equature DSS
Mobile Data System	CORE/Talon
Mobile AVL	Verizon Connect
Emergency/Incident Management	Hazconnect / WEBEOC

4.3.1 Required Interfaces

The interfaces defined in Table 9 below are identified as required interfaces as part of this project.

Table 10

Required Interfaces	Summary
E911 interface	E911 phase I and phase II (ANI/ALI).
State/NCIC Interface	Interface with ability to run queries via the State LEIN network and NCIC
NG911	NG911 phase I and phase II (ANI/ALI), compliance with NENA i3 standards related to CAD-specific elements of NG911
CAD-to-CAD Sharing	CAD-to-CAD interface that supports the NENA EIDO call transfer

Rapid SOS	CAD integration with RapidSOS
Text/TTY Interface	CAD integration with INdigital's Texty text-to-911 product
Caliber Records/Core	CAD CFS interface export to CORE (Talon) Records
Master Time Interface	Time synchronization between Systems and devices in 911 Center. (Currently using Netclock)
Mobile AVL	System provides an Automatic Vehicle Location (AVL) System that is tightly integrated with the MDS
AVL closest unit routing	System provides an Automatic Vehicle Location (AVL) routing System that is tightly integrated with the MDS and provides closest unit routing

4.4 Project Management Services

The vendor shall assign a Project Manager dedicated and available for the entire duration of the project. GCCDA reserves the right to pre-approve the assigned Project Manager. Furthermore, should the vendor need to replace its assigned Project Manager, GCCDA has the right to pre-approve the new Project Manager. GCCDA project team (including its third-party consulting firm) will work with the vendor's Project Manager to coordinate all project activities. All communications between GCCDA, the vendor, and the third-party consulting firm shall be coordinated through their respective Project Managers.

At a minimum, the vendor's Project Manager shall be responsible for:

1. Managing the project as the vendor contact with responsibility for planning, organizing, managing, and controlling all aspects of the project.
2. Developing a project plan, managing the project plan throughout the project, and providing regular updates to that plan as the project proceeds.
3. Providing periodic updates to the project work plan and schedule (as outlined in section 5 of vendor proposal). Minor changes (those that do not impact the scope, schedule, or budget) to the plan are subject to approval by GCCDA's Project Manager. Major changes must be approved as a written change order to the contract.
4. Develop a project staffing plan that addresses vendor and agency resources, the level of participation, and when the staff need to be available. GCCDA requires the vendor to staff the project with an adequate number of properly trained personnel with relevant public sector experience.
5. Provide consultation and advice to GCCDA on matters related to the project.
6. Submit status reports.
7. Help coordinate and participate in project meetings.

8. Help prepare agendas for project status meetings.
9. Identify personnel, equipment, facilities, and resources of GCCDA that are required by the vendor, at least four (4) weeks in advance.
10. Work with GCCDA's project management team to ensure that the project stays on-track and within budget.
11. Help verify that the project and that the System complies with the specifications and requirements.
12. Identify and provide immediate notice of all issues that may threaten the implementation, operation, or performance of the System.
13. Develop and maintain a risk management plan that includes risk assessment, project and organizational impact, and mitigating actions.
14. Help manage and document any project scope changes to include:
 - a. Change request evaluation and documentation
 - b. Assessment of impact of any change to the project
 - c. Integration of the changes into the implementation

4.5 Planning

The vendor shall collaborate with GCCDA staff and its third-party consulting firm and shall be fully responsible for planning, managing, and executing all phases of the System lifecycle. This responsibility includes, but is not limited to, requirements validation, System design, configuration, data conversion, interface development and implementation, testing, training, documentation, deployment, and transition to full operational use.

As part of the planning process, the vendor shall develop and deliver a comprehensive project work plan that defines the overall implementation strategy, detailed task sequencing, resource assignments, milestones, dependencies, and critical path activities.

The project work plan shall also include a structured change management plan and a detailed transition strategy for migrating from existing legacy systems to the new System. The transition strategy shall address continuity of operations, interim interfaces, risk mitigation, data integrity, and the operational impact on GCCDA and its constituent agencies as legacy Systems are phased out.

The vendor shall deliver the initial draft of the project work plan no later than thirty (30) calendar days following the on-site project kickoff meeting. The plan shall be subject to GCCDA review and approval prior to execution.

4.6 Performance Criteria

The following sub-sections outline performance expectations.

4.6.1 Prosecution of Work

After the work has been started, it shall be diligently prosecuted without stoppage until the entire contract is completed. In the event the vendor neglects or fails to diligently prosecute the work required under the contract, GCCDA may terminate the contract and use any method deemed necessary to complete the project.

4.6.2 Performance Requirements

This specification section contains general and specific requirements related to the performance of the proposed System, both at the point of System acceptance and throughout the life of any warranty and maintenance contracts between GCCDA and the successful vendor.

System Acceptance shall occur in phases as various milestones identified in the implementation plan and agreed to by GCCDA are reached. The vendor must work closely with GCCDA, their agents, and consultants to develop an implementation plan that clearly defines the hardware and software deliverables, tasks or other criteria associated with each milestone. The vendor's phased implementation plan must specify how performance testing for each phase shall be done.

4.6.3 Ongoing System Performance

The following specifications describe the performance requirements for the successful vendor's System following formal acceptance of the System by GCCDA and throughout the life of the contract between GCCDA and the vendor.

- a. For any consecutive 30-day period during the life of the contracts and/or warranties, the software components of the System must remain fully operational and available at 99.99 percent availability as calculated in [Section 4.6.5.3](#). Thirty-day performance periods are incremental from System acceptance. If a problem occurs, a new 30-day period shall begin once the problem has been corrected. GCCDA shall decide and notify the vendor when issues have been satisfactorily resolved.
- b. The initial System hardware and software configuration must be scalable to handle anticipated increases in work. This expansion must maintain the specified System performance requirements. The System must continue to meet the functional, reliability, and performance requirements as expressed in this specification throughout the life of the System. If the System fails to meet any requirement of this RFP after final acceptance and during the initial warranty period, the vendor must take appropriate steps to cure

the problem and bring the System back into compliance with the performance and reliability requirements, at no cost to GCCDA. In the event the System fails to meet any requirement of this RFP during the maintenance period, the vendor must take appropriate steps to cure the problem and bring the System back into compliance with the reliability requirements.

- c. The vendor must describe the means and timeframe by which such failure shall be resolved, and GCCDA must agree in writing.

4.6.4 System Performance Profile

The following performance criteria are provided as a guide to the vendor in designing the System and form the basis for acceptance testing of the implemented System.

1. The System must conform to the requirements specified in this RFP.
2. All inquiry and file maintenance functions must be performed without adversely affecting System performance.
3. Users must not be required to halt CAD or mobile operations during backups or other System administration tasks.
4. The proposed System design must provide for a minimum of five (5) active CAD workstations, five (5) desktop workstations, and 45 active MDCs during a worst-case scenario/emergency situation.

The vendor shall not be responsible for the processing time of external Systems (e.g., LEIN, NCIC, AFIS) when such Systems are involved in a transaction. It is understood that outside factors may negatively affect such times and may need to be analyzed as part of the response time determination shall an issue with these times occur.

4.6.5 System Response Times

The System response time must not exceed an average of the seconds defined below when operating with a workload up to the number of licensed users or devices.

4.6.5.1 Transaction Maximum Response Time for CAD and Mapping

The System must provide response times of less than one (1) second 95 percent of the time for the following transactions:

- a. Displaying a blank event entry screen
- b. Assigning a single unit to an event
- c. Changing a single unit's status
- d. Clearing a single unit from an event

The System must provide response times of less than two (2) seconds 99 percent of the time for the following transactions:

- a. Verification of a unique address
- b. Return of a list of possible address matches when an address cannot be uniquely verified with the information entered
- c. Display unit recommendation based on uniquely verified address

4.6.5.2 Transaction Maximum Response Time for CAD and MDS

The System must provide response times of less than five (5) seconds 99 percent of the time to complete the following transactions:

- a. Assignment of up to 10 units to an event from a single command
- b. MDD to CAD or other MDD message (without attachment)
- c. CAD-MDD dispatch message
- d. Display of premises/hazard file data for a given location
- e. Generation and display of "new" call for service on a mobile data workstation or mobile device

The System must meet all the above performance requirements during normal daily activities to include report generation, analytics, and System backups.

4.6.5.3 Computer System Availability

The following specification defines both System availability and the method by which it is calculated, as it is used in other sections of this RFP.

The System shall be considered available for use only when all the following conditions are met:

- a. All features, functions, and interfaces are installed and are operating correctly
- b. System can process calls for service and dispatch resources
- c. Mobile and mobility units with AVL display on map, automatically update their location, and can use that location for other application features

System availability shall be expressed as a percentage of the maximum expected availability over a given period. The System must be available 24-hours a day, 7-days a week (24/7). Scheduled down time (e.g., maintenance), as defined by the vendor and accepted by GCCDA, shall not be considered as unavailable time.

The percentage availability for any period shall be calculated as follows:

$$\text{(Total Hours in Period - Hours System Unavailable)} \div \text{Total Hours in Period}$$

For example: In a 30-day period, maximum availability is 24 hours x 30 days = 720 hours. If the System is unavailable for 7.2 hours during that period, then the availability of the System during the period is $(720-7.2) \div 720$ which equals 99 percent.

4.6.6 Support and Maintenance Requirements

Subject to the terms and conditions set forth in the contract, vendor shall provide the following support for the covered applications ("Basic Support"). The vendor shall maintain the Software and each component thereof so that such Software and components operate in conformity with the Documentation and with all specifications, performance standards and functional requirements in this Agreement. Vendor shall promptly transmit, by the most expeditious means available, corrective material and related instructions for correcting malfunctions.

4.6.6.1 Application Errors

Upon notification, vendor shall promptly correct malfunctions in any of the covered applications discovered by GCCDA during the term of this Agreement, provided (a) GCCDA provides all information regarding such malfunction that may be requested by the vendor and (b) GCCDA has provided the vendor with remote access to the System as required by the contract.

4.6.6.2 Error Reporting

GCCDA personnel making such a report shall describe to support service staff the malfunction in reasonable detail and the circumstances under which the malfunction occurred or is occurring and shall, with the assistance of support service staff members, classify the malfunction as a severity level 1, 2, or 3. GCCDA shall provide all information requested by the vendor and reasonably available to GCCDA, necessary to complete its request for technical services. Upon detection of any malfunctions in any of the covered applications, GCCDA shall provide the vendor a listing of command input, resulting output and any other data, including databases and back-up Systems, that the vendor may reasonably request and is reasonably available in order to reproduce operating conditions like those present when the malfunction occurred.

4.7 Technical Support Center

Vendor shall provide toll-free telephone and email support for operational and technical assistance. Support for Severity 1 and Severity 2 calls relating to the vendor's proposed solution shall be available twenty-four hours a day, seven days a week (24x7). Support for all other calls and any vendor-provided third-party software shall be available during normal support hours of 0900 to 1700 Eastern Time (not including weekends and vendor-defined holidays).

4.7.1 Software Malfunction Severity Level Definitions

"Severity Level 1 Malfunction" – For CAD, Mobile, and Message Switch

A call requesting technical support for a malfunction in any Covered Application or a failure of the System server on which such Covered Application is installed that affects functions or results in System related failures, as follows:

1. The users are unable to enter new requests for service via the application UI
2. The users are unable to change status or raise priority of a call
3. The users are unable to close an incident
4. The users are unable to view incident information needed to dispatch an incident
5. The users are unable to clear assigned units from the call and/or close the call
6. The users are unable to view premise history related to the location of the call
7. The users are unable to update unit status or location related to a call
8. The users are unable to change call type or the priority of the call
9. The users are unable to assign or exchange units or apparatus on the call
10. The users are unable to log units on or off
11. Major issues that prevent continued use or operation of the System endanger the integrity of any database or impacts 25% or more of the operators using the System
12. The user's inability to view the current status of all units
13. CAD side of any interface is down (but other side is active)
14. The user's inability to perform address verification because of an application problem
15. The map cannot be displayed or cannot display any valid location
16. Units do not display on map and/or unit location does not automatically update map

"Severity Level 2 Malfunction"

Shall mean a problem which causes the Software to be inoperative, disrupted or malfunctioning, and which materially interferes with GCCDA's use of the Software.

"Severity Level 3 Malfunction"

Shall mean any problem in the Software which causes the Software not to function in accordance with applicable specifications, including the Documentation, but which causes only a minor impact on GCCDA's use of the Software and for which an acceptable "workaround" is available.

"Workaround"

Shall mean a temporary procedure, routine, solution or fix that restores operational capability without substantially compromising the performance of the Software or integrity of the operating System or data. A workaround shall not require recurring System or workstation

downtime. A workaround gives GCCDA the ability to achieve substantially the same functionality as would be obtained without the programming error. Workarounds may include changes to configuration parameters or operational processes. To be acceptable, it must be an action, or series of actions, that can reasonably be accomplished by an average user without excessive impact on other capabilities and/or impeding work or process flow.

4.7.2 Response Time Credits

All Technical Service Requests (TSR) that the vendor and GCCDA classify as Severity Level 1 must be resolved within 24 hours from the time the Severity Level 1 call is reported to the vendor. If a TSR is not resolved within 24 hours, GCCDA will require the vendor to reduce any subscription or maintenance costs for the time exceeding 24 hours to resolution on a prorated basis.

4.8 Conversion Analysis

As part of this procurement and the associated implementation, the vendor shall be required to provide GCCDA with a review, analysis and estimate of the cost and effort required for data conversion, as outlined in the RFP and contract documents. This effort includes reviewing what is required to collect, prepare, and translate current data into the proposing vendor's product(s).

The proposal shall describe the specific efforts and agenda proposed by the vendor to ensure adequate review, analysis, and estimate of the effort required for data conversion. The following actions shall be described:

- Consultation to determine conversion needs
- Specific steps and requirements needed to convert the data for each agency
- Cost options to convert data based on number of files
- Development of a conversion matrix for the files to be converted that provides a from-to map of the data elements to be converted
- Create a list of fields in each agency's current System that have no match in the successful vendor's System, with available options related to the translation of those fields (e.g., written to narrative, file attachment, etc.)
- Creation of a list of required/mandatory fields within the vendor's System that have no corresponding field in each agency's current Systems from which to populate, and options available to populate those fields

Determining final cost and timeline/schedule proposal to complete any conversion effort agreed upon between the vendor's and participating agencies shall be based on the assessment report and associated activities.

4.9 Testing

The vendor shall, as one of the early milestones, submit test plans for GCCDA's review and approval. These test plans must document how the functional specifications are to be validated. The plan must also include integration testing of all inter-related functional elements that are outside of the procured System, including other procured applications, and how that testing shall be accomplished. A performance test plan must also be submitted for review and approval by GCCDA, which includes the performance criteria specified in this section of this RFP. In these plans, the vendor must include reasonable remedies for GCCDA to exercise if failures are not corrected in a timely manner.

The vendor shall provide test plans which shall include scenarios that demonstrate to GCCDA personnel that the System shall operate as a fully integrated solution (including hardware, software, interfaces) under operational conditions.

The performance requirements specified in this RFP as part of the 30-day Reliability Test must be met before the System is accepted and final payment is made by GCCDA to the vendor.

4.9.1 System Acceptance

The following specifications apply to the requirements for functional testing of the System at the completion of each phase (defined as CAD, MDS, and associated interfaces) of the overall implementation plan.

Beginning with the first day after the completion of each phase (phases shall be specified in the implementation plan as defined above), the System phase is operational and available for testing. Acceptance testing shall be conducted for up to 15 consecutive calendar days (the acceptance period).

During the testing period, the proposed Public Safety Technology System shall undergo a "use" test of the functions and applications defined in the Functional Specification Matrix for the given phase.

During functional acceptance testing (FAT), the vendor shall exercise the System to demonstrate that the selected functions have been delivered and are operational prior to going "live" on the System. The vendor must demonstrate that each function included as part of the System deliverable operates as defined in the contract, vendor's proposal, the RFP, or the System documentation and/or user manuals (in that order of precedence).

4.9.2 Integration Testing

During integration testing, which shall be completed for each phase of the project, the vendor must demonstrate that each System interface operates in concert with the System to provide information and details required by the interface.

4.9.3 Thirty (30) Day Reliability Testing (Final Acceptance)

The reliability test shall be conducted at the completion of all vendor tasks associated with each phase to demonstrate the operational capability and reliability of that module or modules. In order to successfully complete this test, the vendor must demonstrate in live operations that all software supplied under the contract shall be operational and available 99.99 percent of the time during the warranty period or the warranty period shall be extended on a day-for-day basis for each day the System performance falls below this level.

Vendors are advised that GCCDA may elect to review and modify the acceptance criteria for the reliability test during contract negotiations based upon specifics of vendors' proposals.

Once the vendor has certified to GCCDA that the System is ready for live operational use, the System shall undergo a 30-day reliability test. The purpose of this test is to demonstrate the System, as delivered, can perform under live operational conditions without the occurrence of critical priority software errors, as defined in this RFP. If the System experiences a critical priority software error during the first 15 days of the reliability test, a new 30-day period shall begin once the problem has been corrected. If a critical priority software error is detected on or after day 16 of the initial 30-day test period, once corrected, the test shall continue from day 16 and go for the remaining 14-day period.

Upon notification from GCCDA of a critical priority software error, the vendor must work continuously to resolve the problem. If the vendor determines that a resolution or workaround cannot reasonably be provided within 24 hours of notification, the vendor must, within the 24-hour period, provide GCCDA with a resolution plan that includes status updates and estimated time of resolution. Upon successful completion of the reliability test for each given phase, the parties shall jointly acknowledge System acceptance in writing.

5 RFP Guidelines and Schedule

Before submitting a proposal, vendors shall read the entire solicitation, including the contract terms and conditions. Failure to read any part shall not relieve the successful vendor of their contractual obligations.

5.1 Administrative Requirements

GCCDA requires a fixed fee for the annual maintenance agreement and the license portion of the software and services contract. The services portion shall have a "not-to-exceed" amount. The vendor is expected to design, supply, install, configure, test and commission a System that fully complies with the specifications and requirements and the statement of work for the negotiated price.

Cash discounts must be shown in the proposal; otherwise, prices shall be considered net. If prices and all information requested are incomplete, the proposal may be disregarded and given no consideration.

The vendor shall invoice GCCDA for services based on mutually agreed upon milestones ("milestone-based invoicing").

The proposed System shall be defined to be finally accepted by GCCDA after the successful completion of the following performance examinations: System hardware installation (if applicable), software installation and configuration, approval of as-built System design, training, the delivery of System documentation, System functional acceptance, System integration testing, data conversion completion, and the successful completion of the 30-day reliability test. Satisfaction of all conditions and/or criteria for Final Acceptance shall be determined in the sole and exclusive discretion of GCCDA and its consultant(s).

GCCDA shall be entitled to all future releases and upgrades, whether of a "minor" or major" nature, of vendor software for no additional cost beyond the Annual Support Agreement fees.

The vendor must agree that solutions prescribed in their proposal response shall remain available and supported for a minimum of five (5) years from the time the contract is signed and that any material changes to vendor's company or products shall not affect GCCDA's implementation or support. If the company is acquired, transfer of these conditions is required.

All proposals must be signed with the vendor's name and by an officer or employee authorized to bind the vendor in contract. Obligations assumed by such signature must be fulfilled.

Vendor must read and agree to the attached terms and conditions provided under [Section 8](#) of this RFP.

5.2 Solicitation Transparency

Beginning on the date the solicitation is issued and until the date the contract is awarded or the solicitation withdrawn, all persons or entities that respond to the solicitation RFP No. 07-26 titled "Integrated Computer Aided Dispatch and Mobile Data System with Requisite Interfaces,"

including their employees, agents, representatives, proposed partner(s), subcontractor(s), joint venture(s), member(s), or any of their lobbyists or attorneys, (collectively, the vendor) shall refrain, from any direct or indirect contact (including phone calls, e-mails, or on-site visitation) with any person (other than the designated RFP/contract representative) who may play a part in the evaluation process.

If the solicitation is not discussed, vendors may continue to conduct business with GCCDA, and other participating agencies, and discuss business that is unrelated to the solicitation with GCCDA or other participating agency staff. All communication related to the RFP, including specific questions on the content, process, and other requirements shall be directed through GCCDA's consultant:

Pam Woodbury
TSSI Consulting, LLC
pam.woodbury@tssiconsulting.com
(989) 413-7117

All communications regarding this RFP must be directed to the individual identified as GCCDA point of contact. Contact with other GCCDA Board members, staff, or representatives regarding this solicitation is prohibited and may result in disqualification of the proposer.

Only written communications issued by GCCDA through the designated point of contact shall be considered official and binding with respect to this solicitation.

5.3 Submission of Proposal

Prospective proposals shall be submitted via e-mail to the address below and shall be due no later than 4:00 p.m. on May 1, 2026. No proposal shall be accepted after 4:00 p.m. ET.

Proposals must be received by GCCDA no later than the date and time specified in this RFP. Timely delivery shall be determined by the date and time the proposal is received by GCCDA, not the date or time the proposal is sent by the proposer. Proposals received after the specified deadline will be considered non-responsive and will not be accepted or reviewed. Once submitted, proposals may not be withdrawn after the submission deadline.

All material submitted shall become the property of GCCDA, and the only information available at the proposal opening shall be the names of Proposers submitting proposals. No facsimile of proposals shall be accepted.

Proposal packages shall need to include:

- One (1) electronically signed, complete version of the technical proposal, including all appendices and attachments in PDF format and a copy of the completed functional specifications in Excel format
- The completed Excel workbooks for the functional specifications and any documented exceptions
- All forms requiring signature or any other vendor-provided content
- Completed Proposal Cost Sheet in Microsoft Excel format

The proposal package, as defined above, must be submitted to:

Pam Woodbury
TSSI Consulting, LLC
pam.woodbury@tssiconsulting.com
(989) 413-7117

All forms and questionnaires (including the functional specification workbooks and proposal cost sheets for the cost proposal) must be completed using the templates provided by GCCDA.

Information must be furnished in compliance with the terms, conditions, provisions, and specifications of this RFP. The information requested is essential to permit prompt evaluation of all proposals. The response must follow the RFP Response Outline provided in [Section 7](#) of this RFP.

