



Main Features

- 10.1" TFT LCD monitor with projected capacitive touch screen
- Wide viewing angle with high resolution 1280x800
- Touch panel cover thickness 3mm for IK08 protection
- 1,000nits brightness with sunlight readable capability
- Built-in NXP i.MX 8M Plus low-power processor, 4-core
- HDMI® output for 2nd display
- On screen F1~F5 programmable function keys
- Wide range DC input 9V~60V
- Front panel IP65 rating
- Optional back-up battery available

Product Overview

VMC 320, 10.1-inch all in one robust vehicle mount computer, is designed for the warehouses, port, logistic and material handling markets. It implements the NXP i.MX 8M Plus low-power processor on both of Android and Linux platforms, and offers front panel IP65 and IK08. LCD panel: 1,000nits typ. guarantees to reach sunlight-readable. Wide-range power input (9V~60V) can let VMC 320 to be capable of setting up in various facilities and vehicles. The M.2 slot x 2 are designed for WLAN and WWAN wireless connectivity.

Specifications

LCD Panel

- 10.1-inch TFT LCD panel with LED backlight
- 1280x800 pixels
- Brightness: 1000cd/m² (typical)
- Viewing angle: 170° (H)/170° (V)
- Contrast ratio: 800:1 (typical)

Touch Screen

- Projected capacitive
- Anti-glare coating surface
- Transmission rate: 86 ±3%

CPU

- NXP i.MX 8M Plus processor with 1.6 GHz frequency
- Arm® Cortex®-A53 Quad-core

Memory

- Onboard LPDDR4 2133MHz SDRAM 4GB

Video Output

- 1 x HDMI® 2.0a up to 3840x2160@30Hz

Storage

- 1 x eMMC 32GB
- 1 x microSDXC™ slot

Expansion

- 1 x M.2 2230 Key E socket (USB 2.0, PCIe 3.0)
- 1 x M.2 3042/3050/3052 Key B socket (USB 3.2 Gen1) for LTE/5G NR module with 1 x external dual nano-SIM slot

GNSS and Onboard Sensor

- 1 x Default u-blox NEO-M9N GNSS for GPS/Glonass/QZSS/Galileo/Beidou
- Optional M9V modules with dead reckoning available
- G-Sensor and gyroscope

