# MPC-21W7

**21" FHD Fanless Digital Signage Panel Computer with ATOM Dual Core Solution**

# Quick Reference Guide

**1st Ed – 24 April 2013**

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# 1. Getting Started

## 1.1 Safety Precautions

**Warning!**

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

**Caution!**

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

## 1.2 Packing List

- 1 x MPC-21W7 21" FHD Fanless Digital Signage Panel Computer with ATOM Dual Core Solution
- 1 x Quick Reference Guide
- 1 x DVD-ROM contains the followings:
  - User's Manual (this manual in PDF file)
  - Ethernet driver and utilities
  - VGA drivers and utilities
  - Audio drivers and utilities
  - WiFi drivers and utilities
  - Touch controller drivers and utilities
  - Chipset drivers and utilities
- 1 x Power Adapter (12V/7A)
- 4 x screws for VESA (M4 x 6mm)
- 4 x screws for 2.5" HDD device (M3 x 5mm)
  - 4 x screws for mPCIe device (M2 x 4mm)

If any of the above items is damaged or missing, contact your retailer.

## 1.3 System Specifications

| Panel | |
|---|---|
| **LCD size** | 21.6", 16:9 |
| **Resolution** | 1920 x 1080 HD, 16.7M |
| **Pixel pitch** | 0.248mm(H) x 0.248mm(V) |
| **Luminance** | 250 cd/m² |
| **Contrast ratio** | 1000 |
| **Viewing angle** | 80(U), 80(D), 85(L), 85(R ) |
| **Response time** | 5 ms |
| **Backlight** | 4 x CCFL |
| **Touch Type (Optional)** | Resistive |
| **Touch Light transmission** | 80% |
| **Touch Interface** | USB |
| **System** | |
| **Board** | EBM-CDV |
| **CPU** | Intel® Atom™ Dual-Core D2550 1.86GHz CPU |
| **BIOS** | AMI 8M-bit SPI BIOS |
| **System Chipset** | Intel® NM10 Express Chispet |
| **I/O Chip** | E/C IT8518E |
| **System Memory** | One SODIMM socket supports up to 4GB DDR3 800/1066 SDRAM |
| **SSD** | One CompactFlash Type I/II socket |
| **Hard Driver Bay** | Optional One 2.5"HDD or SSD |
| **WiFi** | Optional Mini PCIe WiFi 802.11b/g/n |
| **Watchdog Timer** | Reset: 1 sec.~255 min. and 1 sec. or 1 min./step |
| **H/W Status Monitor** | Monitoring system temperature and voltage. Auto throttling control when CPU overheats |
| **Expansion** | 1 x Mini-PCIe (mSATA supported) |
| **Rear I/O** | |
| **Serial Port** | 1 x RS-232/422/485 (selected by jumper) |
| **Ethernet** | 1 x RJ-45 |
| **VGA** | 1 x HDMI |
| **Audio port** | Line out |
| **USB** | 2 x USB 2.0 |
| **Speaker** | 2 x 1W |
| **Mouse & K/B** | 1 x PS/2 KB & MS |
| **Display** | |
| **Chipset** | Intel NM10 Express Chipset |