GCCDA reserves the right to declare as non-responsive and reject any proposal in which material information requested is not furnished, or where indirect or incomplete answers or information are provided.

Vendor's proposal must be included in this section, in the format outlined in [Section 7](#) of this RFP. The proposal shall outline the process intended for use during the project, and it must meet the technical requirements (attached plans). Attachments, both as required by the RFP and those that contain additional information the vendor feels shall assist in the evaluation, shall be included.

It is expected that pricing for per license-based fees shall remain valid for 12 months from contract signing. This is to ensure GCCDA has accurate figures available to expand the System footprint, shall it prove necessary to meet the needs of GCCDA and client agencies.

Negotiations shall be conducted by the designated vendor representative or vendor-authorized agent and GCCDA. In the Transmittal Letter, vendors shall designate, by name, the individual who shall receive offers and counteroffers. The person so named must be an authorized agent of the vendor able to conduct negotiations and/or make written offers in good faith.

5.3.1 Public Act 517 of 2012 – Iran Linked Business Certification

Pursuant to Michigan Public Act 517 of 2012, GCCDA is prohibited from entering into a contract with a vendor that is identified as an “Iran Linked Business” (see [Exhibit G](#)).

Each proposer must complete and submit a **Certificate of Compliance with Public Act 517 of 2012** affirming that neither the proposer nor any of its parent companies, subsidiaries, or affiliated entities are engaged in investment activities of \$20,000,000 or more in the energy sector of Iran.

Failure to provide the required certification may result in the proposal being deemed non-responsive and eliminated from further consideration.

If it is determined that a proposer has submitted a false certification, GCCDA reserves the right to reject the proposal or terminate any resulting contract.

Each proposer shall include a written certification within its proposal stating that the proposer is not an “Iran Linked Business” as defined in Michigan Public Act 517 of 2012 and that it will not become an Iran Linked Business during the term of any resulting contract.

5.4 Compliance with the RFP

All proposals submitted shall be in strict compliance with the RFP and failure to comply with all provisions in the RFP may result in rejection of the proposal.

5.4.1 Revisions Due to Ambiguity, Conflict, or Other Errors in RFP

Any ambiguity, conflict, discrepancy, omission, or other error/s discovered in the RFP must be promptly reported via e-mail, to:

Pam Woodbury
TSSI Consulting, LLC
pam.woodbury@tssiconsulting.com

Such reports must include a request for modifications or clarification. All changes to RFP shall be made in writing (addendum), and all parties who have received the RFP shall be notified of any addendum. Vendors are responsible for clarifying and/or correcting any ambiguity, conflict, discrepancy, omission, or error in the RFP prior to submitting the proposal, or it shall be deemed waived.

5.4.2 Implied Requirements

Any product or service that is not specifically addressed in the RFP, but which is necessary to provide functional capabilities proposed by the vendor, must be included in the proposal.

5.4.3 Proposals and Presentation Costs

GCCDA is not liable in any way for any costs incurred by the vendors in the preparation of their proposals in response to the RFP, nor for the presentation or demonstration of their proposals and/or participation in any discussion or negotiations.

5.4.4 Rejection of Proposals

GCCDA reserves the right to accept any proposal submitted or to waive any technicality or minor irregularity in a proposal. Additionally, GCCDA shall reject the proposal of any vendor determined to be non-responsive in accordance with the requirements set within this RFP. Unreasonable failure of a vendor to promptly supply GCCDA with information in response to a request for information by GCCDA may be grounds for a determination of non-responsiveness.

GCCDA intends to award the proposal as one contract but has the right to award it to multiple vendors should it best serve GCCDA's requirements.

All Proposals, RFPs, Invitations to Bid, or RFQs are contingent upon budgetary constraints. GCCDA reserves the right to award the contract that best serves the interests of GCCDA, regardless of price.

5.4.5 Exceptions to Format

The RFP describes the requirements and response format in enough detail to secure comparable proposals, recognizing that various proponent approaches may vary widely. Any proposal that differs from the described format may be considered non-responsive and rejected.

5.4.6 Exceptions to Content

GCCDA shall not allow exceptions to any material requirement if, in its opinion, the exception alters the overall intent of this RFP. However, GCCDA may consider such exceptions if they are determined to provide a material benefit to GCCDA.

If a proposal or offer by a vendor is returned with modifications to the contract, the contract provisions contained in GCCDA's RFP shall prevail unless the vendor's proposed alternative provisions are expressly approved in writing by GCCDA.

Exceptions, conditions, or qualifications to the provisions of GCCDA's specifications must be clearly identified and provided in the Proposal under the Letter of Transmittal section (except for exceptions to the functional specifications, which must be included as outlined after the vendor's response to the functional specifications). The vendor must state the section number, heading and/or paragraph or Term and Conditions with which exception is being taken, accompanied by reasoning.

5.4.7 Requests for Clarification

Any request for clarification on this RFP must be in writing and accomplished prior to the receipt of the vendor's proposal.

5.4.8 Validity of Proposals

All proposals shall be valid for 180 days from the date received and become the property of GCCDA. If negotiations result in modifications to the RFP, then 180 days will commence from the date of the receipt of the new proposal. This period may be extended by mutual written agreement between the respondent and GCCDA.

5.4.9 Truth and Accuracy of Proposal Representations

GCCDA requires that all information, statements, representations, and responses provided by a vendor in its proposal, demonstrations, presentations, clarifications, best and final offers, and any other communications related to this RFP be true, accurate, complete, and not misleading.

False, misleading, incomplete, or deceptively unresponsive statements, omissions, or representations made by a vendor, whether intentional or unintentional, shall be sufficient cause for rejection of the proposal, determination of non-responsiveness, removal from further consideration, or termination of the contract, at the sole discretion of GCCDA.

GCCDA reserves the right to rely upon all representations made by the vendor in its proposal, including responses to the Functional Specification Workbooks, narrative descriptions, demonstrations, and written clarifications, in evaluating proposals and in enforcing the terms of any resulting contract. All such representations shall be deemed material and may be incorporated by reference into the final contract.

The evaluation and determination of compliance, responsiveness, and accuracy of proposal representations shall be at the sole judgment of GCCDA, and such judgment shall be final.

5.4.10 Freedom of Information

All proposals and materials submitted in response to this Request for Proposals shall become the property of GCCDA and may be subject to disclosure in accordance with the Michigan Freedom of Information Act (FOIA), Public Act 442 of 1976, as amended.

Proposers should clearly identify any portions of their proposal that they consider to be proprietary information or trade secrets. Blanket statements regarding confidentiality for the entire proposal will not be accepted. GCCDA will make reasonable efforts to maintain the confidentiality of information properly designated as proprietary; however, GCCDA shall not be responsible for disclosure of information required by law.

By submitting a proposal, the proposer agrees to indemnify and hold harmless GCCDA, its officers, employees, and agents from any claims, damages, costs arising from the disclosure of information pursuant to the Michigan Freedom of Information Act.

5.4.11 Debarment and Suspension

GCCDA will not award a contract to any proposer or subcontractor that is suspended, debarred, or otherwise excluded from participation in federal or state procurement programs.

GCCDA reserves the right to verify proposer eligibility through the System for Award Management (SAM) or other appropriate sources prior to contract award.

If a proposer or proposed subcontractor is found to be suspended, debarred, or otherwise ineligible to participate in government contracts, the proposal may be rejected or, if discovered after award, the contract may be terminated.

5.5 GCCDA Terms and Conditions

The successful vendor(s) must comply with the attached terms and conditions provided under [Section 8](#). Additionally, the final contract shall also include a copy of the vendor's proposal, including responses to the functional specification workbooks, and require that the successful vendor's products (software, hardware, and services) are compliant with those responses. Proposals shall include a statement indicating the vendor's willingness/ability to accept the terms outlined in [Section 8](#) "as is," including proposed insurance requirements and acknowledgement that the vendor's proposal and responses shall be included as part of the contract terms, or detailing the reasons why they are not willing or able to do so.

5.6 Proposal Postponement and Addendum

GCCDA reserves the right to revise or amend the specifications or any other part of the RFP up to the time set for opening. All changes, additions, and/or clarifications in connection with this RFP shall be issued by GCCDA in the form of a written addendum.

Following completion of the proposal evaluation process, GCCDA staff will prepare a recommendation for contract award based on the evaluation criteria and overall determination of the proposal that best serves the interests of GCCDA.

The recommended proposer and contract award shall be presented to GCCDA Board for review and approval. Final award of the contract is subject to approval by GCCDA Board and completion of contract negotiations, if required.

5.6.1 Cancellation of Solution

GCCDA reserves the right to cancel this Request for Proposals, in whole or in part, or to reject any or all proposals at any time if such action is determined to be in the best interest of GCCDA.

GCCDA shall not be liable for any costs incurred by proposers in the preparation, submission, or presentation of proposals in response to this solicitation.

5.7 Vendor Cost to Develop Proposal

All costs for preparing and submitting proposals, including travel, software demonstrations and labor in response to this RFP are to be the responsibility of the vendor and shall not be chargeable in any manner to GCCDA.

5.8 Vendor Investigation

Before submitting a proposal, each vendor shall make all investigations and examinations necessary to ascertain all conditions and requirements affecting the full performance of the contract and to verify any representations made by GCCDA upon which the vendor shall rely. If the vendor receives an award as a result of its proposal submission, failure to have made such investigations and examinations shall in no way relieve the vendor from its obligation to comply in every detail with all provisions and requirements of the contract, nor shall a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the vendor for additional compensation.

5.9 Award

GCCDA reserves the right to reject any and all proposals, to waive any informality in the proposals, and to accept the proposal that appears to be in the best interest of GCCDA, regardless of price.

GCCDA reserves the right to issue single or multiple contracts with one or more vendors.

GCCDA reserves the right to negotiate modified proposals in the event it rejects one or more components of the software/services from the original proposal.

In determining and evaluating the best proposal, the price shall not necessarily be the controlling factor. Quality, efficiency, utility, general terms, delivery, suitability, and the reputation of the service in general shall also be considered along with any other relevant factors.

Vendor shall submit to GCCDA for approval within ten (10) days from notice of contract award, all Certificates of Insurance evidencing the required coverage as described under [Section 8.6](#).

The vendor shall not commence work under the terms and conditions of the contract until all Certificates of Insurance have been approved by GCCDA and the vendor has received an executed copy of the contract from GCCDA.

5.10 Non-Collusion Affidavit

The vendor declares, by signing and submitting a proposal, that the proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the vendor has not directly or indirectly induced or solicited any other vendor to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any vendor or anyone else to put in a sham proposal, or that anyone shall refrain from bidding; that the vendor has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the vendor or any other bidder, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other vendor, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and, further, that the vendor has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and shall not pay, any fee to any corporation, partnership, company or data relative thereto, or paid, and shall not pay, any fee to any corporation, partnership, company association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal.

5.11 Anticipated Procurement Schedule

Table 11

Anticipated Timeline	
RFP Released	3/16/2026
Questions Due	4/6/2026
Proposals Due	5/1/2026
Demonstrations	6/15/2026 through 7/01/2026
Vendor Selected	8/14/2026
Negotiating/BAFO	9/25/2026
Presentation and Award	10/9/2026

6 RFP Evaluation

6.1 Evaluation Method

GCCDA shall evaluate all proposals deemed responsive to this request. The following categories shall be considered when determining a selection:

Stage 1

- Acceptance of GCCDA terms and conditions and other RFP criteria
- Functional Specifications
- Customer Service and Support
- Company Background and Experience
- Project Workplan and Schedule
- Pricing
- Hardware and Infrastructure Profile

Stage 2

- References Checks
- On-site Demonstrations
- Site Visits (to be determined by and at the discretion of GCCDA)

6.1.1 Stage 1 – Vendor Scoring

GCCDA shall assess vendor proposals based on the criteria outlined above, including responses to the functional specifications, company background and experience, customer service and support, project workplan and schedule, pricing, and hardware and infrastructure profile.

Additional discovery activities may be conducted to support selection of the preferred vendor. Vendors will be contacted in writing (via email) to request any additional information necessary to clarify or supplement their submitted responses, as determined by GCCDA. GCCDA reserves the right to withhold notice of the selection until a contract is awarded, or to forego awarding contract.

6.1.2 Stage 2 – References, Demonstrations, and Site Visits

GCCDA shall further evaluate vendor solutions by utilizing demonstrations which may include scripted scenarios. Vendors shall be provided with scripted scenarios that they are to use to prepare for an on-site solution demonstration. The vendor shall be further evaluated based on the results of reference checks, additional discovery, and at the option of GCCDA, organized site visits at vendor's customer sites. Vendors shall provide GCCDA with a list of all of vendor's Michigan clients and a list of three (3) potential customer sites as defined in the reference section (Section 9, [Exhibit C](#)) and unless other arrangements are made, GCCDA may select any number of sites to visit or otherwise make contact with. GCCDA reserves the right to visit any vendor customer site that it finds beneficial, or that can otherwise provide valuable vendor insight. Customer sites provided by the vendor shall be using the same major version of the software being proposed to GCCDA and be of a similar scope and complexity.

Please note that on-site demonstrations for vendors shall be conducted between June 15, 2026 and July 1, 2026. Specific days and times will be scheduled after a shortlist is determined, but vendor shall be prepared to conduct the on-site demonstration during this timeframe.

6.1.3 Final Selection

A final selection and contract may be awarded to the vendor whose proposal complies with all the requirements set and considered to be the best fit for GCCDA as interpreted by GCCDA. In acceptance of the proposal, GCCDA shall be guided by consideration of the interests of the public, and the finalist shall be selected by compiling the technical evaluation criteria, solution demonstration assessments, site visits, references, and price evaluation criteria. GCCDA shall be under no obligation to accept the lowest cost proposal. Proposals may be rejected if they show any omissions, alterations of form, additions not called for, or irregularities of any kind. Minor irregularities in proposals that are immaterial or inconsequential in nature may be cured or waived whenever it is determined to be in the best interest of GCCDA. GCCDA reserves the right to negotiate further with any vendor as to any features of their bids and to accept modifications of the work and bid price when such action is in its best interests and is desirable.

6.1.4 Best and Final Offer

Upon selection of a vendor, GCCDA may request a solution confirmation workshop. This workshop is intended to confirm all requirements and representations in order to complete the

best and final offer. This workshop may include additional demonstrations, confirmation of the Requirements worksheets, or any additional items that either party requires to be confirmed. The vendor shall then complete their best and final offer. The best and final offer shall form the basis for contract negotiation. Shall this process not result in an agreement to move to contract negotiations, GCCDA shall move forward with the process with a different vendor.

6.1.5 Contract Negotiations

At the conclusion of solution confirmation and best and final offer, a recommendation for selection shall be presented to GCCDA Board. GCCDA shall enter into contract negotiations with the vendor. The final negotiated contract, along with the best and final offer, shall be submitted to GCCDA Board for review and approval.

6.2 Evaluation Criteria

6.2.1 Conformance to RFP

Vendors must meet the requirements in the subsections below. (Pass/Fail basis).

a. Conforms with RFP Guidelines and Submittal Requirements

The vendor must follow all RFP guidelines and submittal requirements, including the completion of required forms and templates.

b. Vendor's Ability/Willingness to Accept GCCDA's Terms and Conditions

The vendor's ability to accept the contract terms and conditions as outlined in [Section 8](#), acknowledge responsibility for ensuring that the proposed solution is in line with the vendor's proposal and responses, and their willingness to incorporate their responses as part of the contract.

c. RFP includes plan and capability to meet GCCDA's deployment/go-live requirements

Vendors must be capable of meeting the schedule put forward in this RFP. Vendors must provide a detailed narrative describing how it plans to meet the projected schedule and deliver the required capabilities of the System and meet the needs of the constituent agencies.

d. Proposal Completeness

Proposals must include all software and hardware being requested within the RFP. This includes required software and interfaces and required hardware. Shall a vendor not supply all the required elements, the vendor shall propose strategic partnerships with other vendors or contractors to provide a complete and tightly integrated CAD and MDS solution.

e. GIS Integration and Interoperability

The degree to which the proposed solution provides seamless GIS integration, supports agency-managed data, delivers accurate address and location validation, and demonstrates interoperability with GCCDA's existing ESRI (ArcGIS) environment as defined in [Section 4.1.1](#).

6.2.1.1 Product Functionality

The functionality being provided by the proposed System, based on the completed functional specification workbooks.

6.2.1.2 Customer Service and Product Support

Including, but not limited to, the vendor's acceptance of GCCDA's warranty terms, guaranteed response time requirements, support hours and staffing, and the projected schedule.

6.2.1.3 Cost

The provided template, [Exhibit D](#), must be used to outline the cost of the proposed solution. Failure to use the provided worksheet may characterize the proposal as non-responsive and preclude the vendor from further consideration in this procurement. Please provide the level of detail as defined in the pricing worksheet. Clarification may be sought for incomplete responses. If clarifications are not received by the specified due date, they shall be considered non-responsive and precluded from evaluation. All items not defined in the Scope must be shown separately as optional modules or tasks and priced separately. Vendors shall submit pricing on their standard forms as supplemental information related to the pricing submitted on the required worksheet.

6.2.1.4 System Architecture and Infrastructure

Information related to the System hardware, underlying infrastructure, and connectivity requirements shall be included in this section. This information shall be supplemented by a high-level network diagram that shows the basic framework of the System as the vendor anticipates it shall be configured. Information shall also outline how the proposed System meets the overall needs of GCCDA as well as describing the maturity of the software solution, use of current technology, the proposed environment, and the overall architecture (e.g., MS-SQL, browser-based, uses an industry-standard GIS data architecture compatible with GCCDA's GIS environment and runs in virtual server environment, etc.).

6.2.1.5 Project Work Plan and Schedule

Including the vendor's demonstrated understanding of the overall scope of work for this project, the proposed project approach and methodology, as well as the thoroughness and completeness of the implementation, integration, training, testing, and deployment plans. This shall also include the vendor's proposed ability to meet the anticipated schedule and scheduling requirements, and acceptance of requirements associated with staffing and resource substitutions projected by GCCDA in this RFP.

6.2.1.6 Company Background and Experience

Including the vendor's financial and organizational stability, as well as the firm's experience performing work of a similar nature to that solicited in this RFP. This segment also includes the evaluation of the experience level and competence of the project team and organizational staff outlined in the proposal.

6.2.2 Stage 2 Demonstrations and Vendor References

Vendors may be invited to provide demonstrations of the proposed solution. Project Manager attendance at demonstrations may be considered as part of scoring demonstrations. Reference scoring may include the quality and timeliness of work performed by the vendor for previous clients and the comparability of such work to the requirements of this RFP. GCCDA shall conduct reference calls and/or site visits to other organizations it deems similar in size and composition, or that can provide otherwise valuable insight into vendor performance and quality.

6.2.2.1 Site Visits (OPTIONAL)

GCCDA may conduct site visits of relevant customer sites recommended by the vendor or based on direct contact with any client of a proposing vendor it deems may provide valuable insight to vendor performance and quality.

7 RFP Response Requirement and Format

7.1 Format

Vendors must include the following information in their proposal and must use the following format when compiling their responses. Sections labeled and pages shall be sequentially numbered at the bottom of the page. The following sections shall be followed to structure an RFP response. Responses shall include each section detailed below in the order presented. The detail represents the items that are to be covered in each section of the response. Failure to address all items shall impact the evaluation and may classify the proposal as non-responsive and preclude it from further consideration. Please refer to [Section 4](#) – Scope of Work for additional information.

Table 12

Section	Title
	Title Page
	Letter of Transmittal
	<ul style="list-style-type: none"> Acknowledgements and Exceptions to RFP
	Table of Contents
1.0	Executive Summary
2.0	Company Background and Experience
3.0	Project Understanding
4.0	Project Staffing and Organization
5.0	Project Work Plan and Schedule
6.0	System and Technical Description
	<ul style="list-style-type: none"> High Level System/Network Diagram
7.0	Software Maintenance, Updates, and Customer Support
8.0	Other Documents:
	Vendor's Standard Software License Agreement
	Vendor's Standard Support / Maintenance Agreement
	Professional Services Agreement
	Vendor Supplemental Agreements
9.0	Proposal Submission Forms
	Proposal Signature Form
	Certification of Qualifications Form
	Indemnity/Hold Harmless Agreement
	Agreement of Jurisdiction
10.0	Appendices:
	A. Completed Functional Specifications Excel Workbooks
	<ul style="list-style-type: none"> Exceptions documentation
	B. Narrative on meeting deployment and go-live schedule
	C. References Form
	D. Resume Form
	E. Proposal Cost Sheet(s)
	F. Proposal Signature Form
	G. Indemnity/Hold Harmless Form

7.2 Title Page

The title page shall include, at a minimum, the following:

- Name of Project – GCCDA Integrated Computer Aided Dispatch and Mobile Data System with Requisite Interfaces
- Submitted by - Company's Name
- Date of Submittal

7.3 Letter of Transmittal

The transmittal letter shall:

- a. Indicate the intention of the vendor to adhere to the provisions described in the RFP without modification; vendor shall include a signature line for contract compliance
- b. Identify the submitting organization
- c. Identify the person, by name and title, authorized to contractually obligate the organization
- d. Identify the contact person(s) responsible for this response, specifying name, title, mailing address, phone, and email address
- e. Explicitly indicate review and acceptance of GCCDA's Terms and Conditions (see [Section 8](#)), and provide acknowledgement that the proposal submitted, including responses to the Functional Specification worksheets, shall be included as part of the contract
- f. Identify understanding and compliance with RFP requirements, define where the vendor complies with clarification, or otherwise takes exception to RFP requirements and/or content (excluding the functional specifications, which must be contained in Appendix A as [defined below](#))
- g. Acknowledge the proposal is considered firm for 180 days after the due date for receipt of proposals or receipt of the last Best and Final Offer submitted
- h. Acknowledge completion of the pricing worksheets
- i. Provide the original signature of the person authorized to contractually obligate the organization
- j. Be signed by a company representative who is authorized to negotiate on behalf of the company

7.4 Table of Contents

The table of contents shall include the sections shown in the table under the FORMAT section above.

7.5 Executive Summary

The vendor shall provide an Executive Summary that presents a brief and concise description of the contents of the proposal. The Executive Summary shall be a maximum of one (1) to three (3) pages of single-spaced information providing a high-level description of the vendor's ability to meet the requirements of the RFP.

