

# 2024

## Product Guide

### 7"~14" Vehicle Mounted Computers

Winmate's 7" to 14" Vehicle Mounted Computers offer exceptional solutions for vehicular applications. They feature rugged and durable exteriors capable of withstanding extreme environments, including high temperatures, vibrations, and dust.

Winmate's Vehicle Mounted Computers are the ideal choice for improving efficiency, safety, and productivity, meeting the demands of modern vehicular computing needs.



# CONTENT



Why Winmate .....	4
Extensive Reach .....	4
Signature Services .....	5
Pioneering Automotive Innovation	
Success Stories .....	8
Overview .....	10
Application .....	11
FM Series .....	12
Form Factor.....	13
Product Specifications.....	14
M101EBK & FM10.....	15
FM10Q & FM12Q .....	16
FM12E.....	17
FM-V Series.....	18
Form Factor.....	19
Product Specifications.....	21
FM07M & FM07E.....	22
FM07P.....	23
FM10Q-V & FM10E-V.....	24
FM10AD-V.....	25
FM12Q-V & FM12E-V.....	26
FM12AD-V.....	27
FM14Q-V & FM14E-V.....	28
FM14AD-V.....	29

VMT Series .....	30
Form Factor .....	31
Product Specifications.....	33
M101TG & M101AD.....	34
M116TG& M116AD.....	35

# Why Winmate

- Depth of experience 30+ years
- Unmatched breadth of products and services
- More investments in R&D
- Market leader in multiple categories
- Extensive partner ecosystem
- Multiple innovation and workplace awards

## Extensive Reach

Scalable to meet any enterprise demands



**\$200M (USD)**

Global Sales



**15+**

**Offices**  
Across 45 countries



**400+**

**Patents**  
US and INTL patents issued  
and pending



**1,500+**

Employees Worldwide



**5,000+**

**Channel Partners**  
In over 100 countries



**50+**

**Distribution Channels**  
ODM, OEM, Direct, SI

# Co-creating for SaaS Business

Artificial  
intelligence

Dashboard  
Editor

Android  
APP design

Ensure you get the most out of AI, RFID and Winmate SW solutions



## Workflow and Design Consulting

Uncover critical business requirements



## Solution Jumpstart

Design a tangible proof-of-concept that visualizes what is possible



## Solution Validation

Assure that your existing systems are compatible with Winmate solutions



## Program Management

Speed up execution with administration, coordination, and customized project management



## Software Integration

Ensure the software powering your winmate solutions works seamlessly with your back-end IT systems



## Learning as a Service

Speed up user adoption with the training and support you need to get the most from your solution

# Featured for Your In-Vehicle Mount Computer

VMC & VMT Product guide





# Success Stories

## AMR Lift Truck

## Automate materials movement with safe and reliable task automation

### Background



Recent advancements in sensing, mapping, and navigation tech have enabled Automated Guided Vehicles (AGVs) and Autonomous Mobile Robots (AMRs) to supplant traditional forklifts in warehousing and intralogistics. AGVs ensure safety by operating in segregated zones, while AMR lift trucks use autonomous tech, including camera, LiDAR, and machine learning data, for agile navigation. Key AMR components include an HMI controller, computing unit, battery, motors, sensors, and cameras. AMR lift trucks shine with their dynamic path flexibility, offering cost-efficient and deployable solutions.

### Core



- 7 to 12 inches Android / Windows vehicle-mounted computers
- 8 to 15 inches G-Win VM series Panel PC

### Main Challenges



AMR controllers are built to withstand harsh indoor-to-outdoor material flow environments, ensuring stable performance even in high heat conditions. These controllers undergo rigorous testing to ensure their resilience in humid, dusty, and vibration-prone settings, minimizing device downtime. Additionally, AMRs require versatile computing devices with multiple I/O interfaces and wireless connectivity to seamlessly connect with cameras, sensors, and warehouse management systems for efficient data and location sharing.

### Why Winmate



Winmate Vehicle-Mounted Computers seamlessly fit most warehouse and heavy-duty vehicles. It features a set of programmable keys and a glove-friendly touchscreen to simplify the most complex operations. Each product has been tested based on the MIL-STD 810G/H against vibration, drop, and impact. Also, IP65 protection, optional waterproof connectors, temperature sensor, defroster, and optical bonding protect the computer against dust, water intake, and humidity.



FM14AD-V



FM12E-V



L156AD



FM10E-V



LiDAR Sensors



Simultaneous Localization and Mapping (SLAM)



Cameras



L156AD Rugged Laptop



Navigation



Communications



Data transfer



# Logistics

## Improve the efficiency of road cargo

### Background

It's this growing complexity in transportation management that's driving more logistics operations to explore their mobile options. Whether they want to monitor their assets and human resources, more efficiently route and schedule their trucks, or enhance the service levels provided by their customer-facing employees, shippers are turning to mobile tools to help achieve these and other goals.



### Core

■ Vehicle mounted computers



### Main Challenges

the power supply for these systems, primarily drawn from the vehicle itself, poses another challenge. The ability to harness and regulate this power source efficiently, ensuring it meets the specific requirements of the onboard equipment, is paramount. This entails not only maintaining a consistent supply but also safeguarding against potential voltage fluctuations or power surges that could disrupt system functionality. Lastly, the need to maintain a reliable wireless signal in remote or challenging locations is a vital consideration. Whether for data transmission, communication, or remote monitoring, maintaining connectivity is essential for real-time decision-making and data exchange. This challenge entails the deployment of robust antenna systems, signal boosters, and communication protocols that can withstand interference and environmental factors.



### Why Winmate

Winate's rugged computing solutions are designed to withstand high levels of vibration, ensuring the reliability and longevity of your equipment, even in the most demanding conditions. This durability is crucial for cargo trucks that may encounter rough roads and constant movement during long hours of operation. Uninterrupted 4G/LTE Connectivity: Winmate's VMCs provide seamless 4G/LTE connectivity without interruptions. This connectivity is essential for real-time data transfer, communication, and tracking, allowing you to monitor and manage your cargo trucks efficiently, regardless of their location.



M101EBK



FM10Q



# Overview

In today's fast-paced world, industries rely heavily on technology to optimize their operations and increase productivity. Among the many innovations in the market, Winmate Vehicle Mounted Computers have proven to be a game-changer for businesses in various sectors. These rugged and reliable devices are specifically designed to withstand challenging environments and offer a wide range of benefits, making them an ideal solution for logistics, transportation, and industrial applications.

## ■ Rugged Design for Unmatched Durability

Winate's Vehicle Mounted Computers are built with ruggedness in mind. They are constructed to endure extreme temperatures, vibrations, and dust commonly encountered in demanding environments. This robust design ensures that the devices continue to perform optimally, even in the harshest conditions, making them ideal for field applications, warehouse management, and logistics operations.

## ■ Seamless Integration and Customization

Winmate understands that each industry has unique requirements. Therefore, their Vehicle Mounted Computers are designed to offer seamless integration with existing systems and applications. This adaptability allows businesses to streamline processes, reduce implementation time, and ensure compatibility with their specific workflows.

■ Moreover, Winmate offers customization options, enabling companies to tailor the devices to suit their exact needs. From display sizes and processing power to peripheral connectivity, businesses can choose from a range of configurations to achieve the perfect fit for their operations.

## High-Performance Computing on the Move

Equipped with powerful processors and ample memory, Winmate Vehicle Mounted Computers provide high-performance computing on the go. With the ability to run resource-intensive applications smoothly, these devices empower workers to access real-time information, make quick decisions, and carry out tasks efficiently.

## Features:

- Platform: Windows-based and Android-based
- Touch: Resistive / P-CAP Touch
- Power: 10~60V Wide power input with ignition control
- Support RAM / VESA mount
- Application: Urban Waste Collection, Warehouse and Logistics



# Application

Winmate offers a range of Vehicle Mounted Computer (VMC) solutions for various industries, including logistics, transportation, and manufacturing. These VMCs are designed to provide real-time data collection, monitoring, and control capabilities for vehicles.

## **Fleet Management Software :**

Fleet management software is essential for tracking and managing a fleet of vehicles. It can help monitor vehicle locations, routes, fuel consumption, and maintenance schedules. Winmate may offer or recommend third-party fleet management software solutions that are compatible with their VMCs.

## **Navigation and GPS Software:**

For transportation and logistics companies, navigation and GPS software can be crucial. These applications help drivers navigate efficiently, plan routes, avoid traffic, and optimize delivery schedules. Winmate VMCs often come with GPS capabilities and support for navigation software.

## **Warehouse Management Software:**

In warehouse and distribution environments, Winmate VMCs can be integrated with warehouse management software (WMS) to track inventory, manage orders, and streamline operations. The VMCs serve as a data collection and input tool for warehouse staff.

## **Telematics and Vehicle Diagnostics :**

Telematics software provides real-time data on vehicle performance, health, and driver behavior. Winmate VMCs can be used to collect and transmit this data for analysis, helping fleet managers make informed decisions and maintain their vehicles.

## **Barcode Scanning and RFID Applications:**

Winmate VMCs are often equipped with barcode scanners or RFID readers for data collection. You may need software applications to process and manage barcode or RFID data for inventory tracking, asset management, or quality control.

## **Customized Industry-Specific Applications :**

Depending on your industry, Winmate or third-party developers may offer specialized software applications tailored to your unique needs. These could include applications for agriculture, construction, mining, or other specialized fields.