**MPC-21W7**

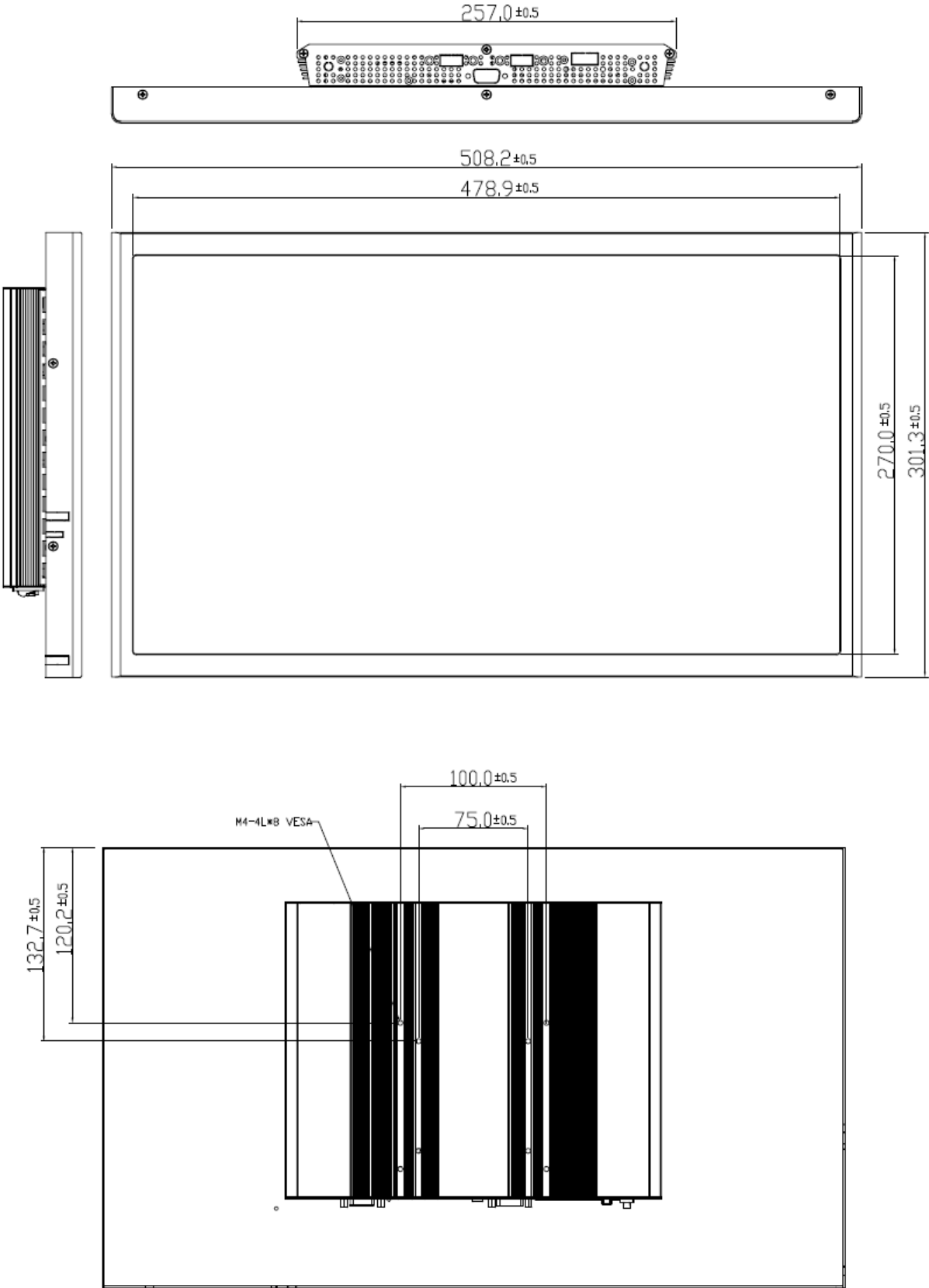| | |
|---|---|
| **Resolution** | CRT: up to 2048x1536@ 60 Hz |
| **Dual Display** | CRT + LVDS with clone mode |
| **Audio** | |
| **AC97 Codec** | Realtek ALC892 supports 5.1CH Audio |
| **Audio Interface** | Line out (jack), AMP Line-in, Line-out, Mic-in (in header) |
| **Ethernet** | |
| **LAN Chip** | Intel® 82574L Gigabit LAN (optional dual 82574L Gigabit LAN) |
| **Ethernet Interface** | 10/100/1000 Base-Tx Fast Ethernet compatible |
| **Mechanical & Environmental** | |
| **Color** | Front & Rear panel Black |
| **Mounting** | Wall/Stand/VESA 100 mm x 100 mm |
| **Power Input** | 100~250 Vdc/ 47~63 Hz |
| **System Power Requirement** | +12~28V DC Power Input |
| **Power Type** | AT/ATX |
| **Operating Temp.** | 32 to 122°F (0 to 50°C) |
| **Storage Temp.** | -4 to 167°F (-20 to 75°C) |
| **Operating Humidity** | 5%~90% relative humidity, non-condensing |
| **Dimensions** | 508.2 x 301.3 x 53.1 mm |
| **Weight** | 6 Kgs / 6.69 Kgs (with Touch) |

## 1.4 System Overview

### 1.4.1 I/O View
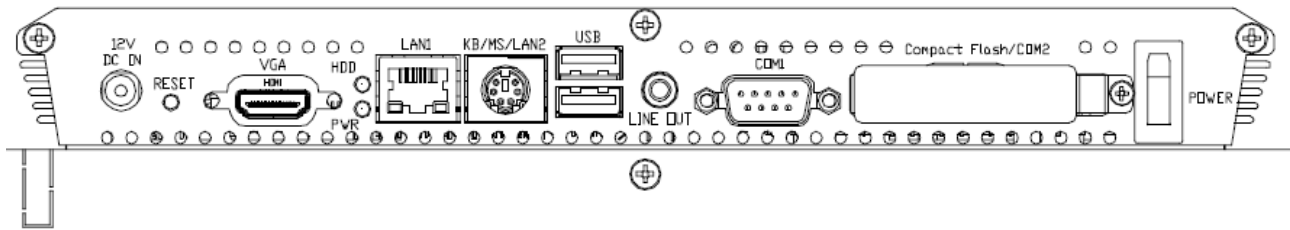


## Connectors

| Label | Function | Note |
|---|---|---|
| **Power** | Power-in connector | |
| **COM1** | Serial port 1 | DB-9 male connector |
| **KB/MS/LAN2** | Keyboard-Mouse connector | |
| **DC-IN** | DC power-in connector | |
| **VGA/HDMI** | CRT connector/HDMI connector | |
| **Reset** | Reset button | |
| **USB** | USB connector | |
| **LAN1** | RJ-45 Ethernet connector 1 | |
| **LINE OUT** | Line-out audio jack | |
| **HDD** | HDD indicator | |
| **PWR** | System power indicator | |
| **Compact Flash/ COM2** | Compact Flash card connector | |