LAN

- 1-port LAN, 10/100/1000Mbps, M12 X-coded

Security

- TPM 2.0: Infineon SLB9670VQ2.0

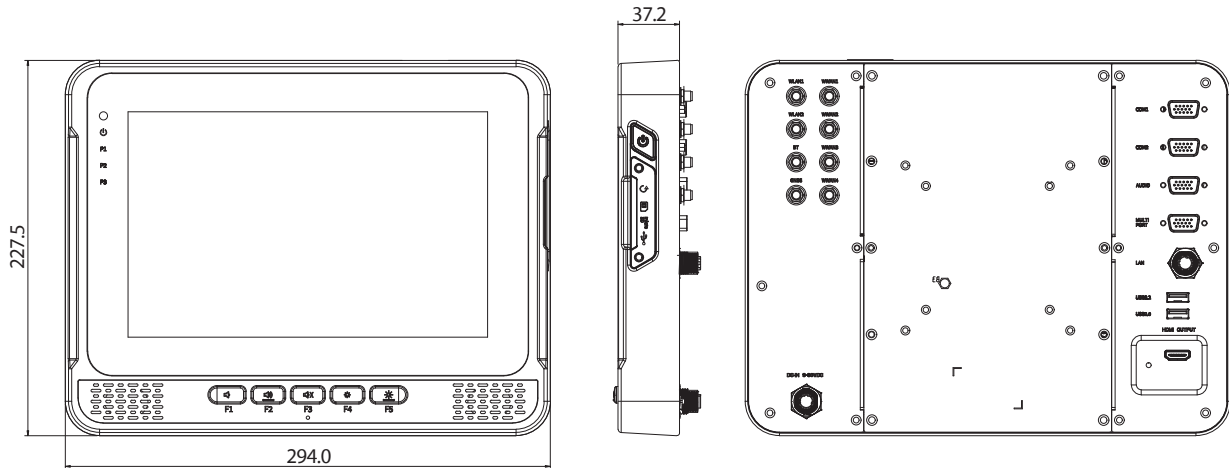
I/O Interface-Front

- F1~F5 programmable function keys (or volume control keys (+/-), brightness control keys (+/-), volume mute)
- 1 x Light sensor
- 4 x LED indicator (1 x power, 3 x programmable)
- 2 x Built-in 2W speakers
- 1 x Mic in

I/O Interface-Lateral

- Right Side
 - 1 x Power button
 - 1 x USB 2.0, Type-A w/ cover
 - 1 x System reset button w/ cover
 - 1 x microSD™ slot w/ cover
 - 1 x Dual nano-SIM slot w/ cover

Dimension Drawing



I/O Interface-Rear

- 2 x DB9 (COM1/2) for Full RS-232/422/485
- 1 x Power connector, M12 A-coded 5-pin
- 1 x 10/100/1000Mbps LAN, M12 X-coded 8-pin
- 1 x USB 3.2 Gen1, Type-A
- 1 x USB 2.0, Type-A
- 1 x HDMI® output
- 1 x DB9 female (audio) for Mic in (mono), 1 x Line out (stereo)
- 1 x DB15 (multi port)
 - 2 x GPI
 - 2 x GPO
 - 1 x Isolated CAN FD, compatible with CAN 2.0A/2.0B
 - PWM (speed) + Direction + GND
- 4 x SMA connector hole for WWAN
- 2 x RP-SMA connector hole for WLAN
- 1 x RP-SMA connector hole for Bluetooth
- 1 x SMA connector for GNSS

Mechanical

- Cooling system: fanless
- Enclosure: metal
- IK rating: IK08 (housing and touch screen)
- Mounting: VESA 75/100
- Ingress protection: front panel IP65
- Dimension: 294.0mm (W) x 227.5mm (H) x 37.2mm (D)
- Weight: 3.6kg

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 SMS, RTC, LAN and ignition

Environment

- Operating temperatures:
 - Ambient with air -30°C to 70°C, ambient with air
- Storage temperatures: -40°C to 80°C

- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random)
 - 2g@5Hz~500Hz (in operation)
- Vibration
 - Operating: MIL-STD-810H, 514.8 Procedure 1, Category 4
 - Storage: MIL-STD-810H, 514.8E Procedure 1, Category 24
 - IEC 60068-2-6: Sinusoidal 5~500MHz 2G
- Shock
 - Operating: MIL-STD-810H, Method 516.8, Procedure I, trucks and semi-trailers = 40g
 - Crash hazard: MIL-STD-810H, Method 516.8, Procedure V, ground equipment = 75g
 - IEC 60068-2-27
 - Operating: half sine, 20G 11ms
 - Non-operating: half sine, 50G 11ms

Operating System

- Linux Ubuntu 22.04 (Weston + Wayland)
- Android 13

Standards/Certifications

- CE/FCC class B/E13

Ordering Information

- **VMC 320-AC0 (P/N: 10VC0032000X0)**
10.1" rugged vehicle mount computer with NXP i.MX 8M Plus, projected capacitive touch screen and front panel IP65, 4GB LPDDR4 SDRAM, 32GB eMMC, DC input 9V~60V DC, OS Linux Ubuntu
- **VMC320-AC0A (P/N: 10VC0032001X0)**
10.1" rugged vehicle mount computer with NXP i.MX 8M Plus, projected capacitive touch screen and front panel IP65, 4GB LPDDR4 SDRAM, 32GB eMMC, DC input 9V~60V DC, OS Android 13
- **(Optional) VMC320 battery kit (P/N: 88VC0303000X0)**
Back-up battery for approx. 70 minutes of operation under power consumption 9W