7.6 Company Background and Experience

This section of the proposal shall establish the ability of the vendor to satisfactorily perform the required work by reasons of experience in performing work of a similar nature, demonstrated competence in the services to be performed, strength and stability of the firm, staffing capability, and record of meeting expectations on similar projects. GCCDA, at its option, may require a vendor to provide additional support and/or clarify requested information.

The vendor shall provide:

- a. A brief profile of the company, including years in business
- b. Any previous names used by any acquired, merged, or traded companies of the submitting organization
- c. A brief description of the organization structure and primary products and services provided
- d. Other major products or services offered
- e. Company's strategic direction in software design and support
- f. Company's commitment and track record serving public sector clients
- g. Number of employees
- h. Number and location of corporate offices
- i. A general description of the company's financial condition
- j. Provide three years of financial statements
- k. Provide information regarding any pending litigation, contract defaults, planned office closures, impending mergers, bankruptcies, or other conditions related to the financial health of the company
- l. Company's experience in performing work of a similar nature to that solicited in this RFP. Highlight participation in such work by the key personnel proposed for assignment to this project.

If the respondent shall not be performing the requirements of this RFP as a single entity, the details of any proposed partnership, joint venture, etc. shall be described, including the organizational structure of the team.

7.7 Project Understanding

This part of the proposal shall contain a description of how the vendor intends to organize its approach to the project. The vendor shall: (a) Discuss how its software solution and the projected schedule meets GCCDA's requirement for an integrated System to be live by the beginning of 2028, as requested in this RFP; (b) Relate how it perceives its role in carrying out the responsibilities required by this implementation; (c) Provide examples of challenges encountered on similar engagements; and (d) Discuss its approach in handling some of the specific challenges and opportunities it foresees for this project.

7.8 Project Staffing and Organization

This section shall identify key personnel who shall be assigned to the project, assuming a January 2027 start date. An organization chart for the project shall be provided. The chart shall indicate how the vendor intends to structure the project effort, and identify the Project Director/Engagement Manager, Project Manager, Technical Team Members, Trainers, and all other key personnel.

Vendor implementation staff must be fully trained and certified by the manufacturer(s) of the System(s) proposed; training must be current. In addition, all key implementation staff must be experienced in similar installations. Resumes must be provided for all implementation staff.

Additional requirements include maintaining the involvement of vendor personnel essential to the project, timely replacing of any staff deemed unqualified by GCCDA and directing staff to comply with any GCCDA-specified rules and regulations.

The Project Manager designated by the vendor shall have overall responsibility to GCCDA or its representative. The Project Manager shall have responsibility for the day-to-day communications with GCCDA to coordinate the activities of the installation and implementation team, and to accomplish the scope of work within the contract budget and project schedule. The Project Manager must have at least three (3) years of experience in administering project management services of the proposed software for a Public Safety institution. A resume of the Project Manager must be provided detailing the work history for the last five (5) years. A Project Manager that has a PMP certification is preferred and shall impact the scoring of the proposal.

Each team member included in the project organization chart shall be identified by name, and a resume or profile shall be provided for each key person. Each resume or profile shall be complete and concise, featuring experience that is most relevant to the task and responsibilities the individual shall be assigned. If an individual is assigned to more than one position, relevant experience shall be indicated for each task assigned. Each proposed team member must have a minimum of two (2) years of experience with the installation of the current (or one previous) version of the proposed software for Public Safety.

For all proposed project team members, please also indicate other projects these individuals shall most likely be engaged in at the time this project commences, as well as anticipated completion dates for those other projects, and how that may impact the amount of time the individuals shall be spending on GCCDA's implementation. Please also indicate the anticipated percentage of time each team member shall be dedicated to the implementation throughout the course of the project.

The specific staff identified in the proposal may not be changed prior to commencement of work or during the project without the specific approval of GCCDA and a two-week notice.

Replacement candidates must have the same or higher level of similar experience as the original project team member they replace. Resumes of replacements shall be submitted with all applicable information.

7.9 Project Work Plan and Schedule

In this section, the vendor is requested to provide details of its methodology, implementation strategy and schedule for the performance of the tasks identified in [Section 4](#), Scope of Work, of this RFP. The work plan shall provide a narrative description of the plan for implementing the work tasks as well as any substantive or procedural innovations used by the vendor on similar projects that are applicable to the services described in this RFP. The work plan shall address the number of resources expected from GCCDA to successfully carry out all the implementation activities.

The work plan and schedule shall address the components identified in a detailed implementation schedule, assuming a January 2027 project start date, which shall include:

- a. Project Management Services
- b. Planning
- c. Implementation
- d. System Integration Plan
- e. Data Conversion Analysis
- f. Data / System Interface Plan
- g. Functional Test Plan
- h. Training Plan
- i. Documentation
- j. System Deployment
- k. Pre and Post Go-Live Support

The work plan and schedule shall be of enough detail to provide GCCDA with the necessary task, resource, and sequence information to allow for logistics and staff allocation planning. The vendor's work plan must state any facilities, data, and other requirements that GCCDA shall be expected to provide.

GCCDA understands that each vendor shall have their own implementation methodology derived from their industry experience and software requirements. It is the desire of GCCDA to have consistency of detail within the work plan and schedule across respondents to allow for an objective determination by staff as to the quality and feasibility of each respondent's submission.

The work plan shall be created in or be compatible with Microsoft Word, and the schedule must be created in Gantt chart format using Microsoft Project, Smartsheet, or other similar program

that produces Gantt formatted output. At a minimum, this chart must show phases, tasks, sub-tasks, and staff utilization. GCCDA may request task expansion or contraction, additional task details, and/or scheduling modifications within the work plan or schedule prior to award of the contract. GCCDA may require vendor to perform Project Management activities on a web-based Project Management tool or portal to enhance review and collaboration.

The work plan must specify the recommended time period for each phase. The work plan must include the proposed responsibilities of the Project Manager. The work plan must describe the vendor's program control methods for demonstrating the vendor's performance, adherence to and control of the project schedule and budget.

The work plan must describe the vendor's commitment of resources for technical and functional-area team members. This team shall consist of experts in the various modules of the proposed software for GCCDA. The work plan and schedule must display the amount and timing of the proposed effort within the project milestones. The work plan must list any specialized System personnel that would be required at GCCDA to maintain and operate the proposed System.

The work plan must include time and activities set aside to revise GCCDA's existing practices to best utilize the proposed software's functionality. GCCDA recognizes that improvements in structure and processes can be as beneficial as improvements in technology. Accordingly, the vendor's experience with similar organizations and "Industry Best Practices" is important to GCCDA and shall be reflected in the work plan and schedule.

The project work plan and schedule must include the time and resource commitment for testing and accepting the System components and configuration within GCCDA's simulated production environment.

The work plan must include the vendor's recommended training plan for end users of the selected software and for IT staff responsible for ongoing System maintenance and support. The work plan must also include detailed listings of training programs for technical staff, configuration staff/core users, senior management, and information/end users. Additionally, the work plan must state the method of training (instructor-led hands-on classroom training, train-the-trainer, offsite public classroom training, web-based training, etc.), the number of training hours to be provided, the recommended number of participants in each training program, and the infrastructure and Systems required. The work plan schedule must show the type of training provided and the hours of commitment for each implementation phase.

The work plan and schedule must include the vendor's recommended deployment plan for converting from the testing environment to the "live mode" of operation. This effort must describe the final steps of the process and the resources required to successfully complete this task. The procedure must include vendor's site preparation, roll-out, migration, turnover to

production and organizational transition strategies. It must also include contingency plans for falling back to the old System shall there be an unexpected problem with the new System.

The work plan must include a description of the vendor's post-implementation technical support programs. This must include the types of programs available, the hours and days of operation, and information on response time for urgent and non-urgent assistance requests. Full details of the Service Level Agreements offered shall be provided, including penalties for non-compliance.

Although GCCDA is requesting a work plan as part of the RFP response, it recognizes that the vendors may need to refine the work plan to use it as a management tool during implementation. GCCDA expects the selected vendor to develop a detailed work plan as part of their Scope of Work and to be submitted no later than 30 days after execution of the contract.

7.10 System Hardware and Infrastructure Description

7.10.1 Hardware Requirements

Vendors shall propose a hardware configuration with adequate storage capacity to accommodate a minimum of 15 years of incident data for CAD and Mobile Data. The System shall be configured such that the System can operate with the defined anticipated maximum concurrent user count without any System degradation. For any hosted/cloud solutions, the vendor shall assume deployment as a private cloud for the purposes of this section.

GCCDA reserves the right to purchase the hardware proposed by vendors independent of the successful vendor's proposal. Regardless of the method determined by GCCDA to purchase the hardware proposed, vendors must certify that the hardware proposed meets or exceeds the requirements stipulated above related to System performance and storage capacity.

Vendors shall describe in detail what hardware/software components are included in the cost of its proposal. It is very important to provide an outline for managed services associated with the hardware, infrastructure, and software maintenance required to maintain the proposed System.

Vendors providing a solution where there are multiple platform options must provide information on each.

Vendors must provide an overall design using a System diagram and an overview explanation (no more than four (4) pages) describing the proposed hardware. The installed System must be scalable and capable of expansion in a modular and incremental fashion. CAD workstations are not anticipated to be included as part of this project. However, vendors must specify minimum and/or optimal requirements for all call taker/dispatcher positions, including what is required to allow a minimum of three monitors from the same workstation.

The System architecture must provide a high availability solution that includes real-time data replication. The System shall be designed to take advantage of existing current automatic fail-over, or other backup technologies that enable continued operation, to provide the ability to withstand single or multiple component failure.

The selected System shall be sized appropriately to meet performance criteria, accommodate any future workload increases, and store enough data history.

The vendor shall provide the recommended hardware with capacity requirements for the proposed System solution. In addition, the vendor shall itemize all required and recommended System software to make the proposed System software operate in the most efficient manner.

Vendors shall provide proposed hardware and System software configuration(s) as part of a Proposal Outline.

7.10.2 General Requirements

Vendors must provide all services and supplies necessary to install, operate and maintain the software and equipment specified in this RFP and functional specifications. GCCDA may elect to increase or decrease quantities or acquire the hardware separately based upon the successful vendor's provided specifications. Regardless of the method of procurement, the successful vendor must be responsible for the hardware configuration proposed. Open Systems solutions are preferred. Various hardware alternatives as well as separate computer Systems for mission critical functions or client/server peer-to-peer operations may be proposed. These solutions or combination of solutions must support all defined software requirements outlined in [Exhibit A – Functional Specification workbook](#).

7.10.3 Mission Critical System Architecture and Availability Requirements

The proposed Integrated CAD and Mobile shall be designed, deployed, and supported as a mission-critical public safety System capable of continuous operation in a 24x7x365 environment. The System shall provide high availability, fault tolerance, and disaster recovery capabilities appropriate to public safety operations, regardless of the deployment model.

Vendors may propose on-premises (GCCDA-hosted), vendor-hosted/cloud-based, or hybrid System architectures. The requirements of this section apply to **all deployment models**, unless explicitly stated otherwise.

7.10.3.1 System Availability

The vendor shall describe how the proposed System achieves high availability and minimizes the risk of service disruption. At a minimum, the proposal shall address:

- System redundancy and elimination of single points of failure
- Automated or rapid failover mechanisms
- Maintenance strategies that minimize or eliminate operational downtime
- Monitoring and alerting capabilities

The vendor shall clearly state the expected System availability and any associated service level commitments.

7.10.3.2 On-Premises or Hybrid Deployments

For on-premises or hybrid solutions, the vendor shall:

- Specify all required server, storage, networking, and System software components
- Identify recommended configurations for redundancy and fault tolerance
- Support deployment within GCCDA's existing virtualized environment where feasible
- Describe backup, recovery, and restoration procedures
- Clearly define vendor versus GCCDA responsibilities for System operation, maintenance, monitoring, and patching

GCCDA reserves the right to procure hardware independently, provided such hardware meets or exceeds the vendor's published specifications.

7.10.3.3 Vendor-Hosted / Cloud Deployments

For vendor-hosted or cloud-based solutions, the vendor shall:

- Describe the hosting architecture, including logical and physical redundancy
- Identify data center locations and hosting model (public, private, or government-only cloud)
- Describe high availability and disaster recovery capabilities, including recovery time objectives (RTO) and recovery point objectives (RPO)
- Describe backup, retention, and restoration procedures
- Define monitoring, incident response, and escalation processes

Hosted solutions must comply with all applicable CJIS, state, and federal security and data protection requirements.

7.10.3.4 Disaster Recovery

Regardless of deployment model, the vendor shall describe the disaster recovery strategy, including:

- Recovery procedures for catastrophic failures

- Restoration timelines
- Data protection mechanisms
- Testing and validation of disaster recovery processes

7.10.3.5 Vendor Responsibility

The vendor shall be solely responsible for ensuring that the System architecture, whether on-premises, hosted, or hybrid, meets the mission-critical operational needs of GCCDA. The vendor shall remain responsible for System availability, performance, and recoverability as defined in this RFP and any resulting contract, regardless of the underlying infrastructure or hosting arrangements.

7.11 Software Maintenance, Updates, and Customer Support

7.11.1 Warranty, Maintenance, and Support Requirements

The vendor shall provide warranty, maintenance, and support services sufficient to ensure the reliable and continuous operation of the Integrated CAD and MDS in a mission-critical, 24x7x365 public safety environment. These requirements apply to all deployment models, including on-premises, vendor-hosted/cloud-based, and hybrid solutions.

7.11.2 System Warranty

The vendor shall provide a minimum one (1) year warranty following final System acceptance. During the warranty period, the vendor shall correct, at no additional cost to GCCDA, any defects, deficiencies, or failures of the System to perform in accordance with the requirements of this RFP and the vendor's proposal.

For on-premises or hybrid deployments, the warranty shall include all vendor-provided software and any vendor-provided hardware components. For vendor-hosted or cloud-based solutions, the warranty shall apply to the complete System, including the hosted environment and all associated services.

7.11.3 System Availability and Support Services

The vendor shall provide support services designed to maintain continuous System availability. The proposal shall include:

- Support hours and escalation procedures
- Incident response and resolution time commitments
- Severity definitions and associated service levels
- Methods for reporting, tracking, and resolving issues

For vendor-hosted or cloud-based solutions, support services shall include monitoring and management of the hosting environment and infrastructure. System availability measurements shall apply to the CAD and MDS application services provided by the vendor and shall exclude outages attributable to external Systems or third-party networks not under the vendor's control.

7.11.4 On-Premises Hardware Support (if Applicable)

For on-premises or hybrid solutions that include vendor-provided hardware, the vendor shall describe:

- Hardware support and replacement procedures
- Response times for critical hardware failures
- Availability of spare parts or replacement components

Hardware support requirements apply only to vendor-provided hardware and do not apply to GCCDA-procured equipment unless otherwise agreed in writing.

7.11.5 Vendor Responsibility

The vendor shall remain fully responsible for the performance, availability, and support of the System for the duration of the contract, regardless of deployment model, infrastructure, or third-party components. GCCDA shall not be responsible for coordinating or resolving issues between the vendor and any subcontractor, hosting provider, or third-party supplier.

Failure to meet warranty, maintenance, or support obligations may be considered a material breach of contract.

7.11.6 Help Desk Support

The vendor shall provide 24/7/365 System support (help desk operations) for CAD and Mobile, with dedicated staffing during normal business hours and must be available for emergencies during off hours, at all times.

7.11.7 File Back-Up/File Recovery

The vendor shall provide comprehensive data backup, recovery, and restoration processes designed to protect System data and maintain data integrity in a mission-critical, 24x7x365 public safety environment. These requirements apply to all deployment models, including on-premises, vendor-hosted/cloud-based, and hybrid solutions.

The vendor shall ensure that System databases and configuration data are regularly backed up using industry-standard methods. Backup processes shall be designed to protect against data

loss resulting from System failure, hardware failure, software failure, cyber incidents, or other operational disruptions.

The vendor shall describe its backup and recovery architecture, including backup frequency, retention periods, storage locations, and data protection mechanisms. For vendor-hosted or cloud-based solutions, the vendor shall describe how backups are performed within the hosting environment and how data is protected and isolated.

Recovery procedures shall be designed to restore System data to a consistent and usable state following a failure, while preserving data integrity. The vendor shall describe expected recovery time objectives (RTO) and recovery point objectives (RPO) for different failure scenarios.

For on-premises or hybrid deployments, recovery procedures shall support restoration of operations following repair or replacement of failed components. For vendor-hosted or cloud-based deployments, recovery procedures shall support restoration of service without requiring action by GCCDA.

The vendor shall provide documentation of backup and recovery procedures and shall support periodic testing of recovery processes, as reasonably requested by GCCDA.

7.11.8 Additional Support Information Requirements

The vendor shall provide detailed information describing its software maintenance, update, and support practices for the proposed Integrated CAD and MDS. These requirements apply to all deployment models, including on-premises, vendor-hosted/cloud-based, and hybrid solutions.

The vendor shall describe its software maintenance and update methodology, including:

- How software updates, patches, and enhancements are developed, tested, distributed, and deployed
- The typical frequency of updates and releases
- Recommended approaches for testing and validating updates prior to deployment in a production environment
- How updates to MDS and other mobile clients are distributed and installed

The vendor shall describe the level of vendor involvement and the skills required by GCCDA personnel, if any, to implement routine updates, incremental enhancements, and major System upgrades. The vendor shall also describe how custom configuration, workflows, and any GCCDA-specific settings or extensions are preserved and validated during the update or upgrade process to ensure no GCCDA-specific functionality is lost.

The vendor shall describe the Quality Assurance (QA) measures used to ensure that software releases are thoroughly tested prior to release, including testing for functionality, performance, security, and regression impacts.

The vendor shall describe the mechanisms available for users to report software issues, defects, or enhancement requests, including any user portals, ticketing Systems, or customer forums. The vendor shall also describe how customer feedback is collected, prioritized, and incorporated into product development.

The vendor shall describe the level of customer influence in product direction, including the processes used for technology decisions, enhancements, new features, and software roadmap development and review.

The vendor shall identify whether national, regional, or customer user groups exist and describe how users may participate to share best practices, discuss System implementation approaches, and provide input to the vendor.

The vendor shall provide detailed information regarding its Technical Support and Help Desk organization, including:

- Hours of operation and availability for mission-critical support
- Staffing levels and organizational structure
- Issue intake, tracking, escalation, and resolution processes
- Tools used for incident management and communication
- Applicable service level agreements (SLAs)
- A general description of how GCCDA would interact with Technical Support and Help Desk staff during normal operations and critical incidents

7.12 Other Documents

Under this section, vendors shall provide copies of all standard contractual and supporting documents applicable to the proposed solution, including but not limited to the following:

- a. Standard Software Licensing Agreement(s)
- b. Standard Support and Maintenance Agreement(s)
- c. Professional Services Agreement(s)
- d. Vendor Supplemental Documents

These documents are requested for **review and evaluation purposes only**. Submission of vendor standard agreements, license terms, policies, or supplemental documents does not constitute acceptance by GCCDA of any terms or conditions contained therein.

GCCDA reserves the right to negotiate, modify, reject, or require changes to any vendor-proposed terms, conditions, policies, or agreements. In the event of a conflict between vendor-provided documents and the requirements of this RFP or any resulting agreement executed by GCCDA, the terms of the RFP and GCCDA's agreement shall govern.

Vendors shall carefully examine this RFP and ensure that all required documentation not specifically identified in Sections 7.1 through 7.11 is included in this section, as applicable. Vendors may also include information they consider pertinent to this project but not specifically requested in the RFP under the Vendor Supplemental Documents subsection.

Vendors are advised that this section is not intended as an invitation to submit excessive or extraneous marketing materials. Documentation provided shall be relevant, concise, and directly applicable to the proposed solution.

Examples of materials that may be included in this section include, but are not limited to:

- a. Sample training manuals or training materials
- b. Sample standard reports
- c. Sample implementation plans or project schedules

7.13 Proposal Submission Forms

Vendor must complete and submit the following forms with their proposal package; failure to include these completed forms with the proposal package may result in vendor disqualification:

- Proposal Signature Form – Exhibit E
- Indemnity/Hold Harmless – Exhibit F
- Iran Business Activities Certification – Exhibit G
- Non-Collusion Affidavit -Exhibit H
- Bidder Information and Acceptance – Exhibit I
- Proposer Guarantees and Warranties – Exhibit J

7.14 Appendices

Vendor shall complete and submit Exhibits A, B, C, D, E, F, G, H, I, and J as appendices to the proposal.

All proposals shall have the following appendices (labeled as defined below):

- a. Appendix A – Functional Specifications
- b. Appendix B – Reference Form
- c. Appendix C – Resume Form

- d. Appendix D – Proposal Cost Sheets
- e. Appendix E – Proposal Signature Form
- f. Appendix F – Indemnity/Hold Harmless Form
- g. Appendix G – Iran Business Activities Certification Form
- h. Appendix H – Non-Collusion Affidavit Form
- i. Appendix I – Bidder Information and Acceptance Form
- j. Appendix J – Proposer Guarantees and Warranties Form

Instructions for Appendices A – J are defined below.

7.14.1 Functional Specification Workbooks (Appendix A)

Vendor must include a completed electronic copy of the Functional Specifications (Excel Workbooks), with the proposal document package. If a responding vendor has more than one solution, the responses to the functional specifications shall reflect only the solution being proposed.

The functional specifications included in this RFP have the following properties associated with them:

Specifications may appear to be conflicting, where a requirement may request a specific function be provided in one way and be followed by a requirement that requests that same function be provisioned for in a different (or potentially conflicting) fashion. Example:

- LMNI-2 = All master name activity for a subject for all jurisdictions can be accessed via one record.
- LMNI-3 = Master name records for the same subject are separated by jurisdiction.

The intent of specifications like those above is to provide a better understanding of each vendor's method of provisioning the given functional feature.

The specifications are labeled with the following importance categories:

- N/A (items marked N/A are not applicable to this project, are locked from access)
- Minimal
- Important
- Crucial

Table 13 below outlines the definitions of the availability categories used in the Functional Specification Workbooks.

