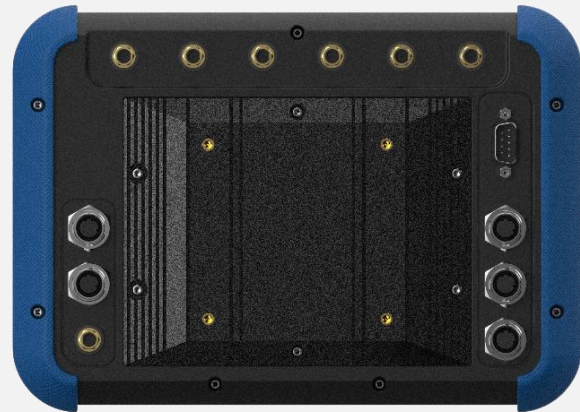


# VMC 2020

(Preliminary)

8" Rugged Vehicle Mount Computer  
with Intel Atom® E3950 processor, Touch Screen and IP65



## Main Features

- ◆ 8" TFT LCD monitor with projected capacitive
- ◆ IPS LCD with wide viewing angle and resolution 1280 x 720
- ◆ Touch panel cover thickness 3mm
- ◆ Sunlight readable capability: 1,000nits LCD brightness
- ◆ Built-in Intel Atom® E3950 processor, up to 2.0GHz
- ◆ Plastic housing and fanless design
- ◆ Automatic/manual brightness control
- ◆ On screen F1 ~ F4 programmable function keys
- ◆ 10/100/1000Mbps for independent ethernet x 1
- ◆ Built-in u-blox-M8 GPS
- ◆ Analog camera x 4 (CVBS, optional)
- ◆ Isolated CANBus 2.0 x 1
- ◆ Back-up battery (optional)
- ◆ SIM Slot x 2
- ◆ Wide range DC input from 9V ~ 60V DC in
- ◆ Military standard for vibration and shock
- ◆ Complete IP65 housing
- ◆ CE/FCC/EMark/IK08

## Product Overview

VMC 2020, 8-inch all in one robust vehicle mount computer, is designed for the warehouses, port, logistic and material handling markets. It implements the latest Intel Atom® E3950 processor on both of Windows and Linux platforms, and offers complete IP65. VMC 2020 is able to support analog camera x 4 (optional) for security purpose and takes less than 1 second to see video content. Back-up battery can help to back up data when car power battery stops supplying. LCD panel: 1,000nits typ. guarantees to reach sunlight-readable. Wide-range power input (9V~60V) can let VMC 2020 to be capable of setting up in various facilities and vehicles. The design of mini-PCIe slots x 2 and M.2 slot x 1 can solve the potential request from the market when needed.

## Specifications

### LCD Panel

- ◆ 8-inch TFT LCD panel with LED backlight
- ◆ 1280 x 720 pixels (HD)
- ◆ Brightness: 1000 cd/m<sup>2</sup> (typical)
- ◆ Viewing angle: 170° (H)/170°(V)
- ◆ Contrast ratio: 1000:1 (typical)

### Touch Screen Sensor

- ◆ Projected capacitive
- ◆ Anti-glare coating surface
- ◆ Transmission rate: 85 ± 3% (TBD)

### CPU & Chipset

- ◆ Intel Atom® E3950 processor quad core
- ◆ One DDR3L 1866 SO-DIMM slot up to 8GB (default: 4GB)

### Expandable Storage

- ◆ 1 x mSATA (occupied mini-PCIe slot)
- ◆ 1 x eMMC 64GB (optional 128GB)

### Expansion

- ◆ 1 x Full-size mini-PCIe socket (PCIe 2.0 + USB 2.0)
- ◆ 1 x Full-size mini-PCIe socket (PCIe 2.0/SATA + USB 2.0)
- ◆ 1 x M.2 key B 3042/3050/3052 (USB2.0 + USB 3.0 / PCIe 2.0 (BOM optional)) with 2 x external Nano SIM slot

### I/O Interface-Front

- ◆ Volume control (+/-)
- ◆ Brightness control (+/-)
- ◆ F1 ~ F4 programmable function
- ◆ Shift with LED
- ◆ Light sensor
- ◆ 5 x LED indicators (power, battery, WWAN, WLAN, storage)
- ◆ 2 x Built-in 2W speakers
- ◆ 1 x Mic

