FM12MG-V

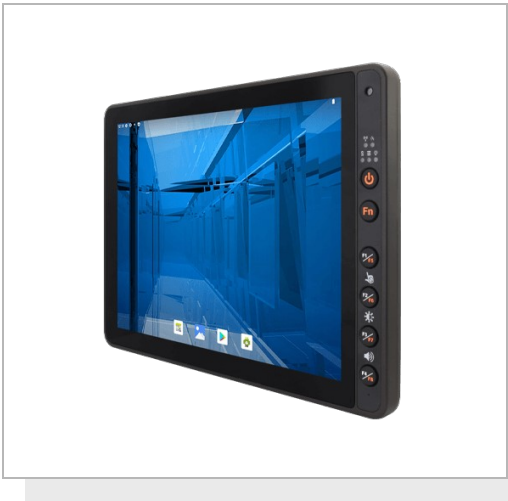## 12.1" Android Vehicle Computers with Genio 510 A78 + A55 CPU

KEY FEATURES

- ARM Genio 510 2 x A78 2.0GHz + 4 x A55 2.0GHz CPU
- 12.1" 1024 x 768 Panel with PCAP touchscreen
- IP65 waterproof and dustproof
- Wide power input 10-60V DC with ignition
- Wide range operating temperature
- Support VESA Mount
- Replaceable front and rear modules for convenience and affordability
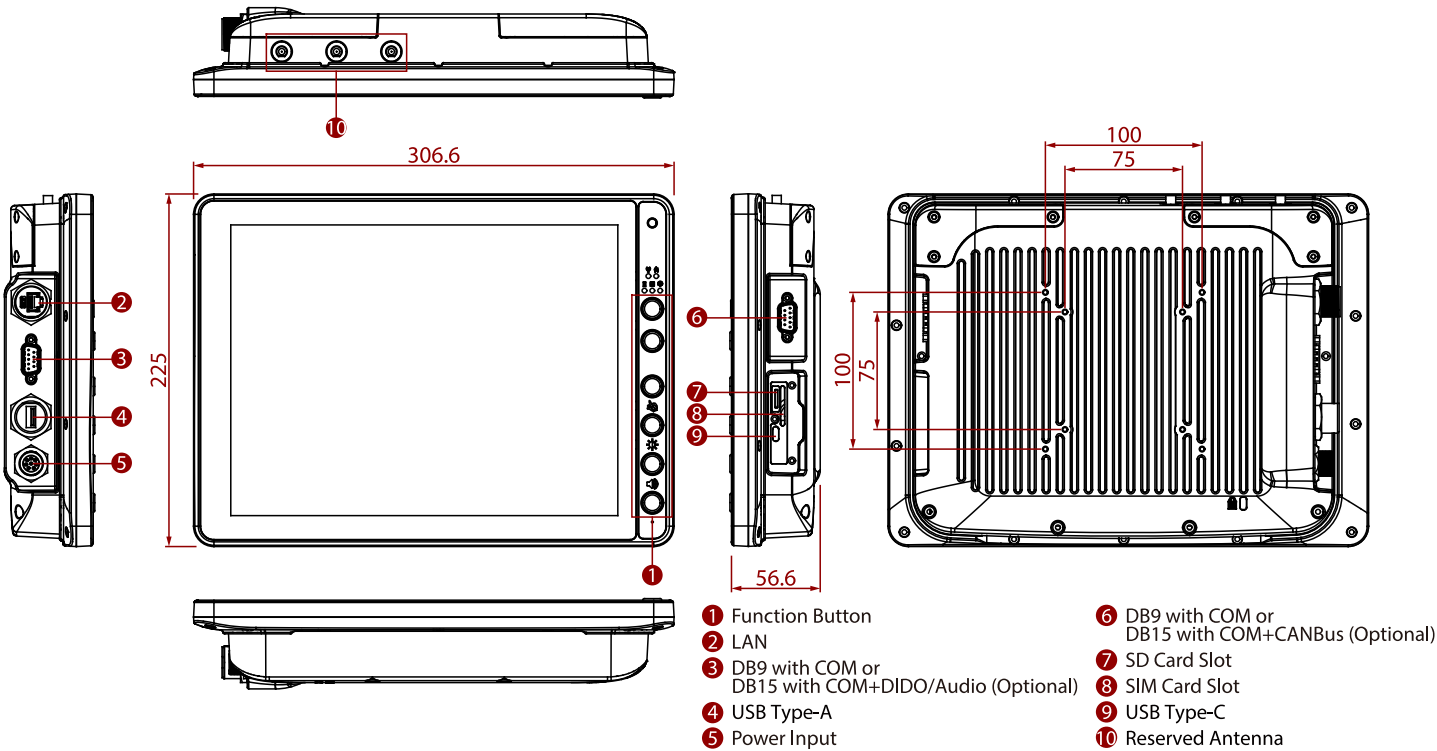
CE FC IP65 COMPLIANT MIL-STD 810H

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	**BT**	Support
WWAN	4G/LTE (Optional)	**GNSS**	GPS/GLONASS
Sensors	G-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 & ±15kV 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

❶ Function Button
❷ LAN
❸ DB9 with COM or DB15 with COM+DIDO/Audio (Optional)
❹ USB Type-A
❺ Power Input
❻ DB9 with COM or DB15 with COM+CANBus (Optional)
❼ SD Card Slot
❽ SIM Card Slot
❾ USB Type-C
❿ Reserved Antenna

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.