# FM Series

## With Vehicle Docking

**Windows**

**Android**

**8 inch**

**M101EKB**



**Intel® Celeron® N6211**

**N/A**

**10 inch**

**FM10E**



**Intel® Atom® x6413E  
Elkhart lake**

**FM10Q**



**Snapdragon™ 660  
Qualcomm**

**12 inch**

**FM12E**



**Intel® Atom® x6413E  
Elkhart lake**

**FM12Q**

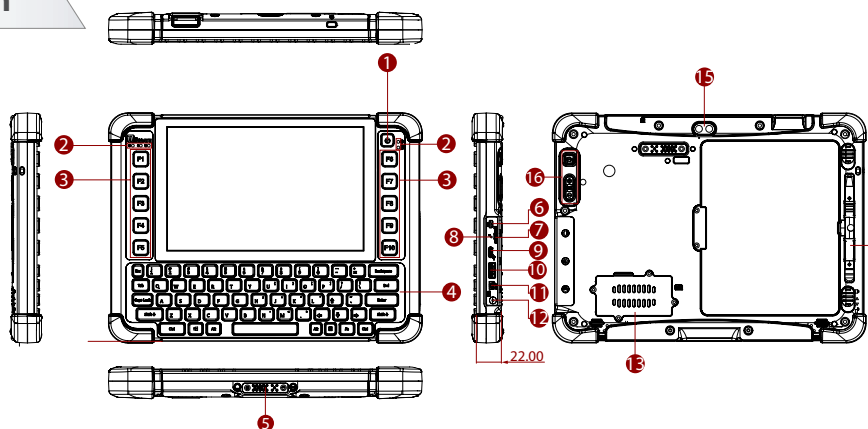


**Snapdragon™ 660  
Qualcomm**

# Form Factor

## M101EKB

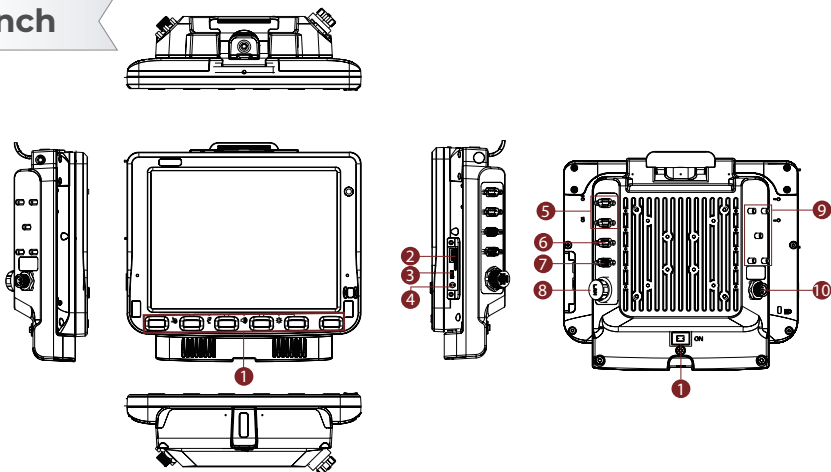
8 inch



No.	Description	No.	Description
1	Power Switch	9	USB Type-C
2	LED indicators	10	USB Type-A
3	Function Buttons	11	Audio
4	QWERTY Keypad	12	Power Input
5	Docking Connector	13	LTE Module/ SIM Card Slot
6	Micro HDMI	14	Rear Camera
7	Micro SD Card Slot	15	Touch Pen Slot
8	Reset Button	16	Function Buttons

## FM10Q/ FM10E

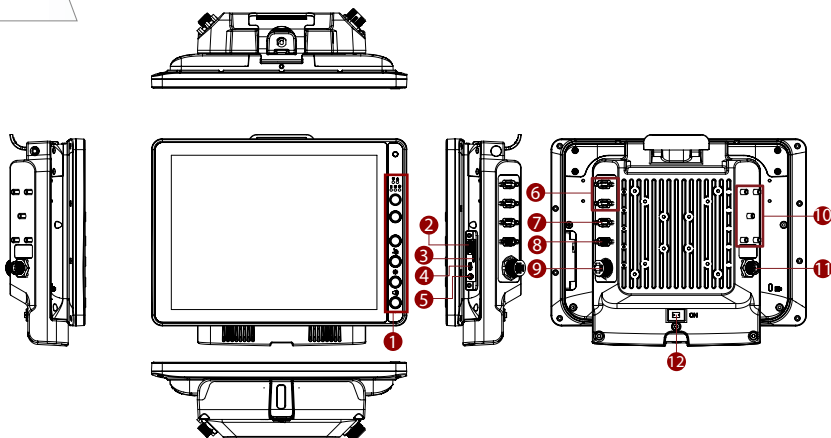
10 inch



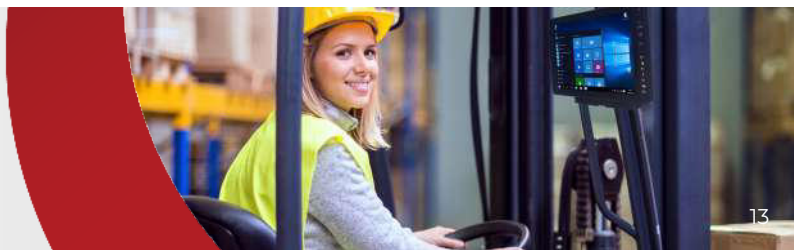
No.	Description	No.	Description
1	Function Button	7	CAN / Audio
2	SD Card Slot / Dual-Nano SIM Card Slot	8	LAN
3	USB Type-A	9	Reserved Antenna
4	Power Input	10	Power Input
5	COM	11	Power Switch
6	USB Type-A		

## FM12Q/ FM12E

12 inch



No.	Description	No.	Description
1	Function Button	7	USB Type-A
2	SD Card Slot	8	CAN / Audio
3	SIM Card Slot	9	LAN
4	USB Type-C	10	Reserved Antenna
5	Power Input	11	Power Input
6	COM	12	Power Switch





# Product Specifications

# Specifications: M101EKB/ FM10E



Model Name		M101EKB	FM10E
Display	Resolution	1280x800	1024x768
	Contrast Ratio	1500:1	1200:1
	View Angles	80,80,80,80	88,88,88,88
	Size	8.0 inches	10.4 inches
	Panel Brightness	800.0 nits	400 nits 800 nits(Optional)
	Touch Mode	Support Hand / Gloves and Rain Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Intel Celeron N6211 @1.20 GHz (up to 3.00 GHz) Intel Pentium N6415 @1.20 GHz (up to 3.00 GHz) (Optional)	Intel Atom X6413E 1.5 GHz
	Storage	128GB SSD Additional storage available with micro SDXC card slot 256GB SSD (Optional) 512GB SSD (Optional)	1 x M.2 2242 SSD 128GB 256GB (Optional)
	Security	Trusted Platform Module (TPM) 2.0 Kensington Lock	Trusted Platform Module (TPM) 2.0
	BT	Support	Support
	WLAN	Support	Support
	Memory	4GB LPDDR4 8GB LPDDR4 (Optional)	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional)
	Operating System	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise SAC (64-bit) (Optional)	Windows 10 IoT Enterprise (64 bit)
	WLAN	Support	Support
	WWAN	4G (Optional) 5G (Optional)	4G/LTE (Optional)
	BT	Support	Support
	GNSS	GPS, GLONASS, Galileo, BeiDou	GPS/AGPS
Mechanical	Dimension	271.8 x 198.2 x 22 mm	Tablet: 268 x 214 x 35 mm (10.6 x 8.42 x 1.37 inches) Docking: 202 x 245 x 52 mm (7.9 x 9.6 x 2.04 inches)
	Mounting	VESA Mount	VESA Mount
	Cooling System	Fanless design	Fanless design
Environment	Operating Humidity	10% to 90% RH, non-condensing	5% to 90% RH, Non-Condensing
	Storage Temperature	20°C to 60°C (AC mode), -10°C to 50°C (Battery mode)	-30°C to 60°C
	Operating Temperature	0°C to 50°C	-30°C to 50°C
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810G Method 514.6 Procedure I
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810G Method 516.6 Procedure I
	IP rating	IP65	IP65
Certification	Certification	CE, FCC	CE, FCC FCC (Electromagnetic Emissions), IC (ICES-003) UL60950-1, EN60950-1, PTCRB
	USB Port	1 x USB 3.0 (Type A), 1 x USB 3.0 (Type-C support Power Delivery 20V In)	1 x USB Type-C (Tablet) 1 x DB9 Connector for 2 x USB 2.0 Port (Docking)
	Video	1 x Micro HDMI Output (Optional)	-
	LAN	-	1 x Gigabit LAN port (Docking)
	Audio	1 x Audio combo 3.5mm audio combo jack (Mic in or Line Out) Dual Digital Mic With Noise Cancellation Dual Speaker	2 x Speaker (Docking) 1 x CANBus or 1 x Audio (Docking)
	Expansion Port	1 x Expansion connector (Optional)	-
	Indicator	4x LED Indicator for Power, Battery, HDD, RF status	6 x LED Indicator (WLAN, BT, UPS battery, HDD, Screen Blanking, Heater)
	SD Card Slot	1 x Micro SD Card slot (Support SDXC)	1 x Micro SD Card Slot (Tablet)
	SIM Card Slot	1 x SIM Card Slot	1 x Dual-Nano SIM Card Slot (Tablet)
Control	Button	Physical Buttons: ISO/IEC 9995-3 QWERTY Keypad, IP65 water and dust proof, with LED backlight (keypad dimensions: min. 10x10mm) 1 x Power, 10 x Function Keys (programmable by HotTab)	1 x Power Button, 6 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	Adapter and Power Cord Capacitive Stylus Standard Battery	5M Power Cable with Fuse Kit 0.3M USB Cable 0.15M Power Converter Cable DC Jack Power Cable Cable Clamp Kit Wi-Fi Antenna x 2 Quick Start Guide External Antenna Fixing Bracket Dock + Latch Locking Key Stylus Kit + Screw
Power	Power Rating	19V DC	Docking: 10V-60V with ignition control  Tablet: 12V DC In
	Adapter	100-240V, 50-60Hz / 19V DC	Docking: 10V-60V with ignition control Tablet: 12V DC In

