

# VMC 110/111

7" Mobile Data Terminal  
with ARM® Cortex®-A9 platform



VMC 110



VMC 111

## Main Features

- 7" 1024 x 600 TFT LCD monitor with resistor touch screen
- ARM® Cortex®-A9 Dual Core Processor with 1GHz frequency
- Compact and fanless design
- On screen F1 ~ F5 programmable function keys
- Linux and Android operating system
- GPS/Wi-Fi/3G/LTE supported (Dead Reckoning included)
- iButton & RFID for ID identification
- Dual CAN Bus 2.0B
- OBDII (ISO15765-4)/SAE J1939 protocol
- Wide Range DC input from 9 ~ 36V
- SW Utility for function demonstration on Android platform
- CE/FCC/Emark

## Product Overview

VMC 110/111, a 7-inch all in one mobile data terminal, targets the fleet management, transportation and logistic applications. Its compact and rugged design with flexible expansion capability is perfect to the limited space on the driver cabinet and strong requirement on the wireless communication. For wireless communication, VMC110/111 is capable of supporting GPS, Dead Reckoning, Wifi, 3G and LTE. Besides, VMC 110/111 works on the both of Android and Linux operating systems, which are the main stream of operating system in the future. 7" 1024 x 600 resolution with 500nits brightness and resistive touch is suitable on the driver cabinet. Abundant I/O support, such as 2 x CAN bus 2.0B, OBDII/J1939, RS232, RS485, USB, GPIO, LAN... can help to get real-time vehicle information and connect with different sensors or equipment, such as ticketing machine, RFID scanner.... VMC 110/111 with Android and Linux platform is no doubt suitable to implement into various truck, forklift, crane... in port, transportation and logistic application.

## Specifications

### LCD Panel

- 7-inch TFT LCD Panel with LED Backlight
- 1024 x 600 pixels
- Brightness: 500 cd/m<sup>2</sup> (typical)
- Contrast ratio: 800:1 (typical)
- Viewing angle: 150(H), 145(V)

### Touch Screen

- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 80% ± 3%

### CPU & Chipset

- ARM® Cortex®-A9 Processor with 1GHz frequency
- Freescale Dual Core

### Memory

- On-board DDR3L 2GB

### Storage

- 1 x Micro SDHC Slot
- EMMC: 8G on board

### Expansion

- 1 x half-size mini-PCIe (PCIe + USB) for WLAN
- 1 x full-size mini-PCIe (USB + UART) for WWAN

- OBDII: ISO15765-4 & SAE J1939 (Default: None, BOM optional)
- RFID (optional)

### I/O Interface-Front

- F1 ~ F5 programmable function keys
- Light Sensor
- Internal Mic-in
- 2 x Built-in 2W speakers
- 3 x LED indicators (Power, Storage and WWAN)

### I/O Interface-Lateral

- Right side
  - 1 x SIM card slot
  - 1 x Micro SD card slot
  - 1 x USB 2.0 type A
  - 1 x micro USB OTG for maintenance
- Left side
  - 1 x Power button
  - 1 x Volume up/down
  - 1 x Brightness up/down
  - 1 x System reset button