Table 13

INSTRUCTIONS	RATING LEGEND
Complete the worksheet by opening the drop-down box and selecting the appropriate descriptor for each criterion. The response must represent the current state of the specific requirement.	Functional available – Feature/Function is available and operational in the current release of vendor’s product and is in use in a live client environment.
	Function not available – Feature/Function is currently not available in a live operational client environment. This would include functions and features that may be on a vendor’s development roadmap.
	Exception – Could meet the requirement with modification or is provisioned in a different manner than specified.

The higher the category of importance, the greater weight in scoring those specifications will carry.

The functional specifications outlined in the SYSTEM and COMMON tabs (included as part of the CAD MAIN Functional Specification Spreadsheet) represent System requirements, and common functional requirements that apply to all packages and modules being proposed.

Each Functional Specification Spreadsheet has an “unlocked” column entitled “Review Comments” that can be used internally by vendors to assist them in scoring and tracking input on each specification. However, all content must be deleted from those fields in the version submitted by each vendor as the final specifications. Should any information be left in those fields, it shall have no bearing on the score, the interpretation of the vendor's response, or otherwise carry any weight or consideration.

7.14.2 Explanations of Exceptions

Following the completed functional specification workbooks, shall be a document that clarifies any exceptions taken to specific functional requirements. Each exception must be documented to include the specification number (e.g., SYS-4), the specification description (e.g., “The System automatically and correctly adjusts for Daylight Savings Time”), and the details associated with the exception. The response must contain an explanation of any “exceptions” taken to functions that appear in the Functional Specification Workbooks. Any “clarifications” provided for any numbered requirement that has been asserted to be an available function in the Functional Specification Workbooks shall generally negate a “Function Available” statement; this shall cause a vendor to be judged non-compliant for the specific requirement. For the purposes of this RFP,

items not answered or marked as an exception on the Functional Specification Workbooks shall be interpreted as Function Not Available and shall be factored accordingly for scoring purposes. Once a short list of qualified vendors is determined, based on initial RFP review and scoring, consideration may be given exceptions to allow for a more complete analysis and vendor comparison.

7.14.3 References (Appendix B)

Vendor references must be submitted in two (2) forms. The first form shall be a vendor client list for the State of Michigan. GCCDA reserves the right to contact any client on that list that it feels may provide valuable vendor insight.

Second, vendor must provide at least three (3) client references. At least two (2) references must be from cities/counties where a CAD/Mobile System was implemented that closely reflects the scope of work for GCCDA as described in this RFP. These references shall be sites at which the software has been fully implemented ("live") within the past three (3) years.

GCCDA prefers references for previous implementations of the same base version that shall be proposed for it. Please use the Client Reference form provided as [Exhibit B](#) in this RFP. For each reference listed, vendor must disclose if it has offered or provided any benefits, products, discounts, or other in-kind services/products to the reference in exchange for fulfilling the role of providing a customer reference.

7.14.4 Resume of Key Personnel (Appendix C)

Under this section, provide a brief resume of key persons, specialists, and individual consultants assigned to the project that includes the information as outlined in RFP and [Exhibit C](#).

7.14.5 Cost (Appendix D)

Pricing is an important aspect of the overall evaluation of the vendor's response. Included in Exhibit E of this RFP is the pricing template that must be used to provide the cost of the proposed solution. Failure to use the provided pricing template may characterize the response as non-responsive and preclude the vendor from further consideration in this procurement. Please price the solution as accurately as possible as it may become the basis for the solution price. Please provide the level of detail as defined in the pricing template. Clarification may be requested for incomplete responses.

The vendor shall use the worksheet provided in [Exhibit D](#) for all software and maintenance related costs. Price shall reflect GCCDA's desire to maintain production, test, and training environments.

The software license and costs must allow GCCDA to utilize the software via direct and remote access by the required number of users and departments of GCCDA affiliates and any other person or entity which GCCDA needs to allow access in order to provide the services required of the System.

Additionally, the vendor shall use their own format to include a brief description of the software pricing methodology (license cost per seat, per named user, per module, per server, per site/organization, etc.).

The vendor shall also include a brief description of the strategy for maintenance agreement pricing after the initial term of the maintenance agreement has ended or after additional software has been licensed.

The specific categories of software cost are provided in the pages of the Proposal Cost Sheets:

- a. Required software (CAD and Mobile) and services
- b. Required interfaces software and services
- c. Optional software, modules, interfaces, and services
- d. Hardware for required software and interfaces
- e. Conversion analysis
- f. System maintenance cost – required software and interfaces
- g. Hardware maintenance cost – required hardware

The vendor shall include all costs associated with the implementation of the software solution and provide a “not-to-exceed” amount to perform implementation, integration, roll-out, and other work identified in this RFP.

Service Costs cover all the types of labor for each functional area that shall be directly charged to the contract. The hourly rate associated with Conversion Assessment shall represent the vendor’s fully loaded rate, including overhead and profit.

Travel shall be based on the number of trips, the number of people traveling, the estimated cost of transportation, the meal and lodging cost of each traveler, and other miscellaneous travel expenses. Actual travel expenses shall not exceed reasonable amounts as determined by GCCDA based on the contract.

In addition to using the Proposal Cost Sheets to provide the specific information requested, the vendor is expected to use their own document format to discuss any additional information or supporting schedules that would clarify any ambiguities and assist GCCDA in obtaining a better understanding of the vendor’s cost philosophy. Please note that the Proposal Cost Sheets must be completed and must not be altered by the vendor.

7.14.6 Proposal Signature Form (Appendix E)

The Proposal Signature Form ([Exhibit E](#)) shall be completed by a representative authorized to sign on behalf of the Company. The vendor shall provide a complete, clear, and transparent cost proposal using the pricing templates provided in Appendix E. The cost proposal shall include all costs necessary to deliver, implement, operate, and support the proposed Integrated CAD and MDS solution in accordance with the requirements of this RFP.

Vendors must clearly state the basis on which all costs are calculated and billed, including but not limited to license-based pricing, subscription or Software-as-a-Service (SaaS) pricing, per-user or per-device pricing, usage-based pricing, hosting fees, maintenance and support fees, and any other recurring or non-recurring charges. Any assumptions used in developing pricing must be explicitly identified.

The cost proposal shall include all software, licenses, interfaces, hosting services (if applicable), hardware (if applicable), professional services, implementation services, training, data conversion, testing, warranty, and ongoing maintenance and support required to deliver a fully functional and operational System. Costs associated with third-party products or services required for proper System operation must be included and clearly identified.

All pricing shall be fully burdened and inclusive of all expenses, including labor, travel, materials, overhead, and profit. GCCDA shall not be responsible for any costs not clearly identified in the vendor's proposal.

If optional modules, services, or features are proposed, they must be clearly identified as optional and priced separately. Optional items shall not be required for the System to meet the mandatory requirements of this RFP unless explicitly approved by GCCDA.

For vendor-hosted or cloud-based solutions, the vendor must clearly identify all recurring fees, including subscription costs, hosting costs, storage costs, usage thresholds, escalation factors, and any fees associated with future expansion, additional users, devices, agencies, or data volume. Any limits, caps, or conditions affecting pricing over time must be clearly disclosed.

The vendor shall provide fixed pricing for implementation and professional services using a not-to-exceed amount. Annual maintenance, support, and subscription costs shall be clearly identified, including the initial term and any proposed escalation rates for subsequent years.

Failure to provide a clear, complete, and transparent cost proposal, or submission of pricing that is ambiguous, incomplete, misleading, or inconsistent with the requirements of this RFP, may result in the proposal being deemed non-responsive and rejected at the sole discretion of GCCDA.

7.14.7 Indemnity/Hold Harmless Form (Appendix F)

Vendor shall complete the Indemnity/Hold Harmless Form ([Exhibit F](#)).

7.14.8 Iran Business Activities Certification (Appendix G)

Vendor shall complete the Iran Business Activities Certification Form ([Exhibit G](#)).

7.14.9 Non-Collusion Affidavit Form (Appendix H)

Vendor shall complete the Non-Collusion Affidavit Form ([Exhibit H](#)).

7.14.10 Bidder Information and Acceptance Form (Appendix I)

Vendor shall complete the Bidder Information and Acceptance Form ([Exhibit I](#)).

7.14.11 Proposer Guarantees and Warranties Form (Appendix J)

Vendor shall complete the Proposer Guarantees and Warranties Form ([Exhibit J](#)).

8 Terms and Conditions

8.1 Constraints on the Successful Offeror

8.1.1 Proposer's Responsibility

It shall be the vendor's responsibility to schedule and coordinate all work to be performed under the contract to ensure continuous and smooth operations of the work and completion within the times specified in the proposal.

The Scope of Work is intended to cover the complete project. It is expressly understood and agreed that failure to mention any work in this proposal, which would normally be required to complete the project, shall not relieve the vendor of its responsibility to perform such work.

8.1.2 Waiver

Neither GCCDA's review, approval or acceptance of, nor payment for, any of the services required under the contract shall be construed to operate as a waiver of any rights under the contract or any cause of action arising out of the performance of the contract, and the vendor shall be liable to GCCDA in accordance with applicable law for all damages to GCCDA caused by the vendor's negligent performance of any of the services furnished under the contract.

8.1.3 Annulment of Contract

Shall the vendor fail to fully satisfy the customer, or to comply with orders of GCCDA, or to perform anew such work that has been rejected as defective and/or unsuitable, or if the vendor shall become insolvent or be declared bankrupt or shall make an assignment for the benefit of creditors or from any other cause shall not carry on the work in an acceptable manner, GCCDA shall have the right to annul its contract and all departmental contracts at GCCDA's convenience.

8.1.4 Contract Term

GCCDA intends that the vendor awarded a contract, shall perform the work commencing upon the date specified in the Notice to Proceed or notification letter and terminate upon expiration or completion of the project unless terminated by GCCDA with the delivery of written notification of contract termination. All contracts extending beyond GCCDA's fiscal year (January 1st annually) shall be subject to budget appropriation. In the event the on-going contract does not acquire funding to continue, the awarded contractor shall be notified in writing at the earliest possible date, and contract termination shall be coordinated.

8.1.5 Approximate Quantities

The vendor's attention is called to the fact that the quantities given are estimated quantities and are intended as a guide to the vendor but in no way bind or limit GCCDA to the actual amount of work to be performed or the quantity of material to be furnished. Any estimates of quantities herein furnished by GCCDA are approximate only and have been used by GCCDA as a basis for estimating the cost of the work and shall also be used for the purpose of tabulating and comparing the proposal and awarding the contract. GCCDA has endeavored to estimate these quantities correctly according to their knowledge and the information as shown; but it is not guaranteed that these estimated quantities are accurate and if the vendor, in making up and/or submitting his proposal or proposal relies upon the accuracy of said estimated quantities, it does so at its own risk.

8.1.6 Permits

If there are any required permits, they shall be obtained and paid for by the vendor.

8.1.7 Personal Liability of Public Officials

In carrying out any of the provisions of the awarded contract or in exercising any power of authority granted therein, there shall be no personal liability upon GCCDA or its authorized agents, consultants, or representatives. In addition, and without qualification to the foregoing, nothing herein or in the resulting contract waives the governmental immunity of GCCDA or its officers and employees if applicable.

8.2 Vendor Personnel Requirements

8.2.1 Affirmative Action Policy

In accordance with the State of Michigan's Affirmative Action policy against discrimination, no person shall, on the grounds of race, color, creed, religion, sex, age marital status, national origin, handicap, or disability, be excluded from full employment rights in, participation in, be denied the benefits of, or be otherwise subjected to discrimination. During the performance of the work and services hereunder, the vendor, for themselves, their assignees and successor in interest, agrees to comply with all federal, state, and local nondiscrimination regulations.

8.2.2 Assignment

Successful vendor shall not assign, transfer, or subject the contract, or its rights, title interests or obligations therein without GCCDA's prior written approval. Violation of the terms of this paragraph shall constitute a breach of contract. All rights, title, interest, and obligations of the successful vendor shall thereupon cease and terminate.

8.2.3 Responsibility for Complete Project

It is the responsibility of the vendor to perform the work under the awarded contract. If mention has been omitted in the contract documents of any items of work or materials usually necessary for completion of the project or usually furnished for proper functioning of the equipment, it shall be included by the vendor without extra payment.

8.3 Responsibilities of the Organization

8.3.1 Inspection

GCCDA may appoint such persons as they may deem necessary to properly review the proposal and presentation to select the best overall proposal for equipment purchase.

8.4 Method of Payment

All invoices shall be reviewed and approved by a vendor's representative and GCCDA's representative before submission. All invoices must be submitted to GCCDA. All invoices shall be net 30 days. If the time frame for completion is over 30 days, payments and invoices shall be equally submitted every 30 days and the final payment upon final acceptance of the final product.

Should the vendor believe that it is entitled to any additional compensation, the vendor shall file a written notice of claim thereof with GCCDA. Unless otherwise specified, such notice shall be given no later than 30 days after the onset of such alleged damages, losses, expenses, or delays.

8.5 Breaches and Dispute Resolution

8.5.1 Disputes

Disputes arising from the selected vendor's performance of work pursuant to this GCCDA, the proposal submitted by the selected vendor, and/or the awarded contract, which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of GCCDA. This decision shall be final and conclusive unless within 10 days from the date of receipt of a copy of the decision, the selected vendor mails or otherwise furnishes a written appeal to GCCDA. In connection with any such appeal, the selected vendor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of GCCDA shall be binding upon the selected vendor, and the selected vendor shall abide by the decision.

8.5.2 Performance During Dispute

Unless otherwise directed by GCCDA, the selected vendor shall continue its performance while matters in dispute are being resolved.

8.5.3 Claims for Damages

Shall a party suffer injury or damage to person or property arising from the work performed under the awarded contract resulting from any act or omission of the party or of any of its employees, agents, or others for whose acts it is legally liable, a claim for damages therefore shall be made in writing to such party within 30 days after the injury or damage was first discovered by the damaged party.

8.5.4 Waiver of Jury Trial

The parties hereto waive their right to a jury trial in any dispute involving their rights under the contract.

8.5.5 Costs and Attorney Fees

Shall any of the parties take action to enforce the terms of this RFP or an agreement arising therefrom, the prevailing party in the action shall be entitled to reasonable and necessary attorneys' fees, court costs, arbitrator fees, witness fees and all expenses of suit.

8.5.6 Rights and Remedies

The duties and obligations imposed by the RFP and any contract documents, and the rights and remedies available thereunder, shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law. No action or failure to act by GCCDA, or the selected vendor shall constitute a waiver of any right or duty afforded any

of them under the RFP or any contract documents, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach there under, except as may be specifically agreed in writing.

8.6 Insurance Requirements

8.6.1 Worker's Compensation and Employer's Liability Insurance

The selected vendor shall take out and maintain during the life of the contract the Statutory Worker's Compensation and Employer's Liability Insurance for all his employees to be engaged in work on the project under the contract.

In case any portion of the project is sublet, the selected vendor shall require all of the sub-contractors similarly to take out and maintain during the entire life of the contract the Statutory Worker's Compensation and Employer's Liability Insurance for all of their employees to be engaged in work in the project under the contract.

The selected vendor and its sub-contractor(s) shall not begin work until the selected vendor has first filed with GCCDA satisfactory evidence that insurance of the above nature is in full force and effect (receipt of Certificate of Insurance naming the County as an "Additional Insured.")

8.6.2 Insurance Requirements for Vendors and Subcontractors

The vendor shall maintain general liability insurance in the amounts listed below for the duration of the contract. Vendor shall name the County as an Additional Insured on its insurance policy(s) and shall provide a copy of the certificate of insurance to GCCDA certifying the at least the minimal coverage required herein is in effect and specifying that the coverage shall not be cancelled, non-renewed, or materially changed by endorsement or through issuance of other policies of insurance without thirty (30) days written notice to GCCDA. The coverage listed is the recommended minimum limits of liability:

General Liability: \$2,000,000 Annual Aggregate

- \$1,000,000 Each Occurrence
- \$1,000,000 Products and Completed Operations
- \$1,000,000 Personal Injury and Advertising
 - Automobile Liability: \$1,000,000 Combined Single Limit
 - Worker's Compensation: -- Statutory
 - Excess \$1,000,000 Each Occurrence

The vendor awarded this contract shall be solely responsible for any/all subcontractors performing service for GCCDA.

8.7 Independent Contractor

The parties intend that the selected vendor, in performing the services under the awarded contract, shall act as an independent contractor. The selected vendor and its agents, consultants, employees, representatives, and /or sub-contractors are not to be considered agents, consultants, employees, representatives, and/or sub-contractors of GCCDA for any purpose.

8.8 Governing Law and Venue

8.8.1 Governing Law

This RFP, and any contract awarded to a selected vendor, shall be governed, and interpreted in accordance with the laws of the State of Michigan and the applicable laws of the United States of America without regard to the conflicts of law principles.

8.8.2 Venue

All parties consent to the exclusive jurisdiction and venue of the U.S. federal court located in and serving the State of Michigan and Michigan state courts located in and serving Gratiot County agencies in connection with any dispute arising out of the work performed pursuant to the RFP, the proposal submitted by the selected vendor, and/or the awarded contract.

9 Exhibits

9.1 Exhibit A. Functional Specifications

The required functional specification Excel workbooks are embedded below. Complete each worksheet in each workbook and include these Excel Workbooks in your response.

The Functional Specifications are attached to this RFP as PDF attachments. Please open the attachments tab with your PDF attachment function. The Excel Spreadsheet Workbooks shall be provided with the delivery of this Specification Document to the vendor.

9.2 Exhibit B. Reference Form

Please copy the table below to list five (5) references, at least two (2) of which must be from cities/counties where the scope of the implementation is similar to the scope of work as described in this RFP. These references shall be sites at which the software has been fully implemented within the past three (3) years.

For each reference listed, vendor must disclose if it has offered or provided any benefits, products, discounts, or other in-kind services/products to the reference in exchange for fulfilling the role of providing a customer reference.

REFERENCE #	
Project Name & Location	
Completion Date (Actual or Estimated)	
Project Owners Name & Address	
Project Owner's Contact Person, Title, Telephone Number, and Email Address	
Estimated Cost for Entire Project	
Estimated Cost for Work Which Firm was/is Responsible	
Scope of Entire Project (Please give quantitative measurements if possible)	

9.3 Exhibit C. Resume Form

Provide a brief resume of key persons, specialists, and individual third-party vendors that would be representative of the persons assigned to this project. Copy the table below and complete it for each staff member as needed.

Name and Role on Project	
Previous Project Assignments	
Name of Third-Party Vendor with which Associated	
Years of Experience	
Education Degree(s)/Year/Specialization	
Other Experience & Qualifications Relevant to the Proposed Project	

9.4 Exhibit D. Proposal Cost Sheets

Software-CAD	
Item	Cost
CAD Software	
CAD Implementation Services	
Subtotal	
Software-Mobile	
Item	Cost
Mobile Software	
Mobile Implementation Services	
Subtotal	
Software Interfaces	
Item	Cost
CAD Interfaces	
CAD/Mobile Interfaces	
Interface to LERMS	
Interface to FRMS	
Interface Implementation Services	
Subtotal	
Hardware-Needed for the System Software	
Item	Cost
Hardware Needed for the System Software	
Subtotal	
Conversion Analysis	
Item	Cost
Data Conversion and Conversion Support	
Subtotal	
System Maintenance Cost	
Item	Cost
System Maintenance-System Software Year 1-5	
System Maintenance-System Software Year 6-10	
Subtotal	
Total	

SOFTWARE - CAD		
Item	Quantity	Price
CAD Base Application Software*	Lot	
Call Entry		
Call List/Grid Control Panel		
Unit List/Grid Status Control Panel		
Unit Recommendations		
Run Cards/Response Plans		
Call Stacking		
CAD Messaging		
Call Scheduling		
Fire Equipment and Apparatus Search/Move/Assign		
GIS/Geo File Verification		
CAD Base Mapping Software	Lot	
CAD AVL		
Proximity Dispatch		
Web CAD (CAD access via browser)		
CAD Modules (in addition to base)	Lot	
Hazmat Search		
Hydrant Search		
Shift Notes		
BOL/BOLOs		
CAD Analytics and Ad-hoc Reporting		
Integration to Mobile		
CAD Workstation Client	10	
CAD Workstation Mapping	10	
CAD Administrator/Maintenance Positions	4	
WebCAD (browser based view of CAD information)	20	
System Administrator/File Maintenance Training	Lot	
Call Taker/Dispatcher Training	Lot	
CAD Software System Integration Services**		
Additional Costs (Must Provide Details)		
Subtotal		

^(*) If an individual module listed in the pricing sheet is not included in the base price, include the cost for that module; if the cost is included in the base package then indicate "included".

*** System integration services includes vendor project management, installation, travel, expenses, etc.

SOFTWARE - MOBILE		
Item	Quantity	Price
Base LE Mobile Application Software*	Lot	
Dispatch/Messaging		
Unit Status Changes		
State/NCIC/NLETS		
Base LE Mobile Mapping Software	Lot	
In-Car Mapping/AVL		
In-Car Routing (driving directions)		
In-Car Mapping/Geofencing		
Base Fire/EMS Mobile Application Software	Lot	
Dispatch/Messaging		
Unit/Apparatus Status Changes		
Base Fire Mobile Mapping Software	Lot	
In-Car Mapping/AVL		
In-Car Routing (driving directions)		
Law Mobile Licenses	50	
Fire/EMS Mobile Licenses	25	
Mobile System Administrator Training	Lot	
Mobile User Training (Train-the-Trainer)	Lot	
Mandatory Software System Integration Services**		
Additional Costs (Must Provide Details)		
Subtotal		

* If an individual module listed in the pricing sheet is not included in the base price, include the cost for that module; if the cost is included in the base package then indicate "included".

** System integration services includes vendor project management, installation, travel, expenses, etc.

SOFTWARE – Required Interfaces		
Item	Quantity	Price
CAD Interfaces		
ASAP Interface (Alarm Monitoring Company to ECC Alarm calls)	Lot	
Alphanumeric Paging (Everbridge)		
CAD-to-CAD		
CAD to LERMS - Caliber		
CAD to Fire FRMS - ESR or ESO		
Call Logging Recorder (Equature)		
E911	Lot	
Textty (INdigital text-to-911)		
Pro QA Paramount - EMD	10	
Pro QA Paramount - EFD (Optional)	10	
Pro QA Paramount - EPD (Optional)	10	
RapidSOS	Lot	
State/NCIC Interface	Lot	
Required Interface Software System Integration Services*	Lot	
Additional Costs (Must Provide Details)		
Subtotal		

* System integration services includes vendor project management, installation, travel, expenses, etc.