# Specifications: FM10Q/ FM12Q



Model Name		FM10Q	FM12Q
Display	Resolution	1024x768	1024x768
	Size	10.4 inches	12.1 inches
	Contrast Ratio	1200:1	1000:1
	Panel Brightness	400 nits 800 nits(Optional)	400 nits 800 nits(Optional)
	View Angles	88,88,88,88	89,89,89,89
	Touch Mode	Support Hand, Stylus, Glove Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Qualcomm® Snapdragon™ 660 (Octa-Core 2.2 GHz)	Qualcomm® Snapdragon™ 660 (Octa-Core 2.2 GHz)
	Memory	3GB	3GB
	Storage	32GB	32GB
	Security	TPM 2.0	TPM 2.0
	Operating System	Android 9.0	Android 9.0
	WLAN	Support	Support
	WWAN	4G/LTE (Optional)	4G/LTE (Optional)
	BT	Support	Support
Mechanical	GNSS	GPS/GLONASS	GPS/GLONASS
	Dimension	Tablet: 268 x 214 x 35 mm (10.6 x 8.42 x 1.37 inches) Docking: 202 x 245 x 52 mm (7.9 x 9.6 x 2.04 inches)	Tablet: 307 x 225 x 41 mm Docking: 202 x 245 x 52 mm
	Mounting	VESA Mount	VESA Mount
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	5% to 95% RH, Non-Condensing	5% to 95% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C	-30°C to 50°C
	Storage Temperature	-30°C to 60°C	-30°C to 60°C
	Shock	MIL-STD-810G Method 516.6 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810G Method 514.6 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65	IP65
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C (OTG)(Tablet) 1 x DB9 Connector for 2 x USB 2.0 Port(Docking)	1 x USB Type-C(Tablet) 1 x DB9 Connector for 2 x USB 2.0 Port(Docking)
	Serial Port	2 x COM Port(Docking)	2 x COM Port(Docking)
	Audio	2 x Speaker(Docking) 1 x CANBus or 1 x Audio(Docking)	2 x Speaker(Docking) 1 x CANBus or 1 x Audio(Docking)
	LAN	1 x Gigabit LAN port(Docking)	1 x Gigabit LAN port(Docking)
	SD Card Slot	1 x Micro SD Card Slot(Tablet)	1 x Micro SD Card Slot(Tablet)
	SIM Card Slot	1 x Dual-Nano SIM Card Slot(Tablet)	1 x Dual-Nano SIM Card Slot(Tablet)
Control	Button	1 x Power Button, 6 x Function Button (Programmable Function Key Configured by Winset)	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	5M Power Cable with Fuse Kit 0.3M USB Cable 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Cable Clamp Kit Wi-Fi Antenna x 2 Quick Start Guide External Antenna Fixing Bracket Dock + Latch Locking Key Stylus Kit + Screw	5M Power Cable with Fuse Kit 0.3M USB Cable 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Cable Clamp Kit Wi-Fi Antenna x 2 Quick Start Guide External Antenna Fixing Bracket Dock + Latch Locking Key Stylus Kit + Screw
	Optional Accessory	1.8M RS232 Cable 0.3M Audio Cable 1.8M CAN BUS Cable 1.8M CAN BUS Open Wire Cable 2M IP65 LAN Cable GPS & LTE 2M Combo Antenna(VM240) GPS & LTE 5M Combo Antenna (VM9C) Magnetic Combo Antenna (VM10S) WWN Antenna HDMI Adapter	1.8M RS232 Cable 0.3M Audio Cable 1.8M CAN BUS Cable 1.8M CAN BUS Open Wire Cable 2M IP65 LAN Cable GPS & LTE 2M Combo Antenna(VM240) GPS & LTE 5M Combo Antenna (VM9C) Magnetic Combo Antenna (VM10S) WWN Antenna HDMI Adapter
Power	Power Rating	Docking: 10V-60V with ignition control Tablet: 12V DC In	1Docking: 10V-60V with ignition control Tablet: 12V DC In

# Specifications: FM12E



Model Name		FM12E
Display	Resolution	1024x768
	Size	12.1 inches
	Contrast Ratio	1000:1
	Panel Brightness	400 nits 800 nits(Optional)
	View Angles	89,89,89,89
	Touch Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Intel Atom X6413E 1.5 GHz
	Memory	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional)
	Storage	1 x M.2 2242 SSD 128GB 256GB (Optional)
	Operating System	Windows 10 IoT Enterprise (64 bit)
	WLAN	Support
	BT	Support
	WWAN	Support
Mechanical	GNSS	GPS/AGPS
	Dimension	Tablet: 307 x 225 x 41 mm Docking: 202 x 245 x 52 mm
	Mounting	VESA Mount
	Cooling System	Fanless Design
Environment	Operating Humidity	5% to 95% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C
	Storage Temperature	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65
Certification	Certification	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C (Tablet) 1 x DB9 Connector for 2 x USB 2.0 Port(Docking)
	Serial Port	2 x COM Port(Docking)
	SD Card Slot	1 x Micro SD Card Slot(Tablet)
	SIM Card Slot	1 x Dual-Nano SIM Card Slot(Tablet)
	LAN	1 x Gigabit LAN port(Docking)
Control	Button	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	5M Power Cable with Fuse Kit 0.3M USB Cable 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Cable Clamp Kit Wi-Fi Antenna x 2 Quick Start Guide External Antenna Fixing Bracket Dock + Latch Locking Key Stylus Kit + Screw
	Optional Accessory	1.8M RS232 Cable 0.3M Audio Cable 1.8M CAN BUS Cable 1.8M CAN BUS Open Wire Cable 2M IP65 LAN Cable GPS & LTE 2M Combo Antenna(VM240) GPS & LTE 5M Combo Antenna (VM9C) Magnetic Combo Antenna (VM10S) WWN Antenna HDMI Adapter
Power	Power Rating	Docking: 10V-60V with ignition control Tablet: 12V DC In

# FM-V Series

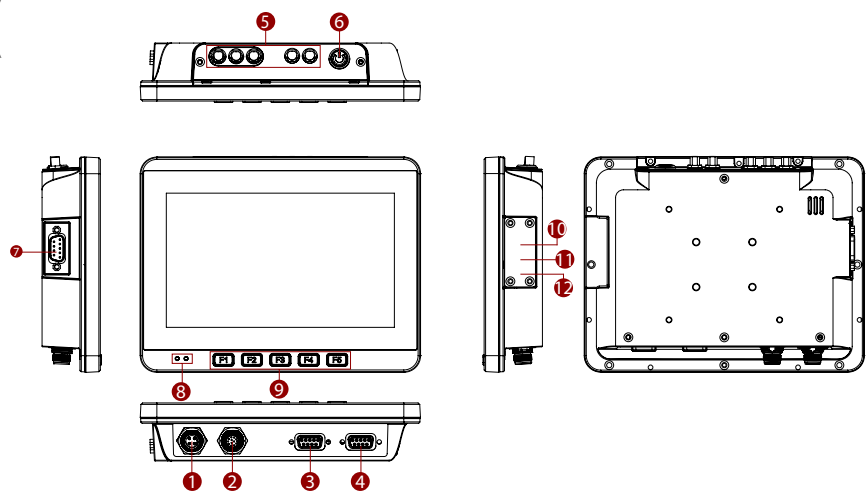
## All-in-one Design

	Android	Windows	
7 inch	FM07M	FM07E	FM07P
	 <p>ARM A53 Quad Core MTK I350</p>	 <p>Intel® Celeron® N6211 Elkhart lake</p>	 <p>Intel® Celeron® N3350 Apollo Lake</p>
10 inch	FM10Q-V	FM10E-V	FM10AD-V
	 <p>Snapdragon™ 660 Qualcomm</p>	 <p>Intel® Atom® x6413E Elkhart lake</p>	 <p>Intel® Core™ i5-1235U Alder Lake</p>
12 inch	FM12Q-V	FM12E-V	FM12AD-V
	 <p>Snapdragon™ 660 Qualcomm</p>	 <p>Intel® Atom® x6413E Elkhart lake</p>	 <p>Intel® Core™ i5-1235U Alder Lake</p>
14 inch	FM14Q-V	FM14E-V	FM14AD-V
	 <p>Snapdragon™ 660 Qualcomm</p>	 <p>Intel® Atom® x6413E Elkhart lake</p>	 <p>Intel® Core™ i5-1235U Alder Lake</p>

# Form Factor

## FM07M/FM07E

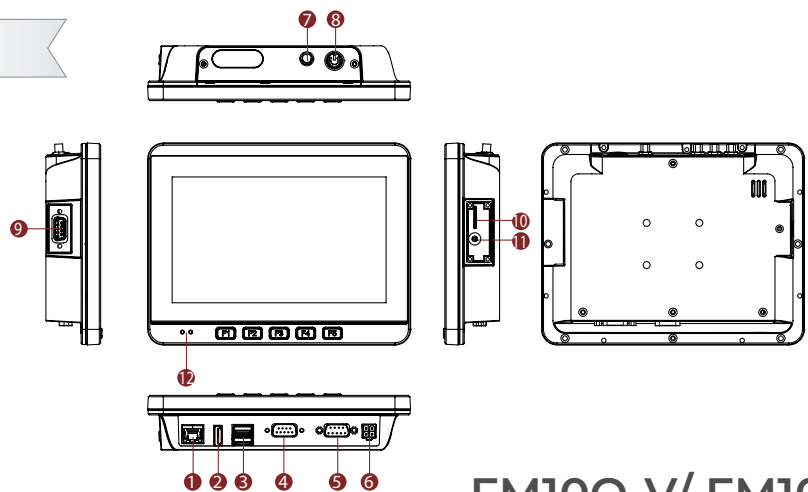
7 inch



No.	Description	No.	Description
1	Power Input	7	USB
2	LAN	8	LED Indicator
3	CAN / Digital IO	9	Function Button
4	COM	10	SIM Card Slot
5	Reserved Antenna	11	Micro USB
6	Power Switch	12	SD Card Slot(only FM07M)