### I/O Interface-Lateral

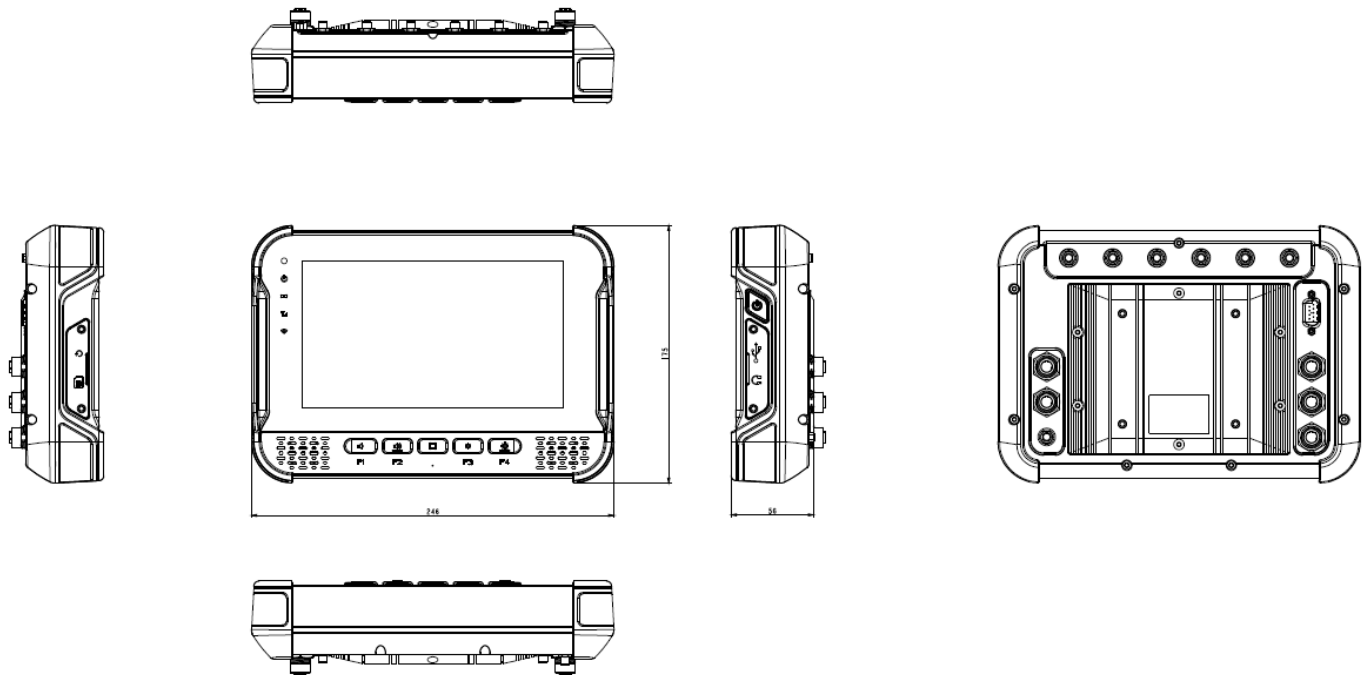
- ◆ Right Side
  - 1 x System reset button w/ cover
  - 2 x Nano SIM slot w/ cover
- ◆ Left Side
  - 1 x Mic-in, 1 x Line-out w/ cover
  - 1 x USB 3.1 host type A connector w/cover
  - 1 x power button

### I/O Interface-Rear

- ◆ 1 x Full RS232 (COM, w/ 5VDC, 12VDC)
- ◆ 1 x power connector, M12 5-pin
- ◆ 1 x 10/100/1000 Mbps LAN, M12 A-coded
- ◆ 1 x M12 A-coded 8pin for 2 x USB 2.0
- ◆ 1 x M12 (MULTI PORT2, A-coded 12-pin)
  - 1 x RS232 TX/RX
  - 1 x RS232 (TX/RX)/RS422/RS485
  - PWM (Speed)+Direction+GND, optional 4 x composite video input/ CAN-06



## Dimension Drawing



- ◆ 1 x M12 (MULTI PORT1, A-coded 8-pin)
  - 2 x GPI
  - 2 x GPO
  - 1 x Isolated CANBus 2.0B
- ◆ 1 x Antenna for Bluetooth
- ◆ 3 x Antenna for Wi-Fi
- ◆ 2 x Antenna for LTE
- ◆ 1 x GPS antenna SMA connector

### Mechanical

- ◆ Cooling system: fanless
- ◆ Enclosure: plastic
- ◆ IK Rating: IK08 (housing and touch screen)
- ◆ Mounting: VESA 75
- ◆ Ingress protection: complete IP65
- ◆ Dimension: 246x175x56 mm
- ◆ Weight: 3kg

### Power Management

- ◆ 9V ~ 60V DC in
- ◆ Reverse protection/over voltage protection/under voltage protection
- ◆ Ignition On/Off control & programmable On/Off delay timing
- ◆ Wake up by LAN, SMS, RTC and ignition

### RFID Module (optional)

- ◆ 13.56-MHz RFID/contactless standard protocols
- ◆ Compatibles with all major global secured baseband ISO standards including ISO14443 Type A, MIFARE classic cards, and Smartlabel ISO15693

### Environment

- ◆ Operating temperatures: Ambient with air -30°C to 60°C
- ◆ Storage temperatures: -40°C to 80°C
- ◆ Relative humidity: 10% to 90% (non-condensing)
- ◆ Vibration (random)
  - 2g@5~500 Hz (in operation)
- ◆ Vibration
  - Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  - Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- ◆ Shock
  - Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers = 40g
  - Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment = 75g

### Operating System

- ◆ Windows 10
- ◆ Linux

### Standards/Certifications

- ◆ CE/FCC class B/E13/IK08

## Ordering Information

- ◆ VMC 2020-PC1 (P/N: TBD)
  - 8" rugged vehicle mount computer with Intel Atom® E3950, projected capacitive touch screen and complete IP65