HARDWARE - Needed for the SYSTEM		
Item	Quantity	Price
CAD Servers (Live and Test)	Lot	
Mobile Servers/Switch	Lot	
LE Mobile Hardware Peripherals		
FD Mobile Hardware Peripherals		
Hardware needed for Interfaces & AVL, list appropriate interface		

Hardware System Integration Services - System Software*		
Additional Costs (Must Provide Details)		
Subtotal		

^(*) System integration services includes vendor project management, installation, travel, expenses, etc.

CONVERSION SUPPORT		
Item	Quantity	Price
Conversion Analysis and Assessment	Lot	
Hourly Rate for Conversion Engineering Support		
Additional Maintenance Costs (Must Provide Details)		
Subtotal		

SYSTEM MAINTENANCE – System Software		
Item	Quantity	Price
1st Year Maintenance 24x7 Maximum 4 Hour Response	Lot	
2nd Year Maintenance 24x7 Maximum 4 Hour Response	Lot	
3rd Year Maintenance 24x7 Maximum 4 Hour Response	Lot	
4th Year Maintenance 24x7 Maximum 4 Hour Response	Lot	
5th Year Maintenance 24x7 Maximum 4 Hour Response	Lot	
6th Year Maintenance 24x7 Maximum 4 Hour Response (OPTIONAL)	Lot	
7th Year Maintenance 24x7 Maximum 4 Hour Response (OPTIONAL)	Lot	
8th Year Maintenance 24x7 Maximum 4 Hour Response (OPTIONAL)	Lot	
9th Year Maintenance 24x7 Maximum 4 Hour Response (OPTIONAL)	Lot	
10th Year Maintenance 24x7 Maximum 4 Hour Response (OPTIONAL)	Lot	
Additional Maintenance Costs (Must Provide Details)		
Subtotal		

9.5 Exhibit E. Proposal Signature Form



Signature Form
Project No. 07-26
(Please Type or Print Clearly in Ink)

My signature certifies that the Proposal as submitted complies with all terms and conditions as set forth in this solicitation, except as noted herein.

I hereby certify that I am authorized to sign as a representative for the firm:

Complete legal name of firm: _____

Order from address: _____

Remit to address: _____

Federal Identification Number: _____

Signature: _____

Name (type/print): _____

Title: _____

Telephone: () _____ Fax: () _____

Date: _____

Send notification of award to: _____
(First and last name)

Email address of person receiving award notification: _____

*Gratiot County Invitation to Bid
Project No. 07-26*

9.6 Exhibit F. Indemnity/Hold Harmless Form

To the fullest extent permitted by law, the undersigned agrees to indemnify and hold GCCDA, its elected and appointed officials, employees, and volunteers, and others working on behalf of GCCDA, harmless from and against all loss, cost, expense, damage, liability or claims, whether groundless or not, arising out of the bodily injury, sickness or disease (including death resulting at any time there from) which may be sustained or claimed by any person or persons, or the damage or destruction of any property, including the loss of use thereof, based on any act or omission, negligent or otherwise, of the vendor, or anyone acting on its behalf in connection with or incident to procurement No. 07-26 "Integrated Computer Aided Dispatch and Mobile Data System with Requisite Interfaces" and the vendor shall, at its own cost and expense, defend any such claims and any suit, action, or proceeding and pay any damages which may be recovered in any such suit, action, or proceeding, and any and all expense including, but not limited to, costs, attorney's fees and settlement expenses, which may be incurred by GCCDA therein. Vendor shall not have to indemnify GCCDA or defend claims arising solely from the negligence of GCCDA.

Name of Organization: _____

Signature: _____

Address of Organization: _____

Date: _____

9.7 Exhibit G. Iran Business Activities Certification

Iran Business Activities Certification

Vendor Name: _____

Vendor Address: _____

City/State/Zip: _____

Country: _____

Re: Certification Regarding Iran-Related Business Activities

The undersigned, on behalf of [**Vendor Legal Name**] (“Vendor”), hereby certifies and represents to **Grafiot County Central Dispatch Authority (GCCDA)** that:

1. Vendor is not owned or controlled by, and is not acting on behalf of, the Government of Iran.
2. Vendor does not currently engage in business, trade, investment, transactions, or other commercial activities with:
 - a. Iran;
 - b. the Government of Iran; or
 - c. any person or entity located in Iran or otherwise subject to Iran-related sanctions, **except to the extent expressly authorized by the U.S. Department of the Treasury, Office of Foreign Assets Control (“OFAC”), or otherwise permitted by applicable law.**
3. Vendor is not identified on any applicable U.S. sanctions list in a manner that would prohibit business with **GCCDA**, including the OFAC Specially Designated Nationals and Blocked Persons List, to the extent applicable. OFAC maintains sanctions program and list information publicly.
4. Vendor has implemented reasonable compliance measures designed to avoid prohibited transactions involving Iran or sanctioned Iranian parties.
5. Vendor will promptly notify **GCCDA** in writing if any statement in this certification becomes inaccurate, incomplete, or misleading at any time during the term of its relationship with **GCCDA**.
6. Vendor understands that **GCCDA** is relying on this certification in evaluating and continuing its business relationship with Vendor.

I certify that I am authorized to sign this certification on behalf of Vendor and that the statements above are true, correct, and complete to the best of my knowledge and belief.

Vendor Legal Name: _____

Authorized Signature: _____

Printed Name: _____

Title: _____

Date: _____

9.8 Exhibit H. Non-Collusion Affidavit Form



Non-Collusion Affidavit Form

Project No. 07-26

(Please Type or Print Clearly in Ink)

I, _____, of _____
(Name and Title) (Company Name)

Attest to the following:

1. That I am fully informed respecting preparation and content of the attached Proposal and of all pertinent circumstances respecting such Proposal;
2. That my Proposal is genuine and not a collusive or sham proposal;
3. Neither myself nor any of our officers, partners, owners, agents, representatives, employees, or parties in interest, has in any way colluded, conspired, connived, or agreed directly or indirectly, with any other Proposer, firm, or person to submit a collusive or sham Proposal in connection with the Contract for which the attached Proposal has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm, or person to fix the price or prices in the attached Proposal or of any other Proposer, or to fix any overhead, profit, or cost element of the proposal price of any other Proposer, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the County or any person interested in the proposed Contract;
4. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any other collusion, conspiracy, connivance, or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

Signature Date

9.9 Exhibit I. Bidder Information and Acceptance Form



Bidder Information and Acceptance

Project No. 07-26

1. The undersigned declares that the bid documents, including, without limitation, any RFP addenda and exhibits have been read.
2. The undersigned is authorized, offers, and agrees to furnish the articles and/or services specified in accordance with the specifications, terms and conditions of the bid documents of Project No. 01-26, Professional Financial Controls Audit.
3. The undersigned has reviewed the bid documents and fully understands the requirements in this bid including, but not limited to, the requirements under the County provisions, and that each bidder who is awarded a contract shall be, in fact, a prime contractor, not a subcontractor, to County, and agrees that its Bid, if accepted by County, will be the basis for the bidder to enter into a contract with County in accordance with the intent of the bid documents.
4. The undersigned acknowledges receipt and acceptance of all addenda.
5. If selected for award, the following certifications will be required before work commences:
 - Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
 - Certification Regarding Nondiscrimination Under Federally and State Assisted Programs
 - Assurance Regarding Access to Records and Financial Statements
 - Iran Economic Sanctions Act
6. The undersigned acknowledges that bidder will be in good standing in the State of Michigan, with all the necessary licenses, permits, certifications, approvals, and authorizations necessary to perform all obligations in connection with this RFP and associated Bid Documents.
7. It is the responsibility of each bidder to be familiar with all specifications, terms and conditions and, if applicable, the site condition. By the submission of a Bid, the Bidder certifies that if awarded a contract they will make no claim against the County based upon ignorance of conditions or misunderstanding of the specifications.
8. Patent indemnity: Vendors who do business with the County shall hold the County of Gratiot, its officers, agents and employees, harmless from liability of a nature or kind, including cost and expenses, for infringement or use of any patent, copyright or other proprietary right, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the contract or purchase order.
9. Insurance certificates are not required at the time of submission. However, if awarded, the Contractor agrees to meet the minimum insurance requirements posted in Appendix A. This documentation must be provided to the County prior to award and shall include an insurance certificate and additional insured certificate, naming the County of Gratiot, which meets the minimum insurance requirements, as stated in the terms and conditions.

*Gratiot County Invitation to Bid
Project No. 07-26*

Page 2

Bidder Information and Acceptance

Company Profile

Official Name of Bidder		Type of Entity/Organization (check one): <input type="checkbox"/> Corporation <input type="checkbox"/> Joint Venture <input type="checkbox"/> Limited Liability Partnership <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Liability Corporation <input type="checkbox"/> Non-Profit Corporation <input type="checkbox"/> Other: _____
Street Address		
City		
State	Zip Code	
Website		
Primary Contact Name		
Primary Contact Phone Number		
Primary Contact Email Address		
Tax Identification Number		
Has your company been debarred by the Federal Government? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, has it been lifted and if so, when?</i>		
Has your company been debarred by State Governments? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, has it been lifted and if so, when?</i>		
Signature		
Name and Title of Signer		
Date		

*Gratiot County Invitation to Bid
Project No. 07-26*

9.10 Exhibit J. Proposer Guarantees and Warranties Form



Proposer Guarantees and Warranties

Project No. 07-26

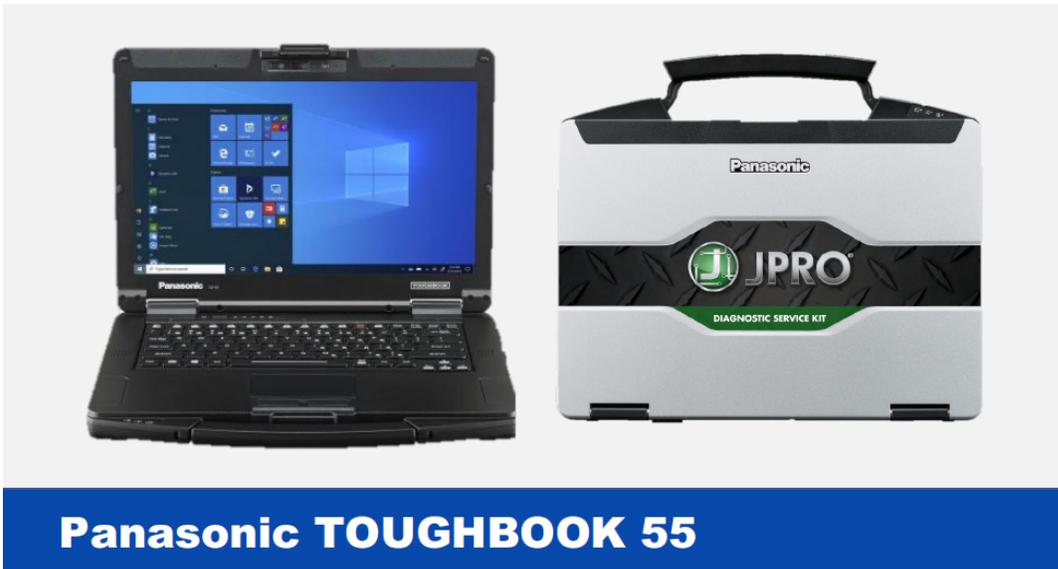
1. Proposer warrants that it is willing and able to comply with State of Michigan laws with respect to foreign (non-state of Michigan) corporations.
2. Proposer warrants that it is willing and able to obtain an errors and omissions insurance policy providing a prudent amount of coverage for the willful or negligent acts or omissions of any officers, employees or agents thereof.
3. Proposer warrants that it will not delegate or subcontract its responsibilities under an agreement without the express prior written permission of the County of Gratiot.
4. Proposer warrants that all information provided by it in connection with this proposal is true and accurate.
5. Proposer certifies it can and will provide and make available, at a minimum, all services set forth in under Minimum Mandatory Requirements on page 1.

Name of Firm	
Name of Official	Title
Signature of Official	Date

9.11 Exhibit K. Current Hardware (servers and mobile devices) Specifications

- 9.7.1 Gratiot County Sheriff's Office & St. Louis Police Department
- 9.7.2 Alma Department of Public Safety
- 9.7.3 Alma District Fire Department
- 9.7.4 St. Louis Fire Department
- 9.7.6 Michigan State Police

9.11.1 Gratiot County Sheriff's Office & St. Louis Police Department



Panasonic TOUGHBOOK 55

OUR PART# 321005 | MFG PART #: FZ-55A0601VM

MAIN FEATURES:

OS: Windows 10 Pro | **CPU:** Intel® Core™ i5-8365U | **DURABILITY:** Semi Rugged

DISPLAY: 14" | **RAM:** 8GB | **HARD DRIVE:** 512GB

The Panasonic TOUGHBOOK® 55 is a 14-inch semi-rugged laptop that features an innovative modular design and longer hours of battery life. Built with state of the art technology, the TOUGHBOOK 55 offers the Intel® Core™ i5-8365U processor, infrared webcam with four microphones, crisp and powerful 92db speakers, color-selectable backlit keyboard and a Night mode to reduce eye strain and help preserve night vision.

- 8 GB RAM for smooth operation and brisk multitasking
- 512 GB storage capacity to meet file storage needs
- Windows 10 Pro OS for a user-friendly and feature-rich performance

[Show More Media](#)

Tech Specs

Specifications are provided by the manufacturer.

• Cache Memory

- Installed Size :6 MB
- Installed Size :6

• Digital Camera

- Features :IR camera, Privacy shutter, Windows Hello
- Resolution :1080p
- Webcam Capability :Yes

• Hard Drive

- SSD Form Factor :M.2
- Type :SSD

• Interfaces

- HDMI Ports Qty :1
- USB 3.0 Ports Qty :2
- USB-C Ports Qty :1
- Interface :Dock
- Interface :HDMI
- Interface :Headphone output
- Interface :LAN
- Interface :USB 3.1 Gen 1
- Qty :2
- Interface :USB-C 3.1 Gen 1

• Keyboard

- Keyboard Layout :QWERTY
- Keyboard Localization :US

• Supported Battery

- Max Supported Qty :2

• Processor

- 64-bit Computing :Yes
 - Clock Speed :1.6 GHz
 - Features :Intel Turbo Boost Technology 2.0, Intel vPro Technology
 - Generation :8
 - Manufacturer :Intel
 - Max Turbo Speed :4.1 GHz
 - Processor Number :I5-8365U
-
- Type :Core i5

• Networking

- Bluetooth Class :Class 1
 - Data Link Protocol :Bluetooth 5.0, Ethernet, Fast Ethernet, Gigabit Ethernet, IEEE 802.11a, IEEE 802.11ac, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n
 - Wired Protocol :Gigabit Ethernet
 - Wireless NIC :Intel Wireless-AC 9560
-
- Wireless Protocol :802.11a/b/g/n/ac, Bluetooth 5.0

• Storage Hard Drive

- Capacity :512 GB

• OS Provided

- Edition :Windows 10 Pro
 - Family :Windows 10
-
- Type :Windows 10 Pro 64-bit Edition

• Audio Input

- Type :Four microphones

• Audio Output

- Compliant Standards :High Definition Audio
-
- Type :Speaker

• Battery

- Capacity :6500 mAh
- Run Time (Up To) :20 hours
- Technology :Lithium ion

• Cabinet

- Chassis Built-in Devices :SSD heater

• Card Reader

- Supported Flash Memory :microSD, microSDHC, microSDXC UHS
- Type :Card reader

• Display

- Diagonal Size (metric) :35.6 cm
- Display Resolution Abbreviation :HD
- LCD Backlight Technology :LED backlight
- Projector Monitor Features :Anti-glare, Anti-reflective, Direct Bonding technology
- Type :LED
- Widescreen Display :Yes

• Header

- Brand :Panasonic
- Manufacturer :Panasonic Notebooks
- Model :55
- Packaged Quantity :1
- Product Line :Panasonic Toughbook

• Input Device

- Backlight :Yes (emissive)
- Features :Electro-static touchpad, Multi-touch touchpad, Programmable buttons, Spill-resistant, Volume control
- Type :Keyboard, Touchpad

• Miscellaneous

- Case Material :Magnesium alloy
- Color Category :Black, Silver
- Compliant Standards :AES, IP53, MIL-STD 810G
- Features :Drop-resistant, Dust-resistant, Shock-resistant, Vibration-resistant, Water-resistant
- Included Accessories :Power adapter
- Security Slot Type :Kensington security slot
- Theft/Intrusion Protection :Security lock slot (cable lock sold separately)

• Modem

- Type :None

• Power Device

- Nominal Voltage :AC 120/230 V

• Service

- Support Details Full Contract Period :3 years
- Support Details Service Included :Parts and labor
- Support Details Type :Limited warranty

• Slot Provided

- Type :Nano-SIM card

• Software

- Type :Drivers & Utilities, Panasonic Dashboard, Panasonic Recovery Partition

• System

- Dockable :Yes
- Embedded Security :Trusted Platform Module (TPM 2.0) Security Chip
- Hard Drive Capacity :512 GB
- Mechanical Design :180° hinge design
- Notebook Type :Notebook

- Platform :Windows

- Platform Technology :Intel vPro Technology

• Video Output

- Graphics Processor Series :Intel UHD Graphics

- Graphics Processor Vendor :Intel UHD Graphics 620

• RAM

- Empty Slots :1

- Installed Size :8 GB

- Installed Size :8

- Max Supported Size :64 GB

- Max Supported Size :64

- Memory Speed :2133 MHz

- Slots Qty :2

- Technology :DDR4 SDRAM

• Dimensions & Weight

- Depth :10.7 in

- Height :1.3 in

- Weight :4.61 lbs

- Width :13.6 in

• Optical Storage

- Drive Type :No optical drive

- Type :None

• Service & Support

- Type :3-year warranty

• Display (Projector)

- Diagonal Size :14 in

- Max Resolution :1366 x 768

9.11.2 Alma Department of Public Safety

2 | **TECH SPECS - DELL-PRO-RUGGED-14-RB14250**

Overview

Brand Dell

Product Line Dell Pro

Model 14 Rugged RB14250

Manufacturer Dell Smart Select Notebooks

Processor

Clock Speed 1.7 GHZ

Cores 12-core

Max Turbo Speed 4.9 GHZ

Processor Brand Intel

Processor Generation Series 1

Processor Main Features 14 Threads

Processor Number i65U

Processor Type Core Ultra 7

AI Processor Technology Intel AI Boost

Memory

Available Memory Slots 0

Cache Memory Installed 12 megabyte

Configuration Features 2 x 8 GB

Data Integrity Check Non-ECC

Max Memory Supported 64 GB

Memory Card Reader Card reader

Memory Slots 2

Memory Speed 2800 megahertz

Memory Technology DDR5 SDRAM

RAM Installed 16 GB

Rated Memory Speed 2800 megahertz

Supported Flash Memory microSD, microSDHC, microSDXC

Storage

Hard Drive Capacity 512 GB

Hard Drive Features Class 35, NVMe Express (NVMe)

Optical Drive Type No optical drive, None

SSD Form FactorM.2 2230

Storage TypeSSD

Hard Drive InterfacePCIe 4.0 x4

Display & Graphics

Display Image Brightness1100 candela per square metre

Display Resolution AbbreviationFull HD

Display TypeLED

Features0.161 mm pixel pitch, 35 ms response rate, Anti-glare, Low Blue Light technology,

Passive pen support, Wide Viewing Angle

Graphics Controller ModelIntel Graphics

Graphics Processor SeriesIntel Graphics

Horizontal Viewing Angle85

Native Resolution1920 x 1080

Pixel Density (ppi)157

Privacy TechnologyNone

Screen Size14 inch

Screen Size (metric)35.56 centimetre

TouchscreenYes

Vertical Viewing Angle85

V-Sync Rate at Max Res.60 hertz

Widescreen DisplayYes

Camera

Frame Rate30 frames per second

Front Camera ResolutionHD

Front Camera Video Resolution1280 x 720

Image Sensor TypeCMOS

WebcamYes

Audio

Audio Input TypeDual array microphone

Compliant StandardsHigh Definition Audio

Connectivity

HDMI Ports1

Interfaces 2 x USB-C 3.2 Gen 2 (supports Thunderbolt 4, DisplayPort 1.4 Alt Mode) (Power Delivery 3.0), HDMI, Headphone/microphone combo jack, LAN, Serial (RS-232), USB 3.2, USB 3.2 Gen 1, USB 3.2 Gen 1 (PowerShare)

USB 3.0 Ports 3

USB Type-C Ports 2

USB-C Features USB Power Delivery

Network & Communication

Data Link Protocols Bluetooth, Ethernet, Fast Ethernet, Gigabit Ethernet, IEEE 802.11a, IEEE 802.11ac, IEEE 802.11ax (Wi-Fi 6E), IEEE 802.11b, IEEE 802.11g, IEEE 802.11n

Ethernet Controllers Intel I219-LM

Features Dual stream (2x2), MU-MIMO

Host Interface M.2 2230

Wired Protocol Gigabit Ethernet

Wireless LAN 802.11a/b/g/n/ac/ax (Wi-Fi 6E), Bluetooth

Wireless NIC Intel Wi-Fi 6E AX 211

Technical Information

Camera Resolution 0.92 Megapixel

Embedded Security Discrete Trusted Platform Module (TPM 2.0) Security Chip

Form Factor (RAM) SO-DIMM 262-pin

Input Device Type Keyboard, Touchpad

Max Operating Temperature 145.4 degree Fahrenheit

Min Operating Temperature -20.2 degree Fahrenheit

Operating Humidity 10 - 95% (non-condensing)

Rugged Yes

Sensor Type Hall sensor

Shock Acceleration (Non-operating) 185 gram

Shock Acceleration (Operating) 160 gram

Shock Duration (Non-operating) 2 ms half-sine pulse

Shock Duration (Operating) 2 ms half-sine pulse

Vibration Acceleration (Non-operating) 7.7 gram

Vibration Frequency Range (Non-operating) 5-2000 Hz

Product Information

Audio Codec Realtek ALC3254

Features 87 degrees, Camera shutter, Chassis intrusion detection, ExpressCharge, RGB camera, Rigid handle