## FM07P

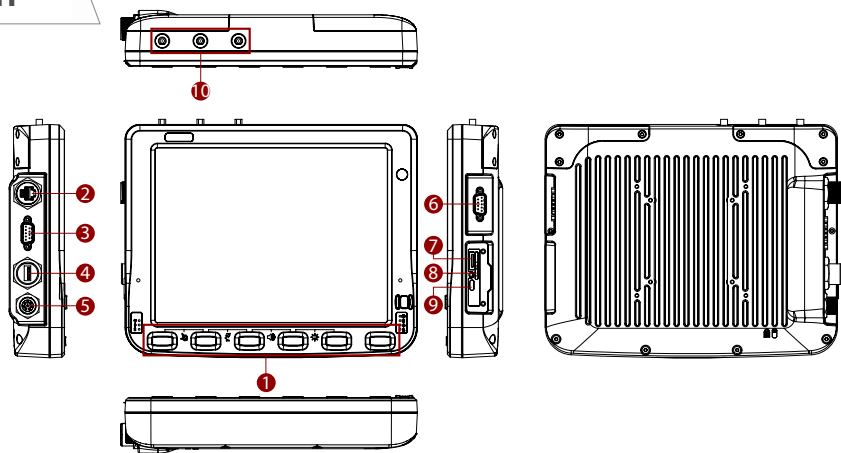
7 inch



No.	Description	No.	Description
1	LAN	7	Wi-Fi Antenna
2	HDMI	8	Power Switch
3	USB	9	COM
4	COM	10	SIM Card Slot
5	CAN / DIDO	11	Audio
6	Power Input	12	LED Indicator

## FM10Q-V/ FM10E-V/FM10AD-V

10 inch



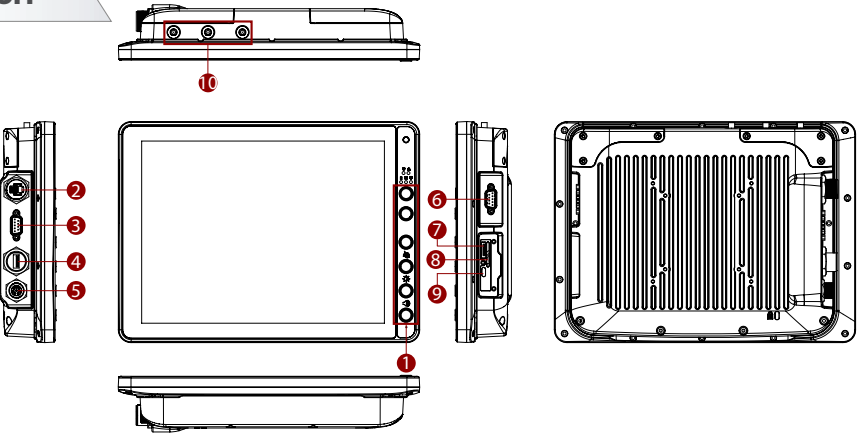
No.	Description	No.	Description
1	Function Button	6	DB9 with COM or DB15 with COM+CANBus (Optional)
2	LAN	7	SD Card Slot
3	DB9 with COM or DB15 with COM+DIDO/Audio (Optional)	8	SIM Card Slot
4	USB Type-A	9	USB Type-C
5	Power Input	10	Reserved Antenna



# Form Factor

## FM12Q-V/FM12E-V/FM12AD-V

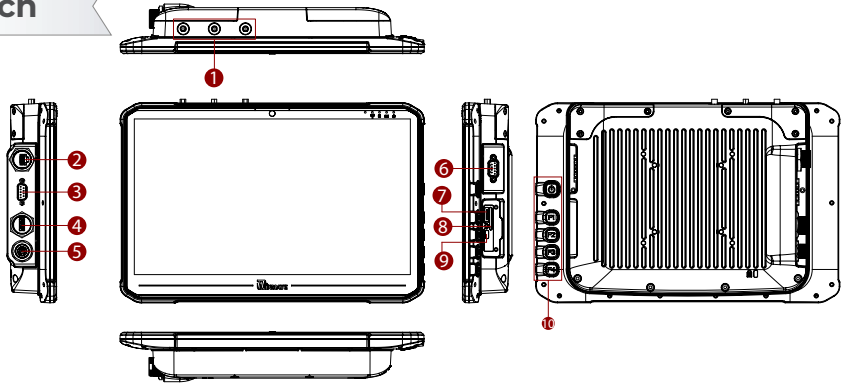
12 inch



No.	Description	No.	Description
1	Function Button	6	DB9 with COM or DB15 with COM+CANBus (Optional)
2	LAN	7	SD Card Slot
3	DB9 with COM or DB15 with COM+DIDO/Audio (Optional)	8	SIM Card Slot
4	USB Type-A	9	USB Type-C
5	Power Input	10	Reserved Antenna

## FM14Q-V/FM14E-V/FM14AD-V

14 inch



No.	Description	No.	Description
1	Reserved Antenna	6	DB9 with COM or DB15 with COM+CANBus (Optional)
2	LAN	7	SD Card Slot
3	DB9 with COM or DB15 with COM+DIDO/Audio (Optional)	8	SIM Card Slot
4	USB Type-A	9	USB Type-C
5	Power Input	10	Function Button





# Product Specifications

# Specifications: FM07M/ FM07E



Model Name		FM07M	FM07E
Display	Resolution	1024x600	1024x600
	Size	7 inches	7.0 inches
	Contrast Ratio	700:1	700:1
	Panel Brightness	1000.0 nits	1000.0 nits
	View Angles	75,75,75,70	75,75,75,70
	Touch / Glass	Projected Capacitive Multi Touch Screen	Projected Capacitive Multi Touch Screen
System Specification	Processor	ARM A53 Quad Core 2.0GHz	Intel Celeron N6211 1.2GHz (up to 2.6GHz)
	Memory	4GB LPDDR4	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional)
	Storage	eMMC: Onboard 32 GB	1 x M.2 2242 SSD 128GB
	Operating System	Android 11 (Upgradeable to Android 13) Linux Yocto 5.10.104 with QT 5.15 (Optional) Linux Ubuntu (in 2023) (Optional)	Windows 10 IoT Enterprise (64 bit) Linux Ubuntu 20.04 (Optional)
	Ethernet controller	-	1 x Intel® Ethernet Controller
	Security	-	TPM 2.0
	BT	Support	Support
	WLAN	Support	Support
	WWAN	4G/LTE (Optional)	4G/LTE (Optional)
	GNSS	GPS/GLONASS	GPS, GLONASS
Mechanical	RFID	NFC (Optional)	-
	Dimension	190 x 146 x 40 mm	190 x 146 x 40 mm
	Mounting	RAM Mount/ VESA Mount	RAM Mount/ VESA Mount
	Weight	1.25 kg	1.25 kg
Environment	Cooling System	Fanless Design	Fanless Design
	Operating Humidity	10% to 95% RH	10% to 95% RH
	Operating Temperature	-20°C to 60°C	-20°C to 60°C
	Storage Temperature	-20°C to 60°C	-20°C to 60°C
	Shock	MIL-STD-810H Method 516.6 Procedure I	MIL-STD-810H Method 516.6 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
Certification	IP rating	IP65, Dustproof and Waterproof	IP65, Dustproof and Waterproof
	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	2 x USB for DB9 1 x Micro USB OTG	2 x USB for DB9 1 x Micro USB
	Serial Port	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)
	LAN	1 x LAN 10/100/1000 Mbps (M12 type)	1 x Gigabit Ethernet LAN 10/100/100 Mbps (M12 type)
	Audio	1x Speaker	1x Speaker
	SD Card Slot	1 x Micro SD card slot (Max to 32GB)	-
	SIM Card Slot	1 x SIM Card Slot (Optional)	1 x SIM Card Slot
	Indicator	Power	Power, HD
	DIDO	DIDO (5XDI ; 3XDO)	DIDO (5XDI ; 3XDO)
Control	CANBUS	1 x CANBus	2x CANBus
	Button	1 x Power Button, 5x Function Button (Programmable Function Key Configured by Winset)	1 x Power Button, 5x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	User Guide M12 LAN Cable, 1.8m RS232 Cable, 1.8m M12 Power Cable, 1.8m USB Cable, 0.3m CANBus and DIDO Cable, 1.8m WLAN Antenna x1 BT Antenna x1 Power Converter Cable Power Adapter	User Guide M12 LAN Cable, 1.8m RS-232 Cable, 1.8m M12 Power Cable, 1.8m USB Cable, 0.3m CANBus and DIDO Cable, 1.8m WLAN Antenna Power Converter Cable Power Adapter
	Optional Accessory	WWAN Antenna x 2 (Optional) Audio Cable, 0.3m (Optional) GPS Antenna, 3m (Optional)	WWAN Antenna x 2 (Optional) Audio Cable, 0.3m (Optional) GPS Antenna, 3m (Optional)
Power	Power Rating	9V~24V, with ignition control	9V-36V, with ignition control

