

FM12E-V

12.1" Vehicle Computer with Intel® Elkhart lake x6413E



KEY FEATURES

- Intel® Elkhart lake x6413E Processor vehicle computer
- 12.1" 1024 x 768 Panel with PCAP touch screen
- IP65 waterproof and dustproof
- Wide power input 10-60V DC with ignition
- Wide range operating temperature
- Support VESA Mount

INTRODUCTION

Winmate FM-V Series Windows Vehicle Mounted Computer (VMC) is designed for reliable performance in demanding industrial and automotive environments. Available in sizes from 7" to 14", it offers processor options ranging from Intel® Celeron® N6211 and N3350 to the powerful 12th Gen Intel® Alder Lake processors. Built with an IP65-rated waterproof and dustproof enclosure, wide 10-60V DC power input with ignition support, and a rugged design for extreme temperatures, the FM-V Series ensures durability and efficiency. VESA mount compatibility provides easy installation, making it ideal for fleet management, logistics, and warehouse operations.

SPECIFICATIONS

Display

Type	Projected Capacitive Multi Touch	Touch Mode	Support Hand, Stylus, Glove Mode
Resolution	1024x768	Size	12.1 inches
Contrast Ratio	1000:1	Panel Brightness	400 nits 800 nits(Optional)
View Angles	89,89,89,89		

System Specification

Processor	Intel Atom x6413E 1.5GHz (up to 3GHz) Intel Atom x6425E 2GHz (up to 3GHz) (Optional) Intel Atom x7433RE 1.5 GHz (up to 3.4 GHz) (Optional) Intel Atom x7835RE 1.3 GHz (up to 3.6 GHz) (Optional)	Memory	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional)
Storage	1 x M.2 2242 SSD 128GB 256GB (Optional) 512GB (Optional)	Security	TPM 2.0
Operating System	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise LTSC (64 bit) (Optional)	WLAN	Support
BT	Support	WWAN	4G/LTE (Optional)
GNSS	GPS/GLONASS (Optional)	Sensors	G-Sensor, Light Sensor, Temp Sensor

Camera

Front Camera	2MP Camera
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Environment

Operating Humidity	5% to 90% RH, Non-Condensing	Operating Temperature	-30°C to 60°C
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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 & ±12kV air

Certification

Certification	CE, FCC FCC (Electromagnetic Emissions), IC (ICES-003) UL60950-1, EN60950-1, PTCRB
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Control

Button	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)
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IO Ports

USB Port	1 x USB Type-C 1 x USB 2.0 Type-A	Serial Port	2 x RS232/422/485 (Default RS232)
SD Card Slot	1 x Micro SD Card Slot	SIM Card Slot	1 x Dual-Nano SIM Card Slot
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)
Indicator	4 x LED Indicator (WLAN, UPS battery, HDD, Heater)	DIDO	1 x DIDO (2XD1 ; 2XD0) either one with Audio (Optional)
CANBUS	1 x CANBus (Optional)		

Mechanical

Dimension	306.6 x 225 x 56.6 mm	Weight	2.4kg
Mounting	VESA mount	Cooling System	Fanless Design

Security Function

SOTI MobiControl	SOTI MobiControl Compliance
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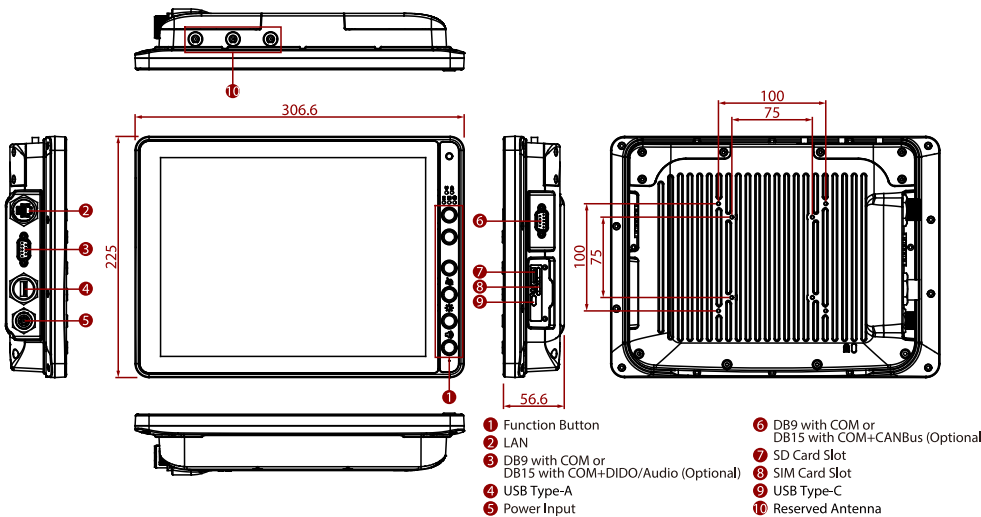
Accessory

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	5M Power Cable with Fuse Kit 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
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Power

Battery	400mAh UPS Battery for 20 minutes backup (Optional)	Power Rating	10V~60V with ignition control
Consumption	45W (Typical)		

DIMENSIONS UNIT:MM



NOTE

- Total usable memory will be less dependent upon actual system configuration.
- SOTI is available upon request.
- Length measurements do not include protrusions. Weight varies with options.
- Measured at dimming LCD brightness. Varies depending on the usage conditions, or when an external device is attached.
- Accessories may vary depending on your configuration.
- This is a simplified drawing and some components are not marked in detail.
- The product shown in this datasheet is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.
- COM port can supply 5V power via the 9th pin.
- The UPS battery is only expected to use for backup under low system loading and without I/O function.