## 1.5 System Dimensions

257.0 ±0.5

508.2 ±0.5

478.9 ±0.5

270.0 ±0.5

301.3 ±0.5

100.0 ±0.5

75.0 ±0.5

M4-4L*8 VESA

132.7 ±0.5

120.2 ±0.5

(Unit: mm)

# 2. Hardware Configuration

**Note:** If you need more information, please visit our website:

[http://www.avalue.com.tw](http://www.avalue.com.tw)
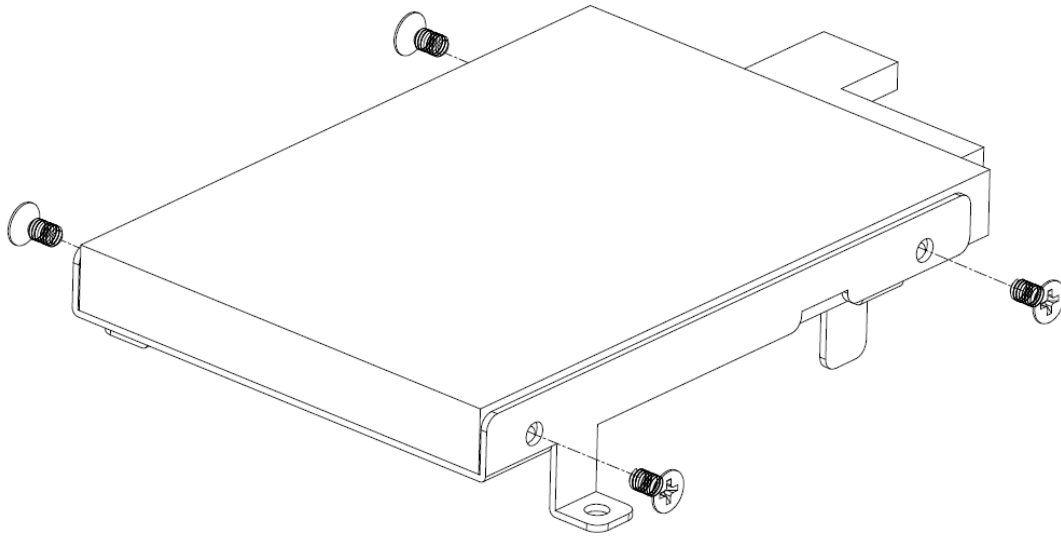
## 2.1 Installing HDD & MPCIE
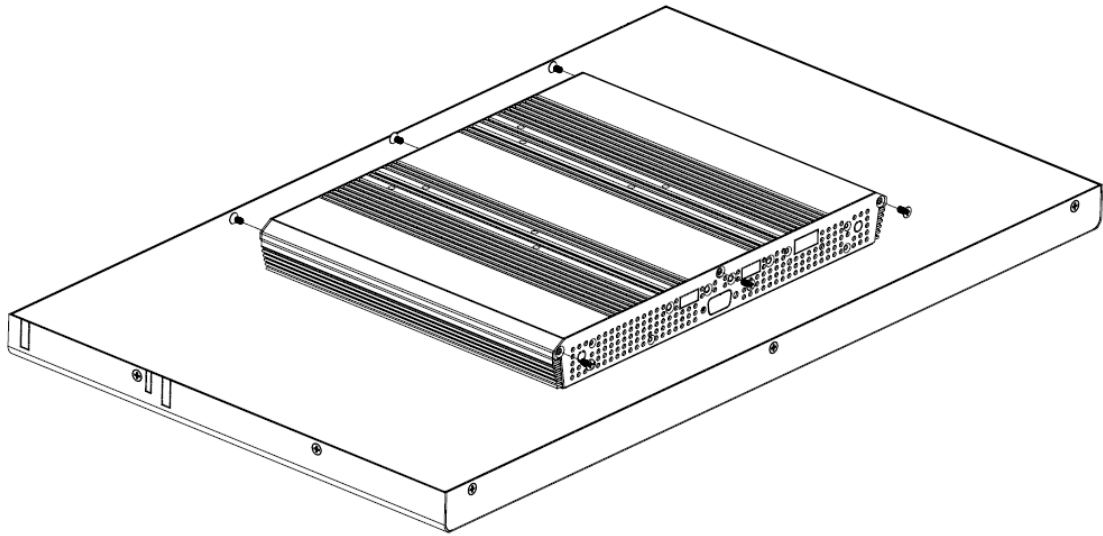