AI-Powered Yes

Input Device Features Copilot key

Keyboard Backlight Yes (RGB)

Output Type Stereo speakers

Packaged Quantity 1

Platform Supported Windows

Product Type Notebook

Security Slot Type Wedge-shaped security slot

Service Activation No

Theft Protection Security lock slot (cable lock sold separately)

Scanning

Bundled Services 3 Years Limited Hardware Warranty with Mail-In Service (Customer supplies box, Dell pays shipping) - Disti SNS

Software

Operating System Windows 11 Pro

Operating System Edition Windows 11 Pro

Operating System Platform Windows

Software Type Activate your Microsoft 365 for a [30 day](#) trial, Dell Additional Softwares

Power

Battery Capacity 53.5 watt hour(s)

Battery Cells 3-cell

Frequency 50/60 hertz

Power Provided 65 watt

Provided Voltage 5 / 9 / 15 / 20 volt

Required Voltage AC 100-240 volt

Included Items

Included Accessories Airbay Cover, USB-C power adapter

Certifications & Listings

Compliant Standards FIPS 140-2, TCG Certified

ENERGY STAR Certified Yes

EPEAT Compliant Yes

EPEAT Level ~~EPEAT~~ Gold

TCO Certified ~~No~~

Physical Characteristics

Color Category ~~Black~~

Dimensions & Weight

Height 1.3 inch

Weight 4.5 lbs

Width 13.4 inch

Specifications Dell Pro Rugged 14 RF14250

- **Key Specs**

Screen Size

14 inches

Screen Resolution

1920 x 1080 (Full HD)

Touch Screen

No

Refresh Rate

60Hz

Brightness

400 [nits](#)

Processor Model

Intel Core Ultra 5 Series 1

Storage Type

SSD

Total Storage Capacity

512 gigabytes

System Memory (RAM)

16 gigabytes

Graphics

Intel Graphics

Display Connector(s)

2 x Thunderbolt 4

Battery Chemistry

Lithium-ion

2-in-1 Design

No

Backlit Keyboard

Yes

- **General**

Brand

Dell

Model Number

P1K9G

Product Name

Pro Rugged 14 RB14250 14" Laptop Intel Core Ultra 5 135U 16GB 512GB SSD

Color

Black

Year of Release

2025

- **Display**

Screen Size

14 inches

Screen Resolution

1920 x 1080 (Full HD)

Touch Screen

No

Refresh Rate

60Hz

Synchronization Technology

Not Applicable

Brightness

400 nits

Color Gamut (Standard RGB)

100 percent

- **Processor**

Processor Brand

Intel

Processor Model

Intel Core Ultra 5 Series 1

Processor Model Number

135U

CPU Boost Clock Frequency

4.4 gigahertz

Number of CPU Cores

12-core

Number of CPU Threads

14

- **Storage**

Storage Type

SSD

Total Storage Capacity

512 gigabytes

Solid State Drive Capacity

512 gigabytes

- **Memory**

System Memory (RAM)

16 gigabytes

Type of Memory (RAM)

DDR5 SDRAM

- **Graphics**

Graphics Type

Integrated

GPU Brand

Intel

Graphics

Intel Graphics

GPU Video Memory Type (RAM)

DDR5 SDRAM

- **Compatibility**

Operating System

Windows 11 Pro

Voice Assistant Built-in

No

- **Connectivity**

Display Connector(s)

2 x Thunderbolt 4

Number of Thunderbolt Ports (Total)

2

USB Ports

2 x USB-A 3.2, 2 x USB-C

Number of USB Ports (Total)

4

Wireless Connectivity

Bluetooth, Wi-Fi

Wireless Standard

AX

Wireless Networking Standard

Wi-Fi 6

Number Of Ethernet Ports

1

Network Connectivity

None

- **Power**

Battery Cells

3-cell

Battery Chemistry

Lithium-ion

- **Camera**

Front-Facing Camera

Yes

- **Features**

2-in-1 Design

No

Backlit Keyboard

Yes

GPS Enabled

No

- **Dimensions**

Product Height

1 8/25 inches

Product Width

13 2/5 inches

Product Depth

8 7/10 inches

Product Weight

4.5 pounds

- **Certifications Listings & Approvals**

ENERGY STAR Certified

Yes

EPEAT Qualified

Yes

EPEAT Level

Gold

- **Included**

Optical Drive Type

None

- **Warranty**

Warranty - Parts

3 year limited

Warranty - Labor

3 Year Limited

- **Other**

UPC

884116481294

BSIN

J3K4L6XZJK

SKU

6629337

9.11.3 Alma District Fire Department

iPad (10th generation) - Technical Specifications

Year introduced : 2022



Finish

- Silver
- Blue
- Pink
- Yellow

Capacity¹

- 64GB
- 256GB

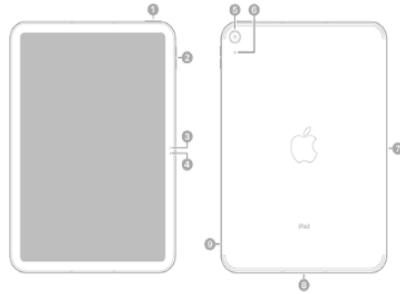
Size and Weight²

- **Wi-Fi models**
 - Height: 9.79 inches (248.6 mm)
 - Width: 7.07 inches (179.5 mm)
 - Depth: 0.28 inch (7 mm)
 - Weight: 1.05 pounds (477 grams)
- **Wi-Fi + Cellular models**
 - Height: 9.79 inches (248.6 mm)
 - Width: 7.07 inches (179.5 mm)
 - Depth: 0.28 inch (7 mm)
 - Weight: 1.06 pounds (481 grams)

Buttons and Connectors

1. Top button/Touch ID
2. Volume buttons
3. Front camera
4. Microphone

5. Rear camera
6. Microphone
7. Smart Connector
8. USB-C connector
9. SIM tray (Wi-Fi + Cellular)



In the Box

- iPad (10th generation)
- USB-C Charge Cable (1 meter)
- 20W USB-C Power Adapter

Display

Liquid Retina display

- 10.9-inch (diagonal) LED backlit Multi-Touch display with IPS technology
- 2360-by-1640-pixel resolution at 264 pixels per inch (ppi)
- True Tone display
- 500 nits brightness
- Fingerprint-resistant oleophobic coating
- Supports Apple Pencil (1st generation)

The iPad display has rounded corners. When measured diagonally as a rectangle, the screen is 10.86 inches. Actual viewable area is less.

Pair and charge Apple Pencil (1st generation) using USB-C to Apple Pencil Adapter.

Chip

- A14 Bionic chip
- 6-core CPU
- 4-core graphics
- 16-core Neural Engine

Camera

- 12MP Wide camera, $f/1.8$ aperture
- Digital zoom up to 5x

- Five-element lens
- Autofocus with Focus Pixels
- Panorama (up to 63MP)
- Smart HDR 3
- Photo geotagging
- Auto image stabilization
- Burst mode
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 25 fps, 30 fps, or 60 fps
- 1080p HD video recording at 25 fps, 30 fps, or 60 fps
- 720p HD video recording at 30 fps or 60 fps
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Extended dynamic range for video up to 30 fps
- Video image stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Playback zoom
- Video formats captured: HEVC and H.264

Front Camera

- Landscape 12MP Ultra Wide camera, 122° field of view
- *f*/2.4 aperture
- Smart HDR 3
- 1080p HD video recording at 25 fps, 30 fps, or 60 fps
- Time-lapse video with stabilization
- Extended dynamic range for video up to 30 fps
- Cinematic video stabilization (1080p and 720p)
- Lens correction
- Retina Flash
- Auto image stabilization
- Burst mode

Video Calling³

- FaceTime video
- Center Stage
- iPad to any FaceTime-enabled device over Wi-Fi or cellular

Audio Calling³

- FaceTime audio
- iPad to any FaceTime-enabled device over Wi-Fi or cellular

Speakers

Landscape stereo speakers

Microphones

Dual microphones for calls, video recording, and audio recording

Cellular and Wireless

- **All models**
Wi-Fi 6 (802.11ax) with 2x2 MIMO; speeds up to 1.2 Gbps
Simultaneous dual band
Bluetooth 5.2
- **Wi-Fi + Cellular models**
Model A2757:
5G NR (Bands n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n29, n30, n38, n40, n41, n48, n66, n71, n77, n78, n79)⁴
FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 20, 21, 25, 26, 28, 29, 30, 32, 66, 71)
TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)
UMTS/HSPA/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
Data only⁵
Wi-Fi calling⁴
eSIM⁶

For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular/networks.

SIM Card

- Nano-SIM
- eSIM⁶

Location

- **All models**
Digital compass
Wi-Fi
iBeacon microlocation
- **Wi-Fi + Cellular models**
GPS/GNSS
Cellular

Sensors

- Touch ID
- Three-axis gyro

- Accelerometer
- Barometer
- Ambient light sensor

Touch ID

- Unlock iPad
- Secure personal data within apps
- Make purchases from the iTunes Store, App Store, and Apple Books

Apple Pay

- Pay with your iPad using Touch ID within apps and on the web
- Send and receive money in Messages

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get proactive suggestions
- Use hands-free
- Listen and identify songs

[Learn more about Siri](#)

Charging and Expansion

USB-C port with support for:

- Charging
- DisplayPort
- USB 2.0 (up to 480 Mb/s)

Display Support

- **Supports full native resolution on the built-in display at millions of colors**
Supports one external display with up to 4K resolution at 30Hz or 1080p resolution at 60Hz
- **Digital video output**
Native DisplayPort output over USB-C
VGA, HDMI, and DVI output supported using adapters (sold separately)
- **Video mirroring**
Up to 4K AirPlay for mirroring, photos, and video out to Apple TV (2nd generation or later) or AirPlay-enabled smart TV
Video mirroring and video out support through USB-C Digital AV Multiport Adapter and USB-C VGA Multiport Adapter (adapters sold separately)

Power and Battery⁸

- Built-in 28.6-watt-hour rechargeable lithium-polymer battery

- Up to 10 hours of surfing the web on Wi-Fi or watching video
- Charging via power adapter or USB-C to computer system
- **Wi-Fi + Cellular models**
 - Up to 9 hours of surfing the web using cellular data network

Operating System

iPadOS

iPadOS comes with powerful features and built-in apps designed to take advantage of the unique capabilities of iPad.

[Learn more about iPadOS](#)

[iPad User Guide](#)

Accessibility

Built-in accessibility features supporting vision, mobility, hearing, and cognitive disabilities help you get the most out of your iPad.

Features include:

- VoiceOver
- Zoom
- Magnifier
- Spoken Content
- Voice Control
- Switch Control
- AssistiveTouch
- Siri and Dictation
- Type to Siri
- Real-Time Text
- Audio Descriptions
- Subtitles and Closed Captioning
- Live Captions (beta)

Built-in Apps

- App Store
- Books
- Calendar
- Camera
- Clock
- Contacts
- FaceTime
- Files
- Find My
- Freeform
- Home

- iTunes Store
- Magnifier
- Mail
- Maps
- Measure
- Messages
- Music
- News
- Notes
- Photo Booth
- Photos
- Podcasts
- Reminders
- Safari
- Settings
- Shortcuts
- Siri
- Stocks
- Tips
- Translate
- TV
- Voice Memos
- Weather

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, Clips, and Apple Store app are preinstalled on iPad.

- Pages
- Numbers
- Keynote
- iMovie
- GarageBand
- Apple Store
- Trailers
- Clips
- Swift Playgrounds
- Support

System Requirements

- Apple ID (required for some features)
- Internet access⁹

- **Syncing to a Mac or PC requires:**
 macOS Catalina 10.15 or later using the Finder
 macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 Windows 10 and iTunes 12.12 or later (free download from itunes.com/download)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional – Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Spain), Arabic, Bulgarian, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Kazakh, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY, Pinyin 10-Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10-Key, Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10-Key), Spanish (Latin America, Mexico, Spain), Ainu, Albanian, Amharic, Apache (Western), Arabic, Arabic (Najdi), Armenian, Assamese, Assyrian, Azerbaijani, Bangla, Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Phonetic, Stroke, Sucheng), Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Dzongkha, Emoji, Estonian, Faroese, Filipino, Finnish, Flemish, Fula (Adlam), Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Igbo, Indonesian, Irish Gaelic, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili, Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bengali, Meetei Mayek), Māori, Marathi, Mongolian, Navajo, Nepali, Norwegian (Bokmål, Nynorsk), Odia, Pashto, Persian, Persian (Afghanistan), Polish, Portuguese (Brazil, Portugal), Punjabi, Rohingya, Romanian, Russian, Samoan, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese (Telex, VIQR, VNI), Welsh, Yiddish

- **QuickType keyboard support with autocorrection**
 Arabic, Arabic (Najdi), Bangla, Bulgarian, Catalan, Cherokee, Chinese – Simplified (Pinyin QWERTY), Chinese – Traditional (Pinyin QWERTY), Chinese – Traditional (Zhuyin), Croatian, Czech, Danish, Dutch, English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Estonian, Filipino, Finnish, Dutch (Belgium), French (Belgium), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Indonesian, Irish Gaelic, Italian, Japanese (Kana), Japanese (Romaji), Korean (2-Set, 10-Key), Latvian, Lithuanian, Macedonian, Malay, Marathi, Norwegian (Bokmål), Norwegian (Nynorsk), Persian, Persian (Afghanistan), Polish, Portuguese (Brazil), Portuguese (Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic), Serbian (Latin), Slovak, Slovenian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Swedish, Tamil (Anjal), Tamil (Tamil 99), Telugu, Thai, Turkish, Ukrainian, Urdu, Vietnamese (Telex)
- **QuickType keyboard support with predictive input**
 English (Australia, Canada, India, Japan, Singapore, South Africa, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **QuickType keyboard support with multilingual input**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese – Simplified (Pinyin), Chinese – Traditional (Pinyin), French (France), French (Belgium), French (Canada), French (Switzerland), German (Germany), German (Austria), German (Switzerland), Italian, Japanese (Romaji), Portuguese (Brazil), Portuguese (Portugal), Spanish (Spain), Spanish (Latin America), Spanish (Mexico), Dutch (Belgium), Dutch (Netherlands), Hindi (Latin), Vietnamese
- **QuickType keyboard support with contextual suggestions**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese (Simplified), French (Belgium), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Italian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Arabic, Arabic (Najdi), Dutch (Belgium), Dutch (Netherlands), Hindi (Devanagari), Hindi (Latin), Russian, Swedish, Portuguese (Brazil), Turkish, Vietnamese
- **QuickPath keyboard support**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese (Simplified Pinyin QWERTY), Chinese (Traditional Pinyin QWERTY), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Italian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Portuguese (Brazil), Portuguese (Portugal), Dutch (Belgium), Dutch (Netherlands), Swedish, Vietnamese

- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese (Japan), Korean (Republic of Korea), Mandarin Chinese (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Türkiye)
- **Dictation languages**
English (Australia, Canada, India, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Cantonese (China mainland, Hong Kong), Mandarin Chinese (China mainland, Taiwan), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Spanish (Chile, Colombia, Mexico, Spain, U.S.), Portuguese (Brazil, Portugal), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian (Bokmål), Polish, Romanian, Russian, Shanghaiese (China mainland), Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Monolingual dictionary support**
English (UK, U.S.), Chinese (Simplified, Traditional, Traditional – Hong Kong), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Idiom dictionary support**
Simplified Chinese, Traditional Chinese – English, Cantonese – English
- **Bilingual dictionary support**
Arabic – English, Bangla – English, Chinese (Simplified) – English, Chinese (Traditional) – English, Czech – English, Dutch – English, Finnish – English, French – English, French – German, German – English, Gujarati – English, Hindi – English, Hungarian – English, Indonesian – English, Italian – English, Japanese – English, Japanese – Chinese (Simplified), Korean – English, Polish – English, Portuguese – English, Russian – English, Spanish – English, Tamil – English, Telugu – English, Thai – English, Urdu – English, Vietnamese – English
- **Thesaurus**
English (UK, U.S.), Chinese (Simplified)
- **Spell check**
English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Spanish (Latin America, Mexico, Spain), Arabic, Arabic (Najdi), Bulgarian, Czech, Danish, Dutch (Netherlands, Belgium), Finnish, Greek, Hindi (Devanagari), Hungarian, Irish Gaelic, Norwegian (Bokmål, Nynorsk), Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Swedish, Telugu, Turkish, Vietnamese

- **Apple Pay supported regions**

Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Brazil, Bulgaria, Canada, China mainland,¹⁰ Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Greece, Greenland, Guernsey, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao, Malaysia, Malta, Mexico, Moldova, Monaco, Montenegro, Netherlands, New Zealand, Norway, Palestine, Peru, Poland, Portugal, Qatar, Romania, Russia, San Marino, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, UK, Ukraine, United Arab Emirates, U.S., Vatican City

Video Playback

- Supported formats include HEVC and H.264
- Supports Dolby Vision and HDR10 content

Audio Playback

- Supported formats include AAC, MP3, Apple Lossless, FLAC, Dolby Digital, Dolby Digital Plus, and Dolby Atmos
- User-configurable maximum volume limit

Mail Attachment Support

Viewable document types

.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz; .pkpass (Wallet)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

iPad and the Environment

iPad is designed with the following features to reduce its environmental impact.¹¹

[See the iPad Product Environmental Report](#)

Made with better materials

- 100% recycled aluminum in the enclosure
- 100% recycled rare earth elements

- 100% recycled tin in the solder of multiple printed circuit boards
- 100% recycled gold in the plating of multiple printed circuit boards
- 100% recycled copper in the foil of the main logic board
- 35% or more recycled plastic in multiple components

Energy efficient

ENERGY STAR® certified¹²

Smarter chemistry¹³

- Arsenic-free display glass
- Mercury-, BFR-, PVC-, and beryllium-free

Green manufacturing

- Apple's Zero Waste Program helps suppliers eliminate waste sent to landfill
- All final assembly supplier sites are transitioning to 100% renewable energy for Apple production

Responsible packaging

- 100% of virgin wood fiber comes from responsibly managed forests
- 97% fiber-based packaging and no outer plastic wrap

Apple and the Environment

We're committed to making our products without taking from the earth, and to become carbon neutral across our entire business, including products, by 2030.

[See Apple's commitment](#)

-
1. Available space is less and varies due to many factors. Storage capacity subject to change based on software version, settings, and iPad model. 1GB = 1 billion bytes; 1TB = 1 trillion bytes. Actual formatted capacity less.
 2. Size and weight vary by configuration and manufacturing process.
 3. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
 4. Data plan required. 5G, Gigabit LTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular.
 5. Cellular data plan is sold separately. The model you purchase is configured to work with a particular cellular network technology. Check with your carrier for compatibility and cellular data plan availability.
 6. Not all carriers support eSIM. See your carrier for details. Not available in China mainland.

7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. Testing conducted by Apple in September 2022 using preproduction iPad (10th generation) units and software. Testing consisted of full battery discharge while performing each of the following tasks: video playback and internet browsing using Wi-Fi or cellular data network (cellular models subscribed to LTE and 5G carrier networks). Video content was a repeated 2-hour 23-minute movie purchased from the iTunes Store. Internet over Wi-Fi and cellular data network tests were conducted using dedicated web servers, browsing snapshot versions of 20 popular web pages. All settings were default except: Wi-Fi was associated with a network (except for internet browsing over cellular data network); the Wi-Fi feature Ask to Join Networks and Auto-Brightness were turned off; Brightness was set to 50%; and WPA2 encryption was enabled. Battery life depends on device settings, usage, network, and many other factors. Battery tests are conducted using specific iPad units; actual results may vary.
9. Wireless broadband recommended; fees may apply.
10. In China mainland, you can use Apple Pay on the web in Safari only on compatible iPhone and iPad models using iOS 11.2 or later.
11. Data accurate as of product launch.
12. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
13. Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end-customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for two-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.

Published Date: Apr 18, 2023

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9.11.4 St. Louis Fire Department

iPad (10th generation) - Technical Specifications

Year introduced : 2022



Finish

- Silver
- Blue
- Pink
- Yellow

Capacity¹

- 64GB
- 256GB

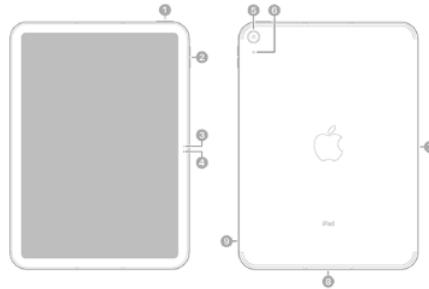
Size and Weight²

- **Wi-Fi models**
 - Height: 9.79 inches (248.6 mm)
 - Width: 7.07 inches (179.5 mm)
 - Depth: 0.28 inch (7 mm)
 - Weight: 1.05 pounds (477 grams)
- **Wi-Fi + Cellular models**
 - Height: 9.79 inches (248.6 mm)
 - Width: 7.07 inches (179.5 mm)
 - Depth: 0.28 inch (7 mm)
 - Weight: 1.06 pounds (481 grams)

Buttons and Connectors

1. Top button/Touch ID
2. Volume buttons
3. Front camera
4. Microphone

5. Rear camera
6. Microphone
7. Smart Connector
8. USB-C connector
9. SIM tray (Wi-Fi + Cellular)



In the Box

- iPad (10th generation)
- USB-C Charge Cable (1 meter)
- 20W USB-C Power Adapter

Display

Liquid Retina display

- 10.9-inch (diagonal) LED backlit Multi-Touch display with IPS technology
- 2360-by-1640-pixel resolution at 264 pixels per inch (ppi)
- True Tone display
- 500 nits brightness
- Fingerprint-resistant oleophobic coating
- Supports Apple Pencil (1st generation)

The iPad display has rounded corners. When measured diagonally as a rectangle, the screen is 10.86 inches. Actual viewable area is less.

Pair and charge Apple Pencil (1st generation) using USB-C to Apple Pencil Adapter.