# Specifications: FM07P



Model Name		FM07P
Display	Resolution	1024x600
	Size	7.0 inches
	Contrast Ratio	700:1
	Panel Brightness	1000.0 nits
	View Angles	75,75,75,70
	Touch / Glass	Projected Capacitive Multi Touch Screen
System Specification	Processor	Intel Celeron N3350 1.1GHz (up to 2.4GHz) Intel Pentium N4200 1.1GHz (up to 2.5GHz) (Optional)
	Memory	1 x SO-DIMM, DDR3L 1600 MHz, 4GB 8GB (Optional)
	Storage	1 x M.2 2242 SSD 128GB
	Ethernet controller	1 x Intel® Ethernet Controller
	Security	TPM 2.0
	Operating System	Windows 10 IoT Enterprise (64 bit) Linux Ubuntu 20.04 (Optional)
	WLAN	Support
	BT	Support
	WWAN	4G/LTE (Optional)
	GNSS	GPS, GLONASS
Mechanical	Dimension	189.93 x 145.93 x 39.8 mm
	Mounting	RAM Mount/ VESA Mount
	Weight	1.2kg
	Cooling System	Fanless Design
Environment	Operating Humidity	10% to 95% RH
	Operating Temperature	-20°C~60°C
	Storage Temperature	-20°C~60°C
	Shock	MIL-STD-810G Method 516.6 Procedure I
	Vibration	MIL-STD-810G Method 514.6 Procedure I
	IP rating	IP65
Certification	Certification	CE, FCC
IO Ports	USB Port	2 x USB
	Serial Port	2 x COM Port
	Audio	1x Speaker
	LAN	1 x Gigabit Ethernet LAN 10/100/100 Mbps
	SIM Card Slot	1 x SIM Card Slot
	Indicator	Power, HD
	DIDO	1 x DIDO (3XDI ; 3XDO)
	CANBUS	2 x CANBUS
Control	Button	1 x Power Button, 5x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	User Guide CANBus and DIDO Cable, 1.8m WLAN Antenna Power Converter Cable Power Adapter
	Optional Accessory	WWAN Antenna x 2 (Optional) GPS Antenna (Optional)
Power	Power Rating	9V-36V, with ignition control

# Specifications: FM10Q-V/FM10E-V



Model Name		FM10Q-V	FM10E-V
Display	Resolution	1024x768	1024x768
	Size	10.4 inches	10.4 inches
	Contrast Ratio	1200:1	1200:1
	Panel Brightness	400 nits 800 nits(Optional)	400 nits 800 nits(Optional)
	View Angles	88,88,88,88	88,88,88,88
	Touch Mode	Support Hand, Stylus, Glove Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Qualcomm® Snapdragon™ 660 (Octa-Core 2.2 GHz)	Intel Atom x6413E 1.5GHz
	Memory	3GB	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional)
	Storage	32GB	1 x M.2 2242 SSD 128GB 256GB (Optional)
	Operating System	Android 9.0	Windows 10 IoT Enterprise (64 bit)
	Security	-	TPM 2.0
	BT	Support	Support
	WLAN	Support	Support
	WWAN	4G/LTE (Optional)	4G/LTE (Optional)
	GNSS	GPS/GLONASS (Optional)	GPS/GLONASS (Optional)
	Sensors	G-Sensor, Temp. Sensor	G-Sensor, Light Sensor, Temp Sensor
Mechanical	Dimension	268.1 x 214 x 51 mm	268.1 x 214 x 51 mm
	Mounting	VESA Mount	VESA Mount
	Weight	2.4 kg	2.4 kg
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	5% to 95% RH, Non-Condensing	5% to 90% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C	-30°C to 50°C
	Storage Temperature	-30°C to 60°C	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810H Method 516.6 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65	IP65
	Impact	Support EN62262 IK07 Rating	Support EN62262 IK07 Rating
	ESD	Compliant with EN 61000-4-2, Enhanced ESD to ±8kV Direct & ±15kV Air	Compliant with EN 61000-4-2, enhanced ESD to ±12kV direct & ±15kV air
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C (OTG) 1 x USB 2.0 Port	1 x USB Type-C 1 x USB 2.0 Type-A
	Serial Port	2 x RS232/422/485 (Default RS232)	2 x RS232/422/485 (Default RS232)
	LAN	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)
	Audio	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)
	SD Card Slot	1 x Micro SD Card Slot	1 x Micro SD Card Slot
	SIM Card Slot	1 x Dual-Nano SIM Card Slot	1 x Dual-Nano SIM Card Slot
	Indicator	5 x LED Indicator (WLAN, BT, UPS battery, Screen Blanking, Heater)	6 x LED Indicator (WLAN, BT, UPS battery, HDD, Screen Blanking, Heater)
	DIDO	1 x DIDO (2XDI ;2XDO) either one with Audio (Optional)	1 x DIDO (2XDI ; 2XDO) either one with Audio (Optional)
	CANBUS	1 x CANBus (Optional)	1 x CANBUS (Optional)
Control	Button	1 x Power Button, 6 x Function Button (Programmable Function Key Configured by Winset)	1 x Power Button, 6 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide
	Optional Accessory	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable
Power	Power Rating	10V~60V with ignition control	10V~60V with ignition control

# Specifications: FM10AD-V



Model Name		FM10AD-V
Display	Resolution	1024x768
	Size	10.4 inches
	Contrast Ratio	1200:1
	Panel Brightness	400 nits 800 nits(Optional)
	View Angles	88,88,88,88
	Touch Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Intel® Core™ i5-1235U 3.30 GHz (up to 4.40 GHz)
	Memory	8GB DDR5 SDRAM, up to 32GB
	Storage	128GB NVMe SSD 256GB NVMe SSD (Optional)
	Security	TPM 2.0
	Operating System	Windows 10 IoT Enterprise
	WLAN	Support
	BT	Support
	WWAN	LTE/5G Sub 6 (Optional)
	GNSS	GPS, GLONASS (Optional)
	Sensors	G-Sensor, Light Sensor, Temp Sensor
Mechanical	Dimension	268.1 x 214 x 51 mm
	Mounting	VESA Mount
	Weight	2.4 kg
	Cooling System	Fanless Design
Environment	Operating Humidity	5% to 95% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C
	Storage Temperature	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65
	Impact	Support EN62262 IK07 Rating
	ESD	Compliant with EN 61000-4-2, Enhanced ESD to ±8kV Direct & ±15kV Air
Certification	Certification	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C 1 x USB 2.0 Port
	Serial Port	2 x RS232/422/485 (Default RS232)
	Audio	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)
	LAN	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)
	SD Card Slot	1 x Micro SD Card Slot
	SIM Card Slot	1 x SIM Card Slot
	Indicator	6 x LED Indicator
	DIDO	1 x DIDO (2XDI ;2XDO) either one with Audio (Optional)
	CANBUS	1 x CANBus (Optional)
Control	Button	1 x Power Button, 6 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide
	Optional Accessory	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable
Power	Power Rating	10V~60V with ignition control

# Specifications: FM12Q-V/FM12E-V



Model Name		FM12Q-V	FM12E-V
Display	Resolution	1024x768	1024x768
	Size	12.1 inches	12.1 inches
	Type	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	400 nits 800 nits(Optional)	400 nits 800 nits(Optional)
	View Angles	89,89,89,89	89,89,89,89
	Touch Mode	Support Hand, Stylus, Glove Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Qualcomm® Snapdragon™ 660 (Octa-Core 2.2 GHz)	Intel Atom x6413E 1.5GHz
	Memory	3GB	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional)
	Storage	32GB	1 x M.2 2242 SSD 128GB 256GB (Optional)
	Operating System	Android 9.0	Windows 10 IoT Enterprise (64 bit)
	Security	-	TPM 2.0
	BT	Support	Support
	WLAN	Support	Support
	WWAN	4G/LTE (Optional)	4G/LTE (Optional)
	GNSS	GPS/GLONASS (Optional)	GPS/GLONASS (Optional)
Mechanical	Sensors	G-Sensor, Temp. Sensor	G-Sensor, Light Sensor, Temp Sensor
	Dimension	306.6 x 225 x 56.6 mm	306.6 x 225 x 56.6 mm
	Mounting	VESA Mount	VESA Mount
	Weight	2.5 kg	2.5 kg
Camera	Cooling System	Fanless Design	Fanless Design
	Front Camera	2MP Camera	2MP Camera
Environment	Operating Humidity	5% to 95% RH, Non-Condensing	5% to 90% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C	-30°C to 50°C
	Storage Temperature	-30°C to 60°C	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65	IP65
	Impact	Support EN62262 IK07 Rating	Support EN62262 IK07 Rating
Certification	ESD	Compliant with EN 61000-4-2, Enhanced ESD to ±8kV Direct & ±15kV Air	Compliant with EN 61000-4-2, enhanced ESD to ±12kV direct & ±15kV air
	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C (OTG) 1 x USB 2.0 Port	1 x USB Type-C 1 x USB 2.0 Type-A
	Serial Port	2 x RS232/422/485 (Default RS232)	2 x RS232/422/485 (Default RS232)
	LAN	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)
	Audio	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)
	SD Card Slot	1 x Micro SD Card Slot	1 x Micro SD Card Slot
	SIM Card Slot	1 x Dual-Nano SIM Card Slot	1 x Dual-Nano SIM Card Slot
	Indicator	3 x LED Indicator (WLAN, UPS battery, Heater)	4 x LED Indicator (WLAN, UPS battery, HDD, Heater)
	DIDO	1 x DIDO (2XDI ;2XDO) either one with Audio (Optional)	1 x DIDO (2XDI ; 2XDO) either one with Audio (Optional)
Control	CANBUS	1 x CANBus (Optional)	1 x CANBUS (Optional)
	Button	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide
	Optional Accessory	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable
Power	Power Rating	10V~60V with ignition control	10V~60V with ignition control

