

FM12MG-V

12.1" Android Vehicle Computers with Genio 510 A78 + A55 CPU



KEY FEATURES

- Utilizes an ARM Genio 510 processor, which includes 2 x Cortex-A78 cores and 4 x Cortex-A55 cores, both operating at 2.0GHz, delivering strong performance and effective multitasking capabilities.
- Equipped with a 12.1-inch panel that has a resolution of 1024 x 768 and features a PCAP touchscreen for seamless and intuitive user interaction
- The device has an IP65 rating, ensuring it is both waterproof and dustproof, providing reliable performance in tough conditions.
- Accommodates a wide power input range of 10-60V DC with ignition control, allowing for flexible installation and operation.
- Designed to function effectively across a wide operating temperature range, ensuring reliable performance in diverse environmental conditions
- Compatible with VESA mounting, providing versatile installation options for various setups.
- Features replaceable front and rear modules, enhancing convenience and cost-effectiveness for users.

INTRODUCTION

Winmate FM-V Series Android Vehicle Mounted Computer (VMC) delivers robust performance and versatility for industrial and automotive applications. Available in sizes from 7" to 14", it features powerful processor options, including ARM A78 and A55 cores, ARM A53 Quad Core, and Qualcomm® Snapdragon™ 660. Designed with IP65-rated waterproof and dustproof protection, wide 10-60V DC power input with ignition, and reliable operation in extreme temperatures, the FM-V Series ensures durability and efficiency. With VESA mount support, it is perfect for fleet management, warehouse operations, and forklift-mounted applications.

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

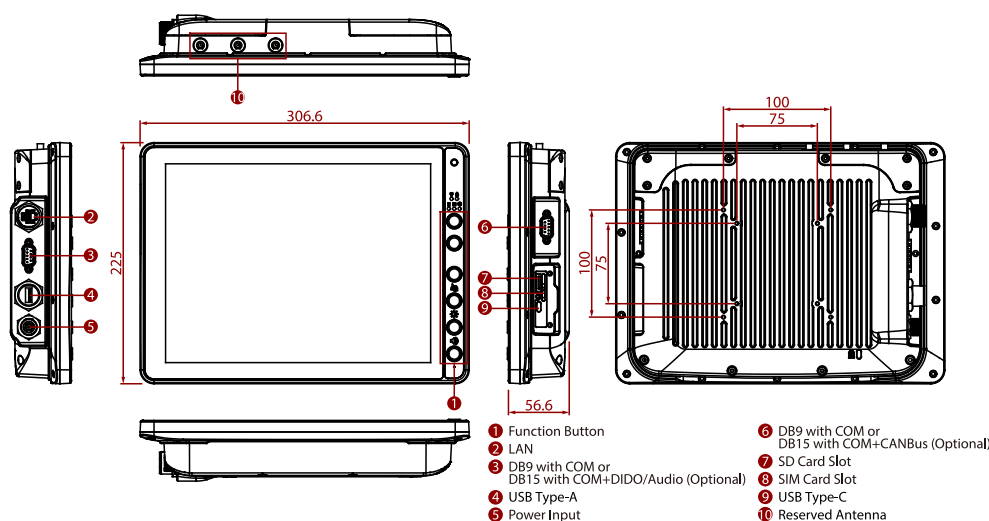
Processor	ARM Genio 510 2 x A78 2.0GHz + 4 x A55 2.0GHz	Memory	4GB LPDDR4
Storage	Onboard 64 GB	Operating System	Android 13 Linux Yocto 5.10.104 with QT 5.15 (Optional) Linux Ubuntu 22.04 (Optional)

WLAN	Support with Internal Antenna Either one with External Antenna (Optional)	BT	Support
WWAN	4G/LTE with External Antenna (Optional)	GNSS	GPS/GLONASS with External Antenna (Optional)
Sensors	G-Sensor, Light Sensor ,Temp Sensor		
Camera			
Front Camera	2MP Camera		
Mechanical			
Dimension	307 x 225 x 57 mm	Weight	2.5 kg
Mounting	VESA mount	Cooling System	Fanless Design
IO Ports			
USB Port	1 x USB 2.0 Type C (OTG) 1 x USB 2.0 Port	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	3 x LED Indicator (WLAN, UPS battery, Heater)	DIDO	1 x DIDO (2XDI ; 2XDO) either one with Audio (Optional)
CANBUS	1 x CANBus (Optional)		
Environment			
Operating Humidity	5% to 95% RH, Non-Condensing	Operating Temperature	-30°C to 60°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 & ±12kV Air
Certification			
Certification	CE, FCC		
Control			
Button	1 x Power Button, 5 x Function Button (Programmable Function Key Configured by Winset)		
Power			
Battery	400mAh UPS Battery for 20 minutes backup (Optional)	Power Rating	10V~60V with ignition control
Consumption	35W (Typical)		
Security Function			
SOTI MobiControl	SOTI MobiControl Compliance		
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 KitStylus 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

DIMENSIONS UNIT:MM

NOTE

1. Total usable memory will be less dependent upon



- actual system configuration.
2. DIDO and audio are mutually exclusive.
 3. The heater is a customized feature available by request.
 4. SOTI is available upon request.
 5. Length measurements do not include protrusions. Weight varies with options.
 6. Measured at dimming LCD brightness. Varies depending on the usage conditions, or when an external device is attached.
 7. Accessories may vary depending on your configuration.
 8. 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.
 9. This is a simplified drawing and some components are not marked in detail.
 10. The UPS battery is only expected to use for backup under low system loading and without I/O function.
 11. COM port can supply 5V power via the 9th pin.