Chip

- A14 Bionic chip
- 6-core CPU
- 4-core graphics
- 16-core Neural Engine

Camera

- 12MP Wide camera, *f*/1.8 aperture
- Digital zoom up to 5x

- Five-element lens
- Autofocus with Focus Pixels
- Panorama (up to 63MP)
- Smart HDR 3
- Photo geotagging
- Auto image stabilization
- Burst mode
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 25 fps, 30 fps, or 60 fps
- 1080p HD video recording at 25 fps, 30 fps, or 60 fps
- 720p HD video recording at 30 fps or 60 fps
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Extended dynamic range for video up to 30 fps
- Video image stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Playback zoom
- Video formats captured: HEVC and H.264

Front Camera

- Landscape 12MP Ultra Wide camera, 122° field of view
- *f*/2.4 aperture
- Smart HDR 3
- 1080p HD video recording at 25 fps, 30 fps, or 60 fps
- Time-lapse video with stabilization
- Extended dynamic range for video up to 30 fps
- Cinematic video stabilization (1080p and 720p)
- Lens correction
- Retina Flash
- Auto image stabilization
- Burst mode

Video Calling³

- FaceTime video
- Center Stage
- iPad to any FaceTime-enabled device over Wi-Fi or cellular

Audio Calling³

- FaceTime audio
- iPad to any FaceTime-enabled device over Wi-Fi or cellular

Speakers

Landscape stereo speakers

Microphones

Dual microphones for calls, video recording, and audio recording

Cellular and Wireless

- **All models**
Wi-Fi 6 (802.11ax) with 2x2 MIMO; speeds up to 1.2 Gbps
Simultaneous dual band
Bluetooth 5.2
- **Wi-Fi + Cellular models**
Model A2757:
5G NR (Bands n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n29, n30, n38, n40, n41, n48, n66, n71, n77, n78, n79)⁴
FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 20, 21, 25, 26, 28, 29, 30, 32, 66, 71)
TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)
UMTS/HSPA/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
Data only⁵
Wi-Fi calling⁴
eSIM⁶

For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular/networks.

SIM Card

- Nano-SIM
- eSIM⁶

Location

- **All models**
Digital compass
Wi-Fi
iBeacon microlocation
- **Wi-Fi + Cellular models**
GPS/GNSS
Cellular

Sensors

- Touch ID
- Three-axis gyro

- Accelerometer
- Barometer
- Ambient light sensor

Touch ID

- Unlock iPad
- Secure personal data within apps
- Make purchases from the iTunes Store, App Store, and Apple Books

Apple Pay

- Pay with your iPad using Touch ID within apps and on the web
- Send and receive money in Messages

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get proactive suggestions
- Use hands-free
- Listen and identify songs

[Learn more about Siri](#)

Charging and Expansion

USB-C port with support for:
Charging
DisplayPort
USB 2.0 (up to 480 Mb/s)

Display Support

- **Supports full native resolution on the built-in display at millions of colors**
Supports one external display with up to 4K resolution at 30Hz or 1080p resolution at 60Hz
- **Digital video output**
Native DisplayPort output over USB-C
VGA, HDMI, and DVI output supported using adapters (sold separately)
- **Video mirroring**
Up to 4K AirPlay for mirroring, photos, and video out to Apple TV (2nd generation or later) or AirPlay-enabled smart TV
Video mirroring and video out support through USB-C Digital AV Multiport Adapter and USB-C VGA Multiport Adapter (adapters sold separately)

Power and Battery⁸

- Built-in 28.6-watt-hour rechargeable lithium-polymer battery

- Up to 10 hours of surfing the web on Wi-Fi or watching video
- Charging via power adapter or USB-C to computer system
- **Wi-Fi + Cellular models**
 - Up to 9 hours of surfing the web using cellular data network

Operating System

iPadOS

iPadOS comes with powerful features and built-in apps designed to take advantage of the unique capabilities of iPad.

[Learn more about iPadOS](#)

[iPad User Guide](#)

Accessibility

Built-in accessibility features supporting vision, mobility, hearing, and cognitive disabilities help you get the most out of your iPad.

Features include:

- VoiceOver
- Zoom
- Magnifier
- Spoken Content
- Voice Control
- Switch Control
- AssistiveTouch
- Siri and Dictation
- Type to Siri
- Real-Time Text
- Audio Descriptions
- Subtitles and Closed Captioning
- Live Captions (beta)

Built-in Apps

- App Store
- Books
- Calendar
- Camera
- Clock
- Contacts
- FaceTime
- Files
- Find My
- Freeform
- Home

- iTunes Store
- Magnifier
- Mail
- Maps
- Measure
- Messages
- Music
- News
- Notes
- Photo Booth
- Photos
- Podcasts
- Reminders
- Safari
- Settings
- Shortcuts
- Siri
- Stocks
- Tips
- Translate
- TV
- Voice Memos
- Weather

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, Clips, and Apple Store app are preinstalled on iPad.

- Pages
- Numbers
- Keynote
- iMovie
- GarageBand
- Apple Store
- Trailers
- Clips
- Swift Playgrounds
- Support

System Requirements

- Apple ID (required for some features)
- Internet access⁹

- **Syncing to a Mac or PC requires:**

- macOS Catalina 10.15 or later using the Finder

- macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later

- Windows 10 and iTunes 12.12 or later (free download from itunes.com/download)

Languages

- **Language support**

- English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional – Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Spain), Arabic, Bulgarian, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Kazakh, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **QuickType keyboard support**

- English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY, Pinyin 10-Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10-Key, Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10-Key), Spanish (Latin America, Mexico, Spain), Ainu, Albanian, Amharic, Apache (Western), Arabic, Arabic (Najdi), Armenian, Assamese, Assyrian, Azerbaijani, Bangla, Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Phonetic, Stroke, Sucheng), Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Dzongkha, Emoji, Estonian, Faroese, Filipino, Finnish, Flemish, Fula (Adlam), Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Igbo, Indonesian, Irish Gaelic, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili, Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bengali, Meetei Mayek), Māori, Marathi, Mongolian, Navajo, Nepali, Norwegian (Bokmål, Nynorsk), Odia, Pashto, Persian, Persian (Afghanistan), Polish, Portuguese (Brazil, Portugal), Punjabi, Rohingya, Romanian, Russian, Samoan, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese (Telex, VIQR, VNI), Welsh, Yiddish

- **QuickType keyboard support with autocorrection**
 Arabic, Arabic (Najdi), Bangla, Bulgarian, Catalan, Cherokee, Chinese – Simplified (Pinyin QWERTY), Chinese – Traditional (Pinyin QWERTY), Chinese – Traditional (Zhuyin), Croatian, Czech, Danish, Dutch, English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Estonian, Filipino, Finnish, Dutch (Belgium), French (Belgium), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Indonesian, Irish Gaelic, Italian, Japanese (Kana), Japanese (Romaji), Korean (2-Set, 10-Key), Latvian, Lithuanian, Macedonian, Malay, Marathi, Norwegian (Bokmål), Norwegian (Nynorsk), Persian, Persian (Afghanistan), Polish, Portuguese (Brazil), Portuguese (Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic), Serbian (Latin), Slovak, Slovenian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Swedish, Tamil (Anjal), Tamil (Tamil 99), Telugu, Thai, Turkish, Ukrainian, Urdu, Vietnamese (Telex)
- **QuickType keyboard support with predictive input**
 English (Australia, Canada, India, Japan, Singapore, South Africa, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **QuickType keyboard support with multilingual input**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese – Simplified (Pinyin), Chinese – Traditional (Pinyin), French (France), French (Belgium), French (Canada), French (Switzerland), German (Germany), German (Austria), German (Switzerland), Italian, Japanese (Romaji), Portuguese (Brazil), Portuguese (Portugal), Spanish (Spain), Spanish (Latin America), Spanish (Mexico), Dutch (Belgium), Dutch (Netherlands), Hindi (Latin), Vietnamese
- **QuickType keyboard support with contextual suggestions**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese (Simplified), French (Belgium), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Italian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Arabic, Arabic (Najdi), Dutch (Belgium), Dutch (Netherlands), Hindi (Devanagari), Hindi (Latin), Russian, Swedish, Portuguese (Brazil), Turkish, Vietnamese
- **QuickPath keyboard support**
 English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Chinese (Simplified Pinyin QWERTY), Chinese (Traditional Pinyin QWERTY), French (Canada), French (France), French (Switzerland), German (Austria), German (Germany), German (Switzerland), Italian, Spanish (Latin America), Spanish (Mexico), Spanish (Spain), Portuguese (Brazil), Portuguese (Portugal), Dutch (Belgium), Dutch (Netherlands), Swedish, Vietnamese

- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese (Japan), Korean (Republic of Korea), Mandarin Chinese (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Türkiye)
- **Dictation languages**
English (Australia, Canada, India, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Cantonese (China mainland, Hong Kong), Mandarin Chinese (China mainland, Taiwan), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Spanish (Chile, Colombia, Mexico, Spain, U.S.), Portuguese (Brazil, Portugal), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian (Bokmål), Polish, Romanian, Russian, Shanghainese (China mainland), Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Monolingual dictionary support**
English (UK, U.S.), Chinese (Simplified, Traditional, Traditional – Hong Kong), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Idiom dictionary support**
Simplified Chinese, Traditional Chinese – English, Cantonese – English
- **Bilingual dictionary support**
Arabic – English, Bangla – English, Chinese (Simplified) – English, Chinese (Traditional) – English, Czech – English, Dutch – English, Finnish – English, French – English, French – German, German – English, Gujarati – English, Hindi – English, Hungarian – English, Indonesian – English, Italian – English, Japanese – English, Japanese – Chinese (Simplified), Korean – English, Polish – English, Portuguese – English, Russian – English, Spanish – English, Tamil – English, Telugu – English, Thai – English, Urdu – English, Vietnamese – English
- **Thesaurus**
English (UK, U.S.), Chinese (Simplified)
- **Spell check**
English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Spanish (Latin America, Mexico, Spain), Arabic, Arabic (Najdi), Bulgarian, Czech, Danish, Dutch (Netherlands, Belgium), Finnish, Greek, Hindi (Devanagari), Hungarian, Irish Gaelic, Norwegian (Bokmål, Nynorsk), Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Swedish, Telugu, Turkish, Vietnamese

- **Apple Pay supported regions**

Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Brazil, Bulgaria, Canada, China mainland,¹⁰ Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Greece, Greenland, Guernsey, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao, Malaysia, Malta, Mexico, Moldova, Monaco, Montenegro, Netherlands, New Zealand, Norway, Palestine, Peru, Poland, Portugal, Qatar, Romania, Russia, San Marino, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, UK, Ukraine, United Arab Emirates, U.S., Vatican City

Video Playback

- Supported formats include HEVC and H.264
- Supports Dolby Vision and HDR10 content

Audio Playback

- Supported formats include AAC, MP3, Apple Lossless, FLAC, Dolby Digital, Dolby Digital Plus, and Dolby Atmos
- User-configurable maximum volume limit

Mail Attachment Support

Viewable document types

.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz; .pkpass (Wallet)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

iPad and the Environment

iPad is designed with the following features to reduce its environmental impact.¹¹

[See the iPad Product Environmental Report](#)

Made with better materials

- 100% recycled aluminum in the enclosure
- 100% recycled rare earth elements

- 100% recycled tin in the solder of multiple printed circuit boards
- 100% recycled gold in the plating of multiple printed circuit boards
- 100% recycled copper in the foil of the main logic board
- 35% or more recycled plastic in multiple components

Energy efficient

ENERGY STAR® certified¹²

Smarter chemistry¹³

- Arsenic-free display glass
- Mercury-, BFR-, PVC-, and beryllium-free

Green manufacturing

- Apple's Zero Waste Program helps suppliers eliminate waste sent to landfill
- All final assembly supplier sites are transitioning to 100% renewable energy for Apple production

Responsible packaging

- 100% of virgin wood fiber comes from responsibly managed forests
- 97% fiber-based packaging and no outer plastic wrap

Apple and the Environment

We're committed to making our products without taking from the earth, and to become carbon neutral across our entire business, including products, by 2030.

[See Apple's commitment](#)

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1. Available space is less and varies due to many factors. Storage capacity subject to change based on software version, settings, and iPad model. 1GB = 1 billion bytes; 1TB = 1 trillion bytes. Actual formatted capacity less.
 2. Size and weight vary by configuration and manufacturing process.
 3. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
 4. Data plan required. 5G, Gigabit LTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular.
 5. Cellular data plan is sold separately. The model you purchase is configured to work with a particular cellular network technology. Check with your carrier for compatibility and cellular data plan availability.
 6. Not all carriers support eSIM. See your carrier for details. Not available in China mainland.

7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. Testing conducted by Apple in September 2022 using preproduction iPad (10th generation) units and software. Testing consisted of full battery discharge while performing each of the following tasks: video playback and internet browsing using Wi-Fi or cellular data network (cellular models subscribed to LTE and 5G carrier networks). Video content was a repeated 2-hour 23-minute movie purchased from the iTunes Store. Internet over Wi-Fi and cellular data network tests were conducted using dedicated web servers, browsing snapshot versions of 20 popular web pages. All settings were default except: Wi-Fi was associated with a network (except for internet browsing over cellular data network); the Wi-Fi feature Ask to Join Networks and Auto-Brightness were turned off; Brightness was set to 50%; and WPA2 encryption was enabled. Battery life depends on device settings, usage, network, and many other factors. Battery tests are conducted using specific iPad units; actual results may vary.
9. Wireless broadband recommended; fees may apply.
10. In China mainland, you can use Apple Pay on the web in Safari only on compatible iPhone and iPad models using iOS 11.2 or later.
11. Data accurate as of product launch.
12. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
13. Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end-customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for two-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.

Published Date: Apr 18, 2023

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Documentation



iPad Air 11-inch (M3) - Tech Specs

Year introduced: 2025

[Identify your iPad model](#)

Finish

- Blue
- Purple
- Starlight
- Space Gray

Capacity¹

128GB

<https://support.apple.com/en-us/122241>

1/15

256GB

512GB

1TB

Size and Weight²

Wi-Fi models

Width: 7.02 inches (178.5 mm)

Height: 9.74 inches (247.6 mm)

Depth: 0.24 inch (6.1 mm)

Weight: 1.01 pounds (460 grams)

Wi-Fi + Cellular models

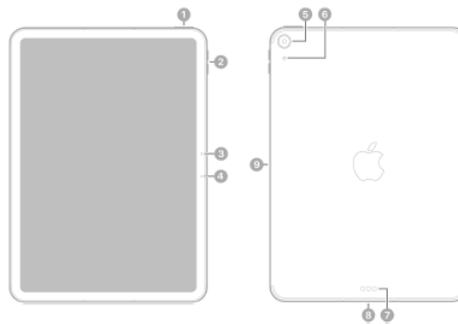
Width: 7.02 inches (178.5 mm)

Height: 9.74 inches (247.6 mm)

Depth: 0.24 inch (6.1 mm)

Weight: 1.01 pounds (460 grams)

Buttons and Connectors



1. Top button/Touch ID
2. Volume buttons
3. Front camera
4. Microphone
5. Rear camera
6. Microphone
7. Smart Connector
8. USB-C connector
9. Magnetic connector for Apple Pencil

In the Box

iPad Air

USB-C Charge Cable (1 meter)

20W USB-C Power Adapter

Display

Liquid Retina display

<https://support.apple.com/en-us/122241>

2/15

LED backlit Multi-Touch display with IPS technology
 2360-by-1640-pixel resolution at 264 ppi
 Wide color (P3)
 True Tone
 Fingerprint-resistant oleophobic coating
 Fully laminated
 Antireflective coating
 500 nits brightness
 Supports **Apple Pencil Pro**, **Apple Pencil (USB-C)**
 Apple Pencil hover

The 11-inch iPad Air display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured diagonally as a rectangle, the 11-inch iPad Air is 10.86 inches. Actual viewable area is less.

Chip

Apple M3 chip

8-core CPU with 4 performance cores and 4 efficiency cores
 9-core GPU
 Hardware-accelerated ray tracing
 16-core Neural Engine
 8GB RAM

Media Engine

Hardware-accelerated 8K HEVC, 4K H.264, ProRes, and ProRes RAW
 Video decode engine
 Video encode engine
 ProRes encode and decode engine
 AV1 decode

Apple Intelligence³

Built into your iPad, Apple Intelligence is the personal intelligence system that helps you write, express yourself, and get things done effortlessly. With groundbreaking privacy protections, it gives you peace of mind that no one else can access your data — not even Apple.

[Learn more about Apple Intelligence](#)

Camera

12MP Wide camera, $f/1.8$ aperture
 Digital zoom up to 5x
 Five-element lens
 Panorama (up to 63MP)
 Sapphire crystal lens cover

Autofocus with Focus Pixels
Smart HDR 4
Wide color capture for photos and Live Photos
Photo geotagging
Auto image stabilization
Burst mode
Image formats captured: HEIF and JPEG

Video Recording

4K video recording at 24 fps, 25 fps, 30 fps, or 60 fps
1080p HD video recording at 25 fps, 30 fps, or 60 fps
720p HD video recording at 30 fps
Slo-mo video support for 1080p at 120 fps or 240 fps
Time-lapse video with stabilization
Extended dynamic range for video up to 30 fps
Cinematic video stabilization (4K, 1080p, and 720p)
Continuous autofocus video
Playback zoom
Video formats captured: HEVC and H.264

Front Camera

Landscape 12MP Center Stage camera
f/2.0 aperture
Smart HDR 4
1080p HD video recording at 25 fps, 30 fps, or 60 fps
Time-lapse video with stabilization
Extended dynamic range for video up to 30 fps
Cinematic video stabilization (1080p and 720p)
Wide color capture for photos and Live Photos
Lens correction
Retina Flash with True Tone
Auto image stabilization
Burst mode

Video Calling⁴

FaceTime video
Center Stage
iPad to any FaceTime-enabled device over Wi-Fi or cellular
Share experiences like movies, TV, music, and other apps in a FaceTime call with SharePlay
Screen sharing
Portrait mode in FaceTime video
Spatial Audio
Voice Isolation and Wide Spectrum microphone modes

Audio Calling⁴	<p>FaceTime audio</p> <p>iPad to any FaceTime-enabled device over Wi-Fi or cellular</p>
Speakers	Landscape stereo speakers
Microphones	Dual microphones for calls, video recording, and audio recording
Cellular and Wireless	<p>All models</p> <p>Wi-Fi 6E (802.11ax) with 2x2 MIMO⁵</p> <p>Simultaneous dual band</p> <p>Bluetooth 5.3</p> <p>Wi-Fi + Cellular models</p> <p>5G (sub-6 GHz) with 4x4 MIMO</p> <p>Gigabit LTE with 4x4 MIMO</p> <p>Model A3267 and A3269:</p> <p>5G NR (Bands n1, n2, n3, n5, n7, n8, n12, n14, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n70, n71, n75, n76, n77, n78, n79)⁵</p> <p>FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 11, 12, 13, 14, 17, 18, 19, 20, 21, 25, 26, 28, 29, 30, 32, 66, 71)</p> <p>TD-LTE (Bands 34, 38, 39, 40, 41, 42, 48)</p> <p>UMTS/HSPA/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)</p> <p>Data only⁶</p> <p>Wi-Fi calling⁵</p> <p>eSIM⁷</p> <p>Learn more about cellular</p> <p>For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular.</p>
SIM Card	<p>eSIM⁷</p> <p>iPad Air uses advanced eSIM technology for more convenience and security (not compatible with physical SIM cards)</p> <p>Learn more about eSIM</p> <p>Learn more about traveling with eSIM</p>
Location	<p>All models</p> <p>Digital compass</p>

	<p>Wi-Fi</p> <p>iBeacon microlocation</p> <p>Wi-Fi + Cellular models</p> <p>GPS/GNSS</p> <p>Cellular</p>
Sensors	<p>Touch ID</p> <p>Three-axis gyro</p> <p>Accelerometer</p> <p>Barometer</p> <p>Ambient light sensor</p>
Touch ID	<p>Unlock iPad</p> <p>Secure personal data within apps</p> <p>Make purchases from the iTunes Store, App Store, and Apple Books</p>
Apple Pay	<p>Pay with your iPad using Touch ID within apps and on the web</p> <p>Send and receive money in Messages</p> <p>Learn more about Apple Pay.</p>
Siri⁸	<p>Get help with everyday tasks like sending messages, setting reminders, and more</p> <p>Activate hands-free with only your voice using “Siri” or “Hey Siri,” or use Type to Siri</p> <p>Protected by the strongest privacy of any intelligent assistant</p> <p>Powered by Apple Intelligence, Siri is more natural and helpful</p> <p>Learn more about Siri</p>
Charging and Expansion	<p>USB-C port with support for:</p> <p>Charging</p> <p>DisplayPort</p> <p>USB 3 (up to 10Gb/s)</p>
Display Support	<p>Supports full native resolution on the built-in display at millions of colors</p> <p>Supports one external display with up to 6K resolution at 60Hz</p>

Digital video output

Native DisplayPort output over USB-C

VGA, HDMI, and DVI output supported using adapters (sold separately)

Video mirroring

Up to 4K AirPlay for mirroring, photos, and video out to Apple TV (2nd generation or later) or AirPlay-enabled smart TV

Video mirroring and video out support through USB-C Digital AV Multiport Adapter and USB-C VGA Multiport Adapter (adapters sold separately)

Power and Battery⁹

Built-in 28.93-watt-hour rechargeable lithium-polymer battery

All models

Up to 10 hours of surfing the web on Wi-Fi or watching video

Charging via power adapter or USB-C to computer system

Wi-Fi + Cellular models

Up to 9 hours of surfing the web using cellular data network

Operating System**iPadOS**

iPadOS comes with powerful features and built-in apps designed to take advantage of the unique capabilities of iPad.

[Learn more about iPadOS](#)

[iPad User Guide](#)

Accessibility

Built-in accessibility features supporting vision, mobility, hearing, and cognitive disabilities help you get the most out of your iPad.

[Learn more about Accessibility](#)

Features Include:

VoiceOver	AssistiveTouch	Subtitles and
Zoom	Siri and Dictation	Closed
Magnifier	Type to Siri	Captioning
Spoken Content	Real-Time Text	Live Captions
Voice Control	Audio	
Switch Control	Descriptions	

Built-in Apps

App Store	Home	Photos
Books	iTunes Store	Podcasts
Calculator	Magnifier	Reminders
Calendar	Mail	Safari
Camera	Maps	Settings
Clock	Measure	Shortcuts
Contacts	Messages	Stocks
FaceTime	Music	Tips
Files	News	Translate
Find My	Notes	TV
Freeform	Passwords	Voice Memos
Health	Photo Booth	Weather

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, Clips, and Apple Store app are preinstalled on iPad.