# Specifications: FM12AD-V



Model Name		FM12AD-V
Display	Resolution	1024x768
	Size	12.1 inches
	Contrast Ratio	1000:1
	Panel Brightness	400 nits 800 nits(Optional)
	View Angles	89,89,89,89
	Touch Mode	Support Hand, Stylus, Glove Mode
System Specification	Processor	Intel® Core™ i5-1235U 3.30 GHz (up to 4.40 GHz)
	Memory	8GB DDR5 SDRAM, up to 32GB
	Storage	128GB NVMe SSD 256GB NVMe SSD (Optional)
	Security	TPM 2.0
	Operating System	Windows 10 IoT Enterprise
	WLAN	Support
	BT	Support
	WWAN	LTE/5G Sub 6 (Optional)
	GNSS	GPS, GLONASS (Optional)
	Sensors	G-Sensor, Light Sensor ,Temp Sensor
Camera	Front Camera	2MP Camera
Mechanical	Dimension	306.6 x 225 x 56.6 mm
	Mounting	VESA Mount
	Weight	2.5 kg
	Cooling System	Fanless Design
Environment	Operating Humidity	5% to 95% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C
	Storage Temperature	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65
	Impact	Support EN62262 IK07 Rating
	ESD	Compliant with EN 61000-4-2, Enhanced ESD to ±8kV Direct & ±15kV Air
Certification	Certification	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C 1 x USB 2.0 Port
	Serial Port	2 x RS232/422/485 (Default RS232)
	Audio	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)
	LAN	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)
	SD Card Slot	1 x Micro SD Card Slot
	SIM Card Slot	1 x Dual-Nano SIM Card Slot
	Indicator	4 x LED Indicator
	DIDO	1 x DIDO (2XDI ;2XDO) either one with Audio (Optional)
	CANBUS	1 x CANBus (Optional)
Control	Button	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide
	Optional Accessory	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable
Power	Power Rating	10V~60V with ignition control

# Specifications: FM14Q-V/FM14E-V



Model Name		FM14Q-V	FM14E-V
Display	Resolution	1920x1080	1920x1080
	Size	14.0 inches	14.0 inches
	Type	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
	Contrast Ratio	800:1	800:1
	Panel Brightness	700.0 nits	700.0 nits
	View Angles	85,85,85,85	85,85,85,85
	Bonding	Optical Bonding for Sunlight Viewability	Optical Bonding for Sunlight Viewability
System Specification	Processor	Qualcomm® Snapdragon™ 660 (Octa-Core 2.2 GHz)	Intel Atom x6413E 1.5GHz
	Memory	3GB	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional)
	Storage	32GB	1 x M.2 2242 SSD 128GB 256GB (Optional)
	Operating System	Android 9.0	Windows 10 IoT Enterprise (64 bit)
	Security	-	TPM 2.0
	BT	Support	Support
	WLAN	Support	Support
	WWAN	4G/LTE (Optional)	4G/LTE (Optional)
	GNSS	GPS/GLONASS (Optional)	GPS/GLONASS (Optional)
	Sensors	G-Sensor, Temp. Sensor	G-Sensor, Light Sensor, Temp Sensor
Mechanical	Dimension	342 x 225 x 52 mm	342 x 225 x 52 mm
	Mounting	VESA Mount	VESA Mount
	Weight	2.5 kg	2.5 kg
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	5% to 95% RH, Non-Condensing	5% to 90% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C	-30°C to 50°C
	Storage Temperature	-30°C to 60°C	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65	IP65
	Impact	Support EN62262 IK07 Rating	Support EN62262 IK07 Rating
	ESD	Compliant with EN 61000-4-2, Enhanced ESD to ±8kV Direct & ±15kV Air	Compliant with EN 61000-4-2, enhanced ESD to ±12kV direct & ±15kV air
Certification	Certification	CE, FCC	CE, FCC
Camera	Front Camera	2MP Camera	2MP Camera
IO Ports	USB Port	1 x USB 3.0 Type C (OTG) 1 x USB 2.0 Port	1 x USB 3.0 Type C 1 x USB 2.0 Port
	Serial Port	2 x RS232/422/485 (Default RS232)	2 x RS232/422/485 (Default RS232)
	LAN	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)
	Audio	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)
	SD Card Slot	1 x Micro SD Card Slot	1 x Micro SD Card Slot
	SIM Card Slot	1 x Dual-Nano SIM Card Slot	1 x Dual-Nano SIM Card Slot
	Indicator	3 x LED Indicator	4 x LED Indicator
	DIDO	1 x DIDO (2XDI ;2XDO) either one with Audio (Optional)	1 x DIDO (2XDI ; 2XDO) either one with Audio (Optional)
	CANBUS	1 x CANBus (Optional)	1 x CANBUS (Optional)
Control	Button	1 x Power Button, 4 x Function Button (Programmable Function Key Configured by Winset)	1 x Power Button, 4 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide
	Optional Accessory	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable
Power	Power Rating	10V~60V with ignition control	10V~60V with ignition control

# Specifications: FM14AD-V



Model Name		FM14AD-V
Display	Resolution	1920x1080
	Size	14.0 inches
	Type	Projected Capacitive Multi Touch
	Contrast Ratio	800:1
	Panel Brightness	700 nits
	Bonding	85,85,85,85
	Touch Mode	Optical Bonding for Sunlight Viewability
System Specification	Processor	Intel® Core™ i5-1235U 3.30 GHz (up to 4.40 GHz)
	Memory	8GB DDR5 SDRAM, up to 32GB
	Storage	128GB NVMe SSD 256GB NVMe SSD (Optional)
	Security	TPM 2.0
	Operating System	Windows 10 IoT Enterprise
	WLAN	Support
	BT	Support
	WWAN	LTE/5G Sub 6 (Optional)
	GNSS	GPS, GLONASS (Optional)
Mechanical	Sensors	G-Sensor, Light Sensor, Temp Sensor
	Dimension	342 x 225 x 52 mm
	Mounting	VESA Mount
	Weight	2.5 kg
Environment	Cooling System	Fanless Design
	Operating Humidity	5% to 90% RH, Non-Condensing
	Operating Temperature	-30°C to 50°C
	Storage Temperature	-30°C to 60°C
	Shock	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65
	Impact	Support EN62262 IK07 Rating
	ESD	Compliant with EN 61000-4-2, Enhanced ESD to ±8kV Direct & ±15kV Air
Certification	Certification	CE, FCC
IO Ports	USB Port	1 x USB 3.0 Type C 1 x USB 2.0 Port
	Serial Port	2 x RS232/422/485 (Default RS232)
	Audio	1 x Audio(Mic in & Line Out) either one with DIDO (Optional)
	LAN	1 x Gigabit LAN port PSE (IEEE 802.3at 30W) (Optional)
	SD Card Slot	1 x Micro SD Card Slot
	SIM Card Slot	1 x SIM Card Slot
	Indicator	4 x LED Indicator
	DIDO	1 x DIDO (2XDI ;2XDO) either one with Audio (Optional)
	CANBUS	1 x CANBus (Optional)
Control	Button	1 x Power Button, 4 x Function Button (Programmable Function Key Configured by Winset)
Accessory	Accessory	1.8M Power Cable with Fuse Kit 0.15M Power Converter Cable DC Jack Power Cable 84W Adapter with power cable Quick Start Guide
	Optional Accessory	Stylus Kit + Screw 1.8M RS232 Cable 2M IP65 LAN Cable GPS & LTE 5M Combo Antenna (VM9C) GPS & LTE Magnetic Combo Antenna (VM10S) GPS Antenna WWAN Antenna 2M Waterproof USB Type-A to A Cable Cable Clamp Kit COM Port + CANBus Cable COM Port + DIDO Cable
Power	Power Rating	10V~60V with ignition control