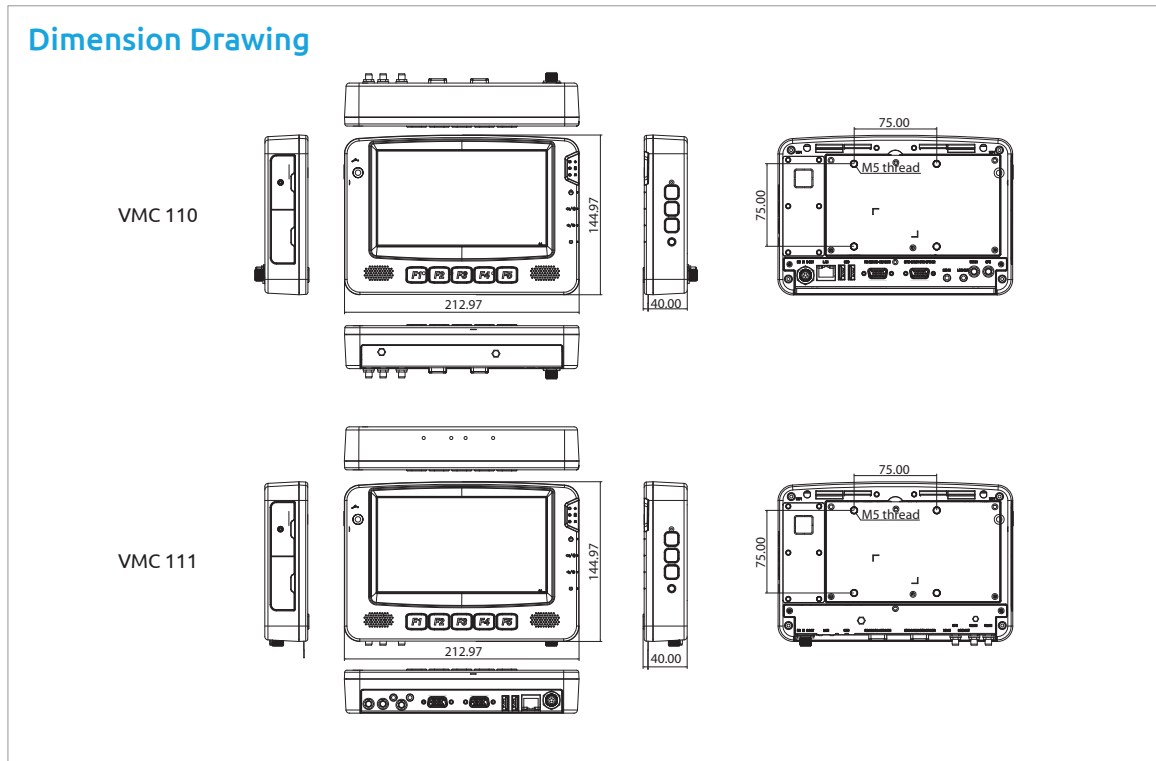
### I/O Interface-Rear/Bottom

- 1 x lockable power input with ignition
- 1 x RJ45 for LAN

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## Dimension Drawing



- 2 x USB 2.0 Type A
- DB-15 connector
  - Full RS-232
  - RS-232/485
  - CAN1 2.0B
- DB-15 connector
  - GPI x 3
    - Sink type: 5VDC TTL (default)
    - Source type: 3 ~ 28VDC
  - GPO x 3
    - Sink type: 5VDC TTL (default), max current: 20mA
    - Source type: 3 ~ 28VDC, max. current: 150mA
  - GPS DR (Speed, direction, GND)
  - CAN2 2.0B (Default) & (BOM optional for OBD II (ISO 15765-4 & J1939))
  - iButton
- 1 x Mic-in
- 1 x Line-out
- 3 x Antenna on I/O
  - Rear: 1 x GPS, 1 x WWAN
  - Bottom: 1 x GPS, 2 x WWAN
- 2 x Antenna on housing for Wi-Fi

### Mechanical

- Cooling System: Fanless
- Enclosure: Plastic PC/ABS + Metal heat-sink
- Mounting: VESA 75/100 & Desktop mounting
- Ingress Protection: Front panel IP54
- Dimension: 212.9mm (W) x 144.97mm (H) x 40mm (D)(8.4" x 5.7" x 1.6")
- Weight: 1.3kg

### Power Management

- 9V~36V DC input
- Selectable boot-up & shut-down voltage
- Ignition: 8-level delay time on/off
- Reverse protection/over-voltage protection/low-voltage protection
- Wake up by SMS/RTC/ignition

### Operating System

- Linux YOCTO 2.0 by Request
- Android 5.1

### Environment

- Operating temperatures: Ambient with air -20°C to 70°C
- Storage temperatures: -30°C to 80°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration
  - Vibration test: IEC 60068-2-64, 2.5G
  - Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  - Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  - MIL-STD-810G, 516.6 Procedure 1, trucks and semi-trailers=40g
  - Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment=75g

### Certification

- CE/FCC class B/E-Mark

## Ordering Information

- **VMC 110 (P/N: 10VC0110005X0)**  
VMC 110-D1A 7" I/O on the back w/i.MX6 Dual Lite, 2GB, 8G EMMC, 4w T/S, Android
- **VMC 111 (P/N: 10VC0111000X0)**  
VMC 111-D1A 7" I/O on the bottom w/i.MX6 Dual Lite, 2GB, 8G EMMC, 4w T/S, Android

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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