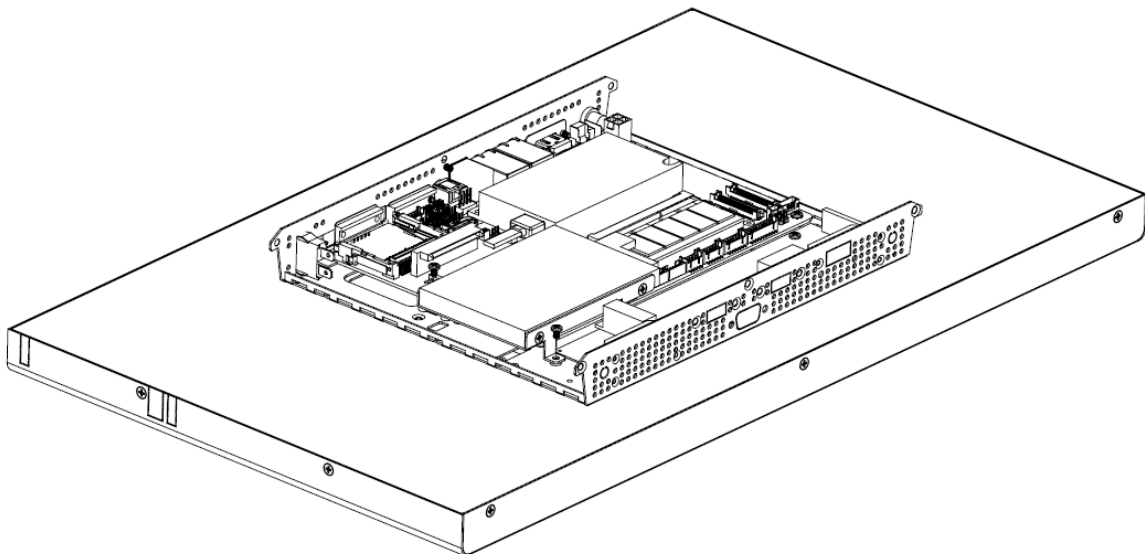**Step 1.** Unfasten 6 screws from the case. Then take off the top chassis.
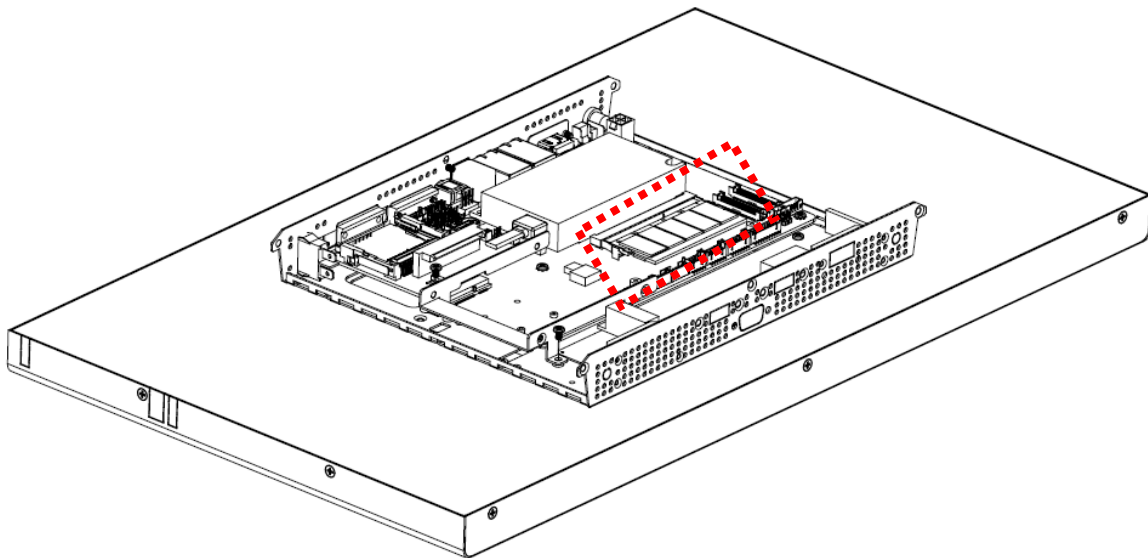
**Step 2.1.** Insert the SODIMM into the memory socket.
**Step 2.2.** Remove 2 screws to release the HDD bracket.

**Step 3.** Secure HDD by means of 4 screws.

**Step 4.** Insert the HDD into the Drive Bay. Remember to place the HDD down to the bottom exactly in order to screw the device tightly.