# VMT Series

## With Vehicle Docking

### M101 Series

### M116 Series

#### M101TG



Intel® Core™ i5-1135G7  
Tiger Lake

#### M116TG



Intel® Core™ i5-1135G7  
Tiger Lake

#### M101AD



Intel® Core™ i5-1235U  
Alder Lake

#### M116AD



Intel® Core™ i5-1235U  
Alder Lake

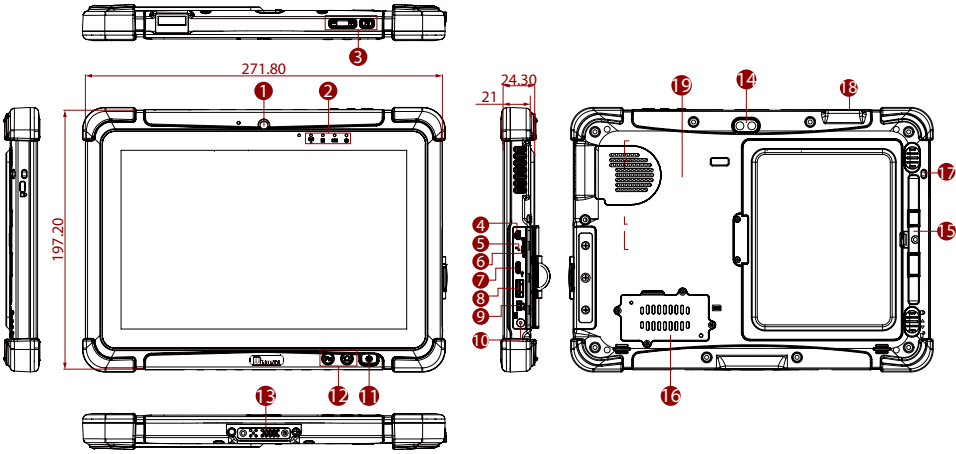
Tiger Lake

Alder Lake

# Form Factor

M101TG

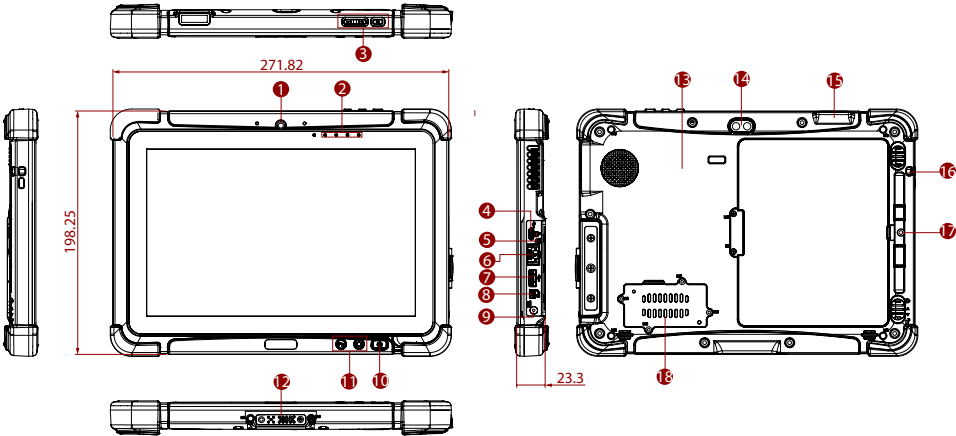
10.1 inch



No.	Description	No.	Description
1	Front Camera	11	Power Switch
2	LED Indicators	12	Function Buttons
3	Function Buttons	13	Docking Connector
4	Micro HDMI	14	Rear Camera
5	Reset Button	15	Touch Pen Slot
6	Micro SD Card Slot	16	LTE Module / SIM Card Slot
7	USB Type-C	17	Kensington Lock
8	USB Type-A	18	Barcode Scanner
9	Audio	19	HF RFID
10	Power Input		

M101AD

10.1 inch



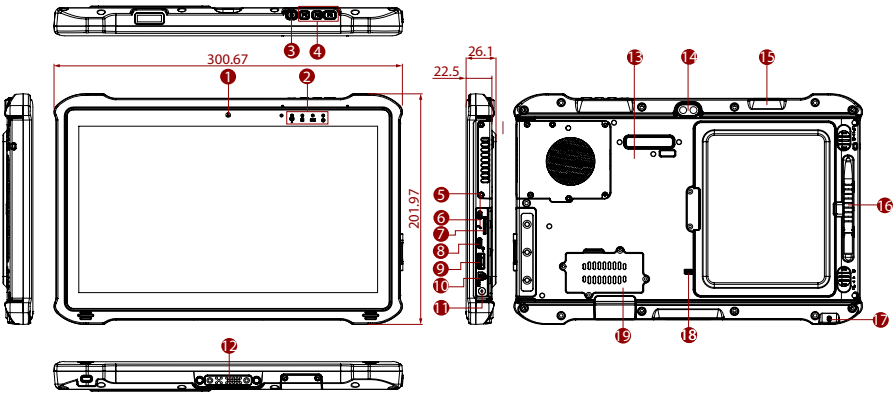
No.	Description	No.	Description
1	Front Camera	10	Power Switch
2	LED Indicators	11	Function Buttons
3	Function Buttons	12	Docking Connector
4	USB Type-C	13	HF RFID
5	Reset Button	14	Rear Camera
6	GigaLAN	15	Barcode Scanner
7	USB Type-A	16	Kensington Lock
8	Audio	17	Touch Pen Slot
9	Power Input	18	LTE Module / SIM Card Slot



# Form Factor

## M116TG

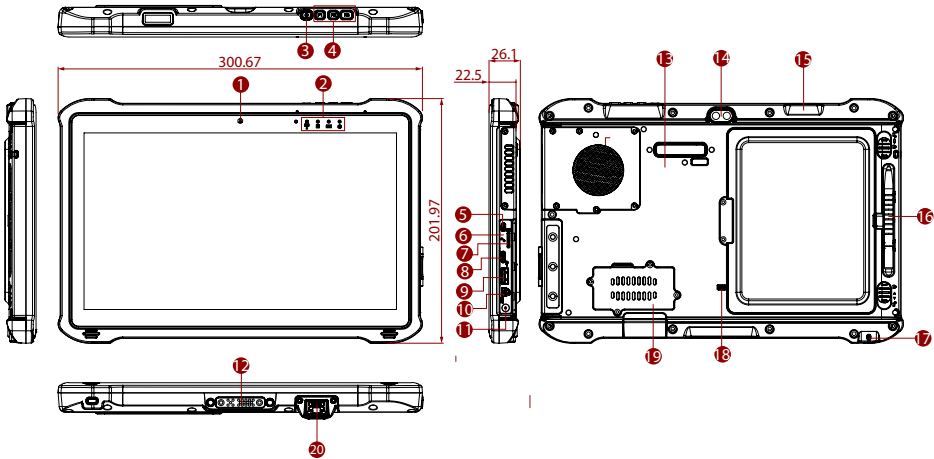
11.6 inch



No.	Description	No.	Description
1	Front Camera	11	Power Input
2	LED Indicators	12	Docking Connector
3	Power Switch	13	HF RFID
4	Function Buttons	14	Rear Camera
5	Micro HDMI	15	Barcode Scanner
6	Reset Button	16	Touch Pen Slot
7	Micro SD Card Slot	17	Kensington Lock
8	USB Type-C	18	SIM Card Slot
9	USB Type-A	19	LTE Module
10	Audio		

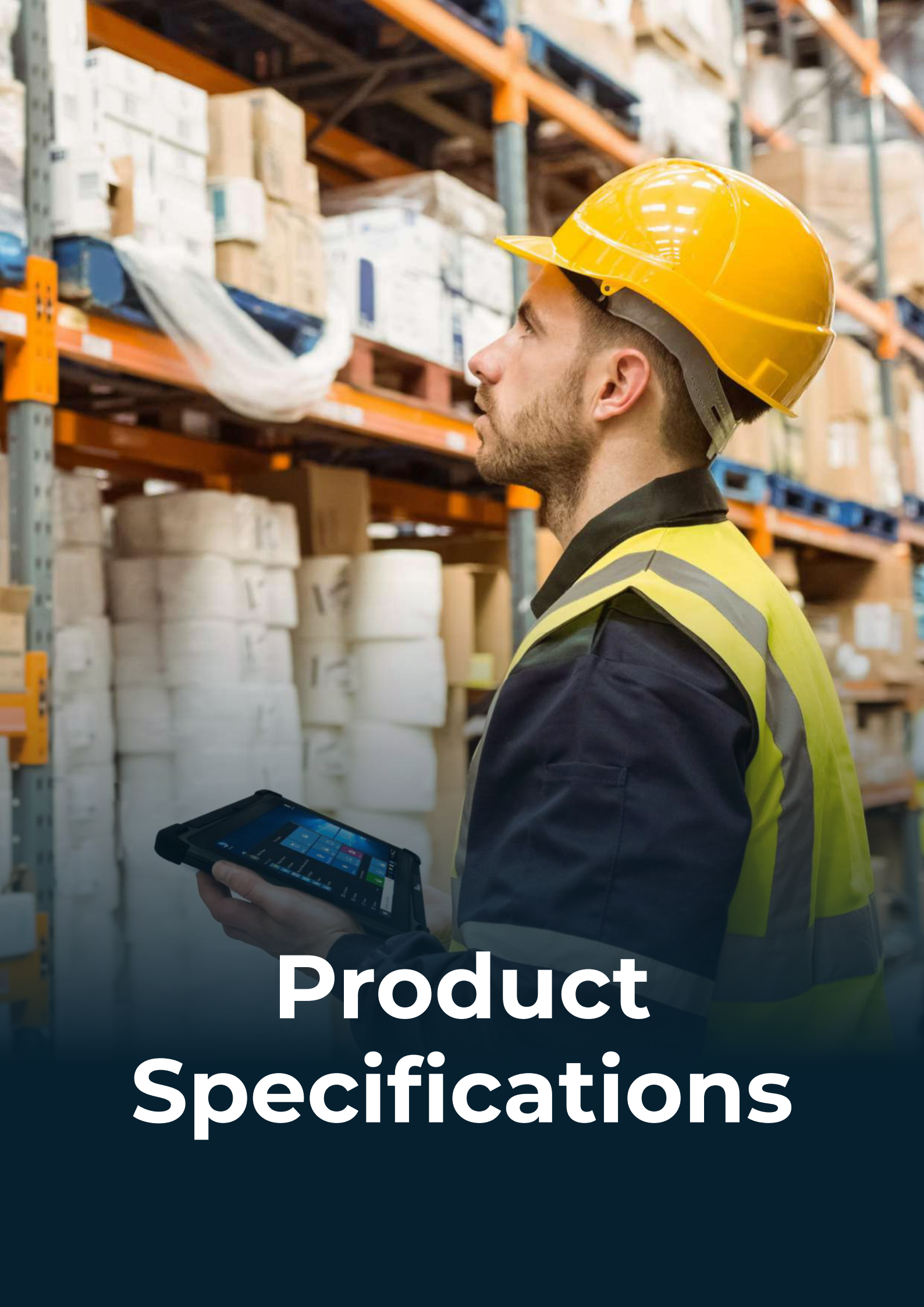
## M116AD

11.6 inch



No.	Description	No.	Description
1	Front Camera	11	Power Input
2	LED Indicators	12	Docking Connector
3	Power Switch	13	HF RFID
4	Function Buttons	14	Rear Camera
5	Micro HDMI	15	Barcode Scanner
6	Reset Button	16	Touch Pen Slot
7	Micro SD Card Slot	17	Kensington Lock
8	USB Type-C	18	SIM Card Slot
9	USB Type-A	19	LTE Module
10	Audio	20	GigaLAN