Pages	GarageBand	Swift
Numbers	Apple Store	Playgrounds
Keynote	Clips	Support
iMovie		

System Requirements

Apple Account (required for some features)

Internet access¹⁰

Syncing to a Mac or PC requires:

macOS Catalina 10.15 or later using the Finder

macOS High Sierra 10.13 through macOS Mojave 10.14.6 using iTunes 12.9 or later

Windows 10 or later using iTunes 12.12.10 or later (free download from apple.com/itunes/download)

Languages

Language support

Arabic, Bulgarian, Catalan, Chinese (Simplified, Traditional, Traditional – Hong Kong), Croatian, Czech, Danish, Dutch, English (Australia, India, UK, U.S.), Finnish, French (Canada, France), German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Kazakh, Korean, Lithuanian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Slovenian, Spanish (Latin America, Spain, U.S.), Swedish, Thai, Turkish, Ukrainian, Vietnamese

QuickType keyboard support

Ainu, Akan, Albanian, Amharic, Apache (Western), Arabic, Arabic (Najdi), Armenian, Assamese, Assyrian, Azerbaijani, Bangla (Alphabetic, InScript, Transliteration), Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Phonetic, Stroke, Sucheng), Catalan, Cherokee, Chickasaw, Chinese –

Simplified (Handwriting, Pinyin – QWERTY, Pinyin – 10-Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin – QWERTY, Pinyin – 10-Key, Shuangpin, Stroke, Sucheng, Zhuyin), Choctaw, Chuvash, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch (Belgium, Netherlands), Dzongkha, Emoji, English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Estonian, Faroese, Filipino, Finnish, Flemish, French (Belgium, Canada, France, Switzerland), Fula (Adlam), Georgian, German (Austria, Germany, Switzerland), Greek, Gujarati (Alphabetic, InScript, Transliteration), Hausa, Hawaiian, Hebrew, Hindi (Alphabetic, InScript, Transliteration), Hmong (Pahawh), Hungarian, Icelandic, Igbo, Inari Sámi, Indonesian, Ingush, Irish Gaelic, Italian, Japanese (Kana, Romaji), Kabyle, Kannada (InScript, QWERTY, Transliteration), Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Kildin Sámi, Konkani (Devanagari), Korean (2-Set, 10-Key), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Liangshan Yi, Lithuanian, Lule Sámi, Lushootseed, Macedonian, Maithili, Malay (Arabic, Latin), Malayalam (Alphabetic, InScript, Transliteration), Maltese, Mandaic, Manipuri (Bengali, Meetei Mayek), Māori, Marathi (InScript, QWERTY, Transliteration), Mi'kmaq, Mongolian, Mvskoke, Navajo, Nepali, N'Ko, North Sámi, Norwegian (Bokmål, Nynorsk), Odia (Alphabetic, InScript), Osage, Pashto, Persian, Persian (Afghanistan), Pite Sámi, Polish, Portuguese (Brazil, Portugal), Punjabi (Alphabetic, InScript, QWERTY, Transliteration), Rejang, Rohingya, Romanian, Russian, Samoan, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Skolt Sámi, Slovak, Slovenian, South Sámi, Spanish (Latin America, Mexico, Spain), Swahili, Swedish, Tajik, Tamazight (Standard Moroccan), Tamil (Anjal, Tamil 99, Transliteration), Telugu (Alphabetic, InScript, QWERTY, Transliteration), Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Ume Sámi, Urdu (Alphabetic, QWERTY, Transliteration), Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese (Telex, VIQR, VNI), Wancho, Welsh, Wolastoqey, Yiddish, Yoruba

QuickType keyboard support with autocorrection

Arabic, Arabic (Najdi), Bangla (Alphabetic, InScript, Transliteration), Bulgarian, Catalan, Cherokee, Chinese – Simplified (Pinyin – QWERTY), Chinese – Traditional (Pinyin – QWERTY), Chinese – Traditional (Standard, Zhuyin-Grid), Croatian, Czech, Danish, Dutch (Belgium, Netherlands), English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Estonian, Filipino, Finnish, French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Greek, Gujarati (Alphabetic, InScript, Transliteration), Hawaiian, Hebrew, Hindi (Alphabetic, InScript, Transliteration), Hungarian, Icelandic,

Indonesian, Irish Gaelic, Italian, Japanese (Kana, Romaji), Korean (2-Set, 10-Key), Latvian, Lithuanian, Macedonian, Malay, Marathi (Alphabetic, InScript, Transliteration), Norwegian (Bokmål, Nynorsk), Persian, Persian (Afghanistan), Polish, Portuguese (Brazil, Portugal), Punjabi (Alphabetic, InScript, QWERTY, Transliteration), Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Spanish (Latin America, Mexico, Spain), Swedish, Tamil (Alphabetic, Anjal, Tamil 99, Transliteration), Telugu, Thai, Turkish, Ukrainian, Urdu (Alphabetic, QWERTY, Transliteration), Vietnamese (Telex)

QuickType keyboard support with predictive typing

Arabic, Arabic (Najdi), Bangla, Cantonese (Traditional), Chinese (Simplified, Traditional), Czech, Danish, Dutch (Belgium, Netherlands), English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Greek, Gujarati, Hebrew, Hindi, Icelandic, Indonesian, Italian, Japanese, Korean, Lithuanian, Marathi, Norwegian (Bokmål, Nynorsk), Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Slovenian, Spanish (Latin America, Mexico, Spain), Swedish, Tamil, Telugu, Thai, Turkish, Vietnamese

QuickType keyboard support with multilingual typing

Chinese (Simplified – Pinyin, Traditional – Pinyin), Dutch (Belgium, Netherlands), English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Hebrew, Hindi (Latin), Italian, Japanese (Romaji), Polish, Portuguese (Brazil, Portugal), Romanian, Spanish (Latin America, Mexico, Spain), Turkish, Vietnamese

QuickType keyboard support with contextual suggestions

Arabic, Arabic (Najdi), Chinese (Simplified), Dutch (Belgium, Netherlands), English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Hindi (Devanagari, Latin), Italian, Portuguese (Brazil), Russian, Spanish (Latin America, Mexico, Spain), Swedish, Turkish, Vietnamese

QuickPath keyboard support

Arabic, Chinese (Simplified – Pinyin – QWERTY, Traditional – Pinyin – QWERTY), Dutch (Belgium, Netherlands), English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Hebrew, Italian, Korean, Polish,

Portuguese (Brazil, Portugal), Romanian, Spanish (Latin America, Mexico, Spain), Swedish, Vietnamese

Siri languages

Arabic (Saudi Arabia, United Arab Emirates), Cantonese (China mainland, Hong Kong), Danish (Denmark), Dutch (Belgium, Netherlands), English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Finnish (Finland), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Hebrew (Israel), Italian (Italy, Switzerland), Japanese (Japan), Korean (South Korea), Malay (Malaysia), Mandarin Chinese (China mainland, Taiwan), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Spanish (Chile, Mexico, Spain, U.S.), Swedish (Sweden), Thai (Thailand), Turkish (Türkiye)

Dictation languages

Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Cantonese (China mainland, Hong Kong), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), English (Australia, Canada, India, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Finnish, French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Switzerland), Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian (Italy, Switzerland), Japanese, Korean, Malay, Mandarin Chinese (China mainland, Taiwan), Norwegian (Bokmål), Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghainese (China mainland), Slovak, Spanish (Latin America, Mexico, Spain, U.S.), Swedish, Thai, Turkish, Ukrainian, Vietnamese

Monolingual dictionary support

Bulgarian, Catalan, Chinese (Simplified, Traditional, Traditional – Hong Kong), Danish, Dutch, English (UK, U.S.), French, German, Greek, Hebrew, Hindi, Italian, Japanese, Korean, Malay, Norwegian, Polish, Portuguese, Punjabi, Romanian, Russian, Spanish, Swedish, Thai, Turkish

Idiom dictionary support

Cantonese – English, Chinese (Simplified) – English, Chinese (Traditional) – English

Bilingual dictionary support

Arabic – English, Bangla – English, Cantonese (Traditional) – English, Chinese (Simplified) – English, Chinese (Simplified) – Japanese, Croatian – English, Czech – English, Danish – English, Dutch – English, Finnish – English, French – English, French – German, German – English, Greek – English, Gujarati – English,

Hindi – English, Hungarian – English, Indonesian – English, Italian – English, Japanese – English, Kannada – English, Kazakh – English, Korean – English, Malay – English, Malayalam – English, Norwegian – English, Polish – English, Portuguese – English, Punjabi – English, Russian – English, Slovak – English, Spanish – English, Swedish – English, Tamil – English, Telugu – English, Thai – English, Turkish – English, Ukrainian – English, Urdu – English, Vietnamese – English

Thesaurus

Chinese (Simplified), English (UK, U.S.)

Spell check

Arabic, Arabic (Najdi), Bulgarian, Czech, Danish, Dutch (Belgium, Netherlands), English (Australia, Canada, India, Japan, New Zealand, Singapore, South Africa, UK, U.S.), Finnish, French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Greek, Hindi (Devanagari), Hungarian, Irish Gaelic, Italian, Norwegian (Bokmål, Nynorsk), Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Spanish (Latin America, Mexico, Spain), Swedish, Telugu, Turkish, Vietnamese

Apple Pay supported regions

Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Brazil, Bulgaria, Canada, Chile, China mainland,¹¹ Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, El Salvador, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Greece, Greenland, Guatemala, Guernsey, Honduras, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Jordan, Kazakhstan, Kuwait, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao, Malaysia, Malta, Mexico, Moldova, Monaco, Montenegro, Morocco, Netherlands, New Zealand, Norway, Palestine, Panama, Peru, Poland, Portugal, Qatar, Romania, San Marino, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, UK, Ukraine, United Arab Emirates, U.S., Vatican City, Vietnam

Video Playback

Supported formats include HEVC, H.264, AV1, and ProRes

HDR with Dolby Vision, HDR10+/HDR10, and HLG

Audio Playback

Supported formats include AAC, MP3, Apple Lossless, FLAC, Dolby Digital, Dolby Digital Plus, and Dolby Atmos

Spatial Audio playback

User-configurable maximum volume limit

Mail Attachment Support

Viewable document types

.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz; .pkpass (Wallet)

Environmental Requirements

Operating ambient temperature:

32° to 95° F (0° to 35° C)

Nonoperating temperature:

-4° to 113° F (-20° to 45° C)

Relative humidity:

5% to 95% noncondensing

Operating altitude:

tested up to 10,000 feet (3000 m)

iPad Air and the Environment

iPad Air is designed to reduce environmental impact:¹²

[See the iPad Air Product Environmental Report \(PDF\)](#)

Progress toward Apple 2030

More than 30% recycled content¹³

Over 35% of manufacturing electricity sourced from renewable electricity¹⁴

Over 35% emissions reduction against business-as-usual scenario as modeled by Apple¹⁵

[See Apple's commitment](#)

Materials

100% recycled aluminum in the enclosure

100% recycled cobalt and over 95% recycled lithium in the battery

100% recycled copper in multiple printed circuit boards

100% recycled gold wire in all cameras

100% recycled gold in the plating of all Apple-designed printed circuit boards and all connectors

100% recycled rare earth elements in all magnets

100% recycled tin in the solder of multiple printed circuit boards

15% recycled glass in the cover glass

At least 20% recycled plastic in 12 components

100% fiber-based packaging¹⁶

39% recycled content in fiber-based packaging

Energy

Over 35% of manufacturing electricity for iPad Air is sourced from renewable electricity

ENERGY STAR® certified¹⁷

Waste

No established final assembly sites generate waste sent to landfill as part of Apple's Zero Waste Program

Smarter chemistry¹⁸

Arsenic-free glass

Mercury-, BFR-, and PVC-free

1. Available space is less and varies due to many factors. Storage capacity subject to change based on software version, settings, and iPad model. 1GB = 1 billion bytes; 1TB = 1 trillion bytes. Actual formatted capacity less.
2. Size and weight vary by configuration and manufacturing process.
3. Apple Intelligence is available in beta. Some features may not be available in all regions or languages. For feature and language availability and system requirements, see support.apple.com/121115.
4. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
5. Wi-Fi 6E available in countries and regions where supported. Data plan required. 5G, Gigabit LTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on 5G and LTE support, contact your carrier and see apple.com/ipad/cellular.
6. Cellular data plan is sold separately. The model you purchase is configured to work with a particular cellular network technology. Check with your carrier for compatibility and cellular data plan availability.
7. Not all carriers support eSIM. See your carrier for more details. For Model A3270 and A3271, contact China Unicom for more details.
8. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
9. Testing conducted by Apple in January and February 2025 using preproduction iPad Air 11-inch (M3) and iPad Air 13-inch (M3) units. Testing consisted of full battery discharge while performing each of the following tasks: video playback and internet browsing using Wi-Fi or cellular data network (cellular models subscribed to LTE and 5G carrier networks). Video content was a repeated 2-hour 23-minute movie purchased from the iTunes Store. Internet over Wi-Fi and cellular data network tests were conducted using dedicated web servers, browsing snapshot versions of 20 popular web pages. All settings were default except: Wi-Fi was associated with a network (except for internet browsing over cellular data network); the Wi-Fi feature Ask to Join Networks and Auto-Brightness were turned off; Brightness was set to 50%; and WPA2 encryption was enabled. Battery life depends on device settings, usage, network, and many other factors. Battery tests are conducted using specific iPad units; actual results may vary.
10. Wireless broadband recommended; fees may apply.
11. In China mainland, you can use Apple Pay on the web in Safari only on compatible iPhone and iPad models using iOS 11.2 or later.
12. Data accurate as of product launch.
13. Product recycled or renewable content is the mass of certified recycled material relative to the overall mass of the device, not including packaging or in-box accessories.
14. We estimate the percentage of electricity-related emissions in our manufacturing that is sourced from low-carbon electricity by attributing to our carbon model low-carbon energy procured by our suppliers in the prior fiscal year, based on the supplier manufacturing allocations at time of product launch. This calculation assesses the suppliers for iPad Air. Included in this number is only low-carbon electricity that Apple or its suppliers have procured as part of Apple's Supplier Clean Energy Program.
15. Carbon reductions are calculated against a product-specific business-as-usual scenario as modeled by Apple: 1) No use of clean electricity for manufacturing or product use, beyond what is already available on the latest modeled grid (based on regional emissions factors). 2) Apple's carbon intensity of key materials as of 2015 (our baseline year for our 2030 product carbon neutrality goal). Carbon intensity of materials reflects use of recycled content and production technology. 3) Apple's average mix of transportation modes (air, rail, ocean, ground) by product line and by region across three years (fiscal years 2017 to 2019) to best capture the baseline transportation emissions of our products.

- 16. Based on retail packaging as shipped by Apple. Breakdown of U.S. retail packaging by weight. Adhesives, inks, and coatings are excluded from our calculations of plastic content and packaging weight.
- 17. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
- 18. Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end-customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for two-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.

Some features may not be available for all countries or all areas. [View complete list.](#)

Helpful? Yes No

Support iPad Air 11-inch (M3) - Tech Specs

9.11.5 Michigan State Police

Tech Specs – Dell Latitude 5430 Rugged

- **Processor**

11th Generation Intel® Core™ i5-1135G7 (8 MB cache, 4 cores, 8 Threads, 2.40 GHz to 3.80 GHz, 28 W)

11th Generation Intel® Core™ i5-1145G7 vPro® (8 MB cache, 4 cores, 8 Threads, 2.60 GHz to 4.0 GHz, 28 W)

11th Generation Intel® Core™ i7-1185G7 vPro® (12 MB cache, 4 cores, 8 Threads, 3.0 GHz to 4.30 GHz, 28 W)

- **Operating System**

(Dell Technologies recommends Windows 11 Pro for business)

Windows 11 Home, 64-bit

Windows 11 Pro, 64-bit

Ubuntu® Linux® 20.04 LTS, 64-bit

- **Graphics Card**

Integrated:

Intel® Iris Xe Graphics

Discrete: (optional)

NVIDIA® T500, 4 GB GDDR6

- **Display**

14-inch, FHD, 1920 x 1080, 60 Hz, anti-glare, non-touch, 100% Srgb, 400 nits, wide-viewing angle

14-inch, FHD, 1920 x 1080, 60 Hz, touch, 100% sRGB, 1100 nits, wide-viewing angle

- **Memory**

8 GB, 1 x 8 GB, DDR4, 3200 MHz, non-ECC

16 GB, 2 x 8 GB, DDR4, 3200 MHz, non-ECC, dual-channel

32 GB, 2 x 16 GB, DDR4, 3200 MHz, non-ECC, dual-channel

64 GB, 2 x 32 GB, DDR4, 3200 MHz, non-ECC, dual-channel

- **Storage**

M.2 2230, 128 GB, PCIe NVMe Gen3 x4, Class 35 SSD

M.2 2230, 256 GB, PCIe NVMe Gen3 x4, Class 35 SSD

M.2 2230, 512 GB, PCIe NVMe Gen3 x4, Class 35 SSD
M.2 2230, 1 TB, PCIe NVMe Gen3 x4, Class 35 SSD
M.2 2280, 256 GB, PCIe NVMe Gen4 x4, Class 40 SSD
M.2 2280, 512 GB, PCIe NVMe Gen4 x4, Class 40 SSD
M.2 2280, 1 TB, PCIe NVMe Gen4 x4, Class 40 SSD
M.2 2280, 2 TB, PCIe NVMe Gen4 x4, Class 40 SSD
M.2 2280, 512 GB, PCIe NVMe Gen4 x4, Class 40 SSD, self-encrypting drive

- **Color**

Maluck black, Matte

- **Microsoft Office**

Rugged Control Center
Dell Support Assist
Dell Support Center
Intel® WiFi Direct
Microsoft Office 30-days trial
Microsoft Office Home and Business 2021
Microsoft Office Professional 2021

- **Home and Small Business Security Solutions**

Optional Dell Data Security and Management Software
Dell BIOS Verification
Optional Dell Endpoint Security and Management Software
Dell Encryption Enterprise
Dell Encryption Personal
Intel BIOS Guard (BIOS anti-malware)
Intel TXT (Trusted Execution Technology)
Intel Total Memory Encryption (TME)

- **Protect your purchase - View Support offers below**

3 years warranty with mail-in service after remote diagnostics.
3 years ProSupport with Next Business Day on-site service
4 years ProSupport with Next Business Day on-site service
5 years ProSupport with Next Business Day on-site service
3 years ProSupport Plus with Next Business Day on-site service
4 years ProSupport Plus with Next Business Day on-site service
5 years ProSupport Plus with Next Business Day on-site service

- **Accidental Damage Service**

3 years Accidental Damage Service
4 years Accidental Damage Service
5 years Accidental Damage Service

- **Keyboard**

English US and Canada, Standard, Internal Sealed non-backlit Keyboard, 82 keys
English US and Canada, Standard, Internal Sealed RGB backlit Keyboard, 82 keys
English US and Canada, Rubberized backlit keyboard, 82 keys
English UK, Standard, Internal Sealed non-backlit Keyboard, 83 keys
English UK, Standard, Internal Sealed RGB backlit Keyboard, 83 keys
English UK, Rubberized backlit keyboard, 83 keys
Brazilian, Standard, RGB backlit Keyboard, 84 keys
Japan, Standard, RGB backlit Keyboard, 86 keys

- **Ports**

1 RJ45 Ethernet port
1 USB 3.2 Gen 1 port
1 USB 3.2 Gen 1 port with PowerShare
1 TBT4/USB 3.2 Gen 2 Type-C® port with PowerDelivery 3.0
1 TBT4/USB 3.2 Gen 2 Type-C® port with PowerDelivery 3.0 (optional)
1 HDMI 2.0 port
1 Serial RS-232 port
1 headset (headphone and microphone combo) port
1 Optional I/O bay (Choose from: RJ-45/USB Type-A/Native Serial/Fischer USB 3.0 9-pin/Blank)

- **Optical Drive**

No optical drive

- **Slots**

1 microSD-card slot
1 Nano SIM card slot
1 Smart card reader slot (optional)
1 kensington lock slot

- **Dimensions & Weight**

"Height (rear): 1.32 in. (33.60 mm)
Height (peak): 1.32 in. (33.60 mm)
Height (front): 1.32 in. (33.60 mm)
Width: 13.38 in. (340.00 mm),

Depth: 8.66 in. (220.00 mm)
Weight (minimum): 4.35 lb (1.97 kg)

- **Camera**

No camera/No microphone
720p at 30 fps, HD RGB camera (optional)
1080p at 30 fps, FHD RGB/IR camera (optional)

- **Audio and Speakers**

Stereo speakers with Waves MaxxAudio® Pro, 2 W x 2 = 4 W total (Realtek® ALC3254)

- **Chassis**

4K Carbon fiber with plastic resin and TPE (Thermoplastic Elastomer). Base material is Magnesium.

- **Wireless**

Wireless:

Intel® AX210, 2x2, 802.11ax
Qualcomm WCN6856, 2x2, 802.11ax, MU-MIMO, Bluetooth® wireless card

Mobile broadband:

Qualcomm SDX20 4G LTE, Up to 1.2 Gbps, 5x20 MHz
Qualcomm SDX55 5G, Up to 3 Gbps, 7x20 MHz
Discrete U-BLOX GPS (optional)
RF pass-through (for 5G, pass-through is at 4G speeds)

- **Primary Battery**

3-cell, 53.5 Wh, lithium ion, ExpressCharge™ (Supports up to two hot-swappable batteries)
3-cell, 53.5 Wh, lithium ion, Long Life Cycle (Supports up to two hot-swappable batteries)

- **Battery Life**

Up to 12 hours, 26 minutes

- **Regulatory**

Mil-Spec 810H tested, 3-foot drop
IP-53 rated
ENERGY STAR® 8.0 qualified Compliant
EPEAT Silver Registered available in select configurations and regions only
China CECP Compliant
China RoHS Compliant
China CEL Compliant
WEEE Compliant
EU RoHS Compliant

9.11.6 Server Specifications

The current network design is available upon request.

Dell PowerEdge R650

128 GB Memory / 108 GB Free

Intel Xeon Silver 4309Y 8 core processors (x2)

8.82 tb space / 5.2 TB free

Currently Vmware - Will be Hyper-V by the time any cad changes occur