# Product Specifications

# Specifications: M101TG/M101AD



Model Name		M101TG	M101AD
Display	Resolution	1920x1200	1920x1200
	Size	10.1 inches	10.1 inches
	Type	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
	Contrast Ratio	800:1	800:1
	Panel Brightness	800.0 nits	800 nits
	View Angles	85,85,85,85	85,85,85,85
	Bonding	Optical Bonding for Sunlight Viewability	Optical Bonding for Sunlight Viewability
	Viewability	Anti-Glare touch treatment	Anti-Glare touch treatment
System Specification	Processor	Intel Core i5-1135G7 2.4GHz (up to 4.2GHz)	Intel Core i51235U(up to 4.40GHz)
	Memory	8GB DDR4 SDRAM 16GB DDR4 SDRAM (Optional) 32GB DDR4 SDRAM (Optional)	8GB DDR5 SDRAM 16GB DDR5 SDRAM (Optional) 32GB DDR5 SDRAM (Optional)
	Storage	256GB SSD Additional storage available with micro SDXC card slot 512GB SSD (Optional) 1TB SSD (Optional) 2TB SSD (Optional)	256GB SSD Additional storage available with micro SDXC card slot 512GB SSD (Optional) 1TB SSD (Optional) 2TB SSD (Optional)
	Operating System	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise SAC (64 bit) (Optional)	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise SAC (64 bit) (Optional)
	Security	Trusted Platform Module (TPM) 2.0 Kensington Lock	Trusted Platform Module (TPM) 2.0 Kensington Lock
	BT	Support	Support
	WLAN	Support	Support
	WWAN	4G LTE (Optional) 5G (Optional)	Support 4G LTE/5G (TelitFN990A28)
	GNSS	GPS, GLONASS	GPS, GLONASS
	RFID	HF RFID reader 13.56 MHz (Optional)	HF RFID reader 13.56 MHz (Optional)
	Sensors	Light sensor/ G-sensor / Gyro	Light sensor/ Gsensor/ Gyro
Mechanical	Dimension	271.8 x 197.2 x 21 mm	271.8 x 198.3 x 21 mm
	Weight	1.3 kg (2.86 lbs) with standard battery	1.3 kg (2.86 lbs) with standard battery
	Cooling System	Fan design	Fan design
Environment	Operating Humidity	10% to 90% RH, non-condensing	10% to 90% RH, noncondensing
	Operating Temperature	-20°C to 60°C (AC mode), -10°C to 50°C (Battery mode)	-20°C to 60°C (AC mode), 10°C to 50°C (Battery mode)
	Storage Temperature	-30°C to 70°C (-22°F to 158°F)	-30°C to 70°C (-22°F to 158°F)
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	Drop	MIL-STD-810H Method 516.8, 4 ft	MIL-STD-810H Method 516.8, 4 ft
	IP rating	IP65	IP65
Certification	Certification	CE, FCC	CE, FCC
Camera	Front Camera	2MP Front Camera	2MP Camera
	Rear Camera	8MP Rear Camera with auto-focus and LED light	8MP Rear Camera with autofocus and LED light
IO Ports	USB Port	1 x USB 3.0 (Type A), 1 x USB 3.0 (Type-C support Power Delivery 20V In)	1 x USB 3.0(Type A), 1x USB 3.0(TypeC support Power Delivery, ALT mode)
	Video	1 x Micro HDMI (Optional)	-
	Audio	1 x Audio combo 3.5mm audio combo jack Dual Digital Mic With Noise Cancellation Dual Speaker	1 x Audio combo 3.5mm audio combo jack Dual Digital Mic With Noise Cancellation Dual Speaker
	SD Card Slot	1 x Micro SDXC slot	1 x Micro SDXC slot
	SIM Card Slot	1 x Micro SIM card slot	1 x Nano SIM card slot
	Indicator	4x LED Indicator for Power, Battery, HDD, RF status	4x LED Indicator for Power, Battery, HDD, RF status
	Docking Connector	1 x 19-pin docking connector	1 x 19pin docking connector
	LAN	-	1 x RJ45 GigaLAN Port
Control	Button	1 x Power, 1 x Home 2 x volume key 2 x Programmable function Keys	1 x Power, 1 x Home 2 x Volume key 2 x Programmable function Keys
Accessory	Accessory	Adapter and Power Cord Capacitive Stylus Standard Battery	Adapter and Power Cord Capacitive Stylus Standard Battery
	Optional Accessory	Desk Dock (Optional) Vehicle Dock (without VGA output) (Optional) Vehicle Cradle (Optional) Vehicle Charger (Optional) High Capacity Battery (Optional) Hand Strap (Optional) Shoulder Strap (Optional) Carry Bag (Optional)	Desk Dock (Optional) Vehicle Dock (without VGA output) (Optional) Vehicle Cradle (Optional) Vehicle Charger (Optional) High Capacity Battery (Optional) Hand Strap (Optional) Shoulder Strap (Optional) Carry Bag (Optional)
Power	Power Rating	19V DC	19V DC

# Specifications: M116TG/M116AD



Model Name		M116TG	M116AD
Display	Resolution	1920x1080	1920x1080
	Size	11.6 inches	11.6 inches
	Type	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	850.0 nits	850.0 nits
	View Angles	85,85,85,85	85,85,85,85
	Bonding	Optical Bonding for Sunlight Viewability	Optical Bonding for Sunlight Viewability
	Viewability	Anti-Glare touch treatment	Anti-Glare touch treatment
	Touch Mode	Support Hand/Rain, Stylus, Glove Mode	Support Hand/Rain, Stylus, Glove Mode
System Specification	Processor	Intel Core i5-1135G7 2.4GHz (up to 4.2GHz)	Intel Core i5-1235U 1.3GHz (up to 4.4GHz)
	Memory	4GB DDR4 SDRAM 8GB DDR4 SDRAM (Optional) 16GB DDR4 SDRAM (Optional) 32GB DDR4 SDRAM (Optional)	8GB DDR5 SDRAM 16GB DDR5 SDRAM (Optional) 32GB DDR5 SDRAM (Optional)
	Storage	128GB SSD Additional storage available with micro SDXC card slot 256GB SSD (Optional) 512GB SSD (Optional) 1TB SSD (Optional) 2TB SSD (Optional)	Additional storage available with micro SDXC card slot 256GB SSD 512GB SSD (Optional) 1TB SSD (Optional) 2TB SSD (Optional)
	Operating System	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise SAC (64 bit) (Optional)	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise SAC (64 bit) (Optional)
	Security	Trusted Platform Module (TPM) 2.0 Kensington Lock	Trusted Platform Module (TPM) 2.0 Kensington Lock
	BT	Support	Support
	WLAN	Support	Support
	WWAN	4G LTE (Optional) 5G (Optional)	4G LTE (Optional) 5G (Optional)
	GNSS	GPS, GLONASS	GPS, GLONASS
	Sensors	Light sensor/ G-sensor / Gyro	Light sensor/ G-sensor / Gyro
	Dimension	300.67 x 201.97 x 22.5 mm	300.67 x 201.97 x 22.5 mm
Mechanical	Weight	1.5 kg (3.3 lbs) with standard battery	1.5 kg (3.3 lbs) with standard battery
	Cooling System	Fan design	Fan design
Environment	Operating Humidity	10% to 90% RH, non-condensing	10% to 90% RH, non-condensing
	Operating Temperature	-20°C to 60°C (AC mode), -10°C to 50°C (Battery mode)	-20°C to 60°C (AC mode), -10°C to 50°C (Battery mode)
	Storage Temperature	-30°C to 70°C (-22°F to 158°F)	-30°C to 70°C (-22°F to 158°F)
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	Drop	MIL-STD-810H Method 516.8, 4 ft	MIL-STD-810H Method 516.8, 4 ft
	IP rating	IP65	IP65
Certification	Certification	CE, FCC	CE, FCC
Camera	Front Camera	2MP Front Camera	2MP Front Camera
	Rear Camera	8MP Rear Camera with auto-focus and LED light	8MP Rear Camera with auto-focus and LED light
IO Ports	USB Port	1 x USB 3.0 (Type A), 1 x USB 3.0 (Type-C support Power Delivery 20V In)	1 x USB 3.0 (Type A), 1 x USB 3.0 (Type-C support Power Delivery 20V In)
	LAN	1 x RJ45-10/100/1000 GigaLAN port (Optional)	1 x RJ45-10/100/1000 GigaLAN port (Optional)
	Audio	1 x Audio combo 3.5mm audio combo jack Dual Digital Mic With Noise Cancellation	1 x Audio combo 3.5mm audio combo jack Dual Digital Mic With Noise Cancellation
	SD Card Slot	1 x Micro SDXC slot	1x Micro SDXC slot
	SIM Card Slot	1 x Micro SIM card slot	1 x Micro SIM card slot
	Indicator	4x LED Indicator for Power, Battery, HDD, RF status	4x LED Indicator for Power, Battery, HDD, RF status
	Docking Connector	1 x 19-pin docking connector	1 x 19-pin docking connector
Control	Button	1 x Power, 3 x function keys	1 x Power, 3 x function keys
Accessory	Accessory	Adapter and Power Cord Capacitive Stylus Standard Battery	Adapter and Power Cord Capacitive Stylus Standard Battery
	Optional Accessory	Desk Dock (Optional) Vehicle Dock (Optional) Vehicle Cradle (Optional) Vehicle Charger (Optional) High Capacity Battery (Optional) Hand Strap (Optional) Shoulder Strap (Optional) Carry Bag (Optional)	Desk Dock (Optional) Vehicle Dock (Optional) Vehicle Cradle (Optional) Vehicle Charger (Optional) High Capacity Battery (Optional) Hand Strap (Optional) Shoulder Strap (Optional) Carry Bag (Optional)
Power	Power Rating	19V DC	19V DC

# Winmate VMC & VMT Series





