

# CS-110/P1000

## 10.4" TFT-LCD Sunlight Readable Touch Panel PC with Intel® Atom™ E3845 Quad Core Processor



- 10.4" TFT-LCD with Ultra High Brightness up to 1,500 nits and 1024 x 768 (XGA) Resolution
- Onboard Intel® Atom™ E3845 Processor Quad Core, 1.91GHz
- Supports 1x DDR3L SO-DIMM Socket, up to 8 GB
- 1x 2.5" SATA Drive Bay, 1x CFast Card and 1x SIM Card Socket
- 2x GbE LAN, 4x USB, 2x COM, 1x VGA, 1x DisplayPort, 4x DI/4x DO
- 1x Mini-PCIe Expansion Socket for Wireless and I/O Expansion
- Wide Range Operating Temperature -20°C to 70°C
- Designed with Aluminum Die-casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports Panel / VESA / Rack Mounting
- Convertible Display System (CDS) Technology Supported

### Overview

CS-110/P1000 Series is a 10.4" TFT-LCD sunlight readable touch panel PC offering 1,500 nits ultra high brightness and 1024 x 768 (XGA) resolution. The system is equipped with Intel® Atom® E3845 processor and provides extensive I/O including 2x GbE, 4x USB, 2x RS232/422/485, 4x DI/4x DO, 1x VGA and 1x DisplayPort. It also supports 1x Mini-PCIe slot and 1x SIM socket for a variety of wireless connections, such as BT/WiFi and 3G/LTE. In addition, there are 2 types of storage devices including 2.5" SATA HDD and CFast. The accessible design of these storage devices allows quick data access and easy maintenance.

CS-110/P1000 Series supports Convertible Display System (CDS) technology. Comparing to regular standalone panel PCs, it can lower maintenance cost and reduce unplanned downtime.

Furthermore, CS-110/P1000 Series is a truly rugged display system supporting wide range operating temperature (-20°C to 70°C), IP65 dust/water proof front panel, wide range DC power input (9 to 48VDC) and rigorous industrial protections.

### Highlights



#### Sunlight Readable

Providing ultra high brightness 1,500 nits and resolution up to 1024 x 768 (XGA), CS-110/P1000 Series is suitable for all lighting conditions including direct sunlight.



#### Wide Temperature

CS-110/P1000 Series supports wide range operating temperature from -20°C to 70°C and is suitable for deploying in extreme and harsh environments.



#### Multiple Functions

CS-110/P1000 Series provides extensive I/O, Mini-PCIe slot, 2.5" SATA drive bay, CFast socket, and SIM card slot.

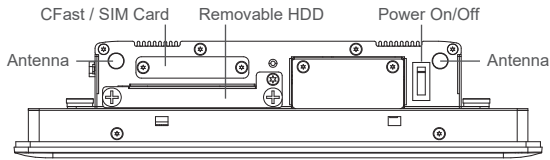
## Specifications

<p><b>Display</b></p> <ul style="list-style-type: none"> <li>▪ LCD Size: 10.4" (4:3)</li> <li>▪ Max. Resolution: 1024 x 768</li> <li>▪ Brightness (cd/m2): 1500</li> <li>▪ Contrast Ratio: 1400 : 1</li> <li>▪ LCD Color: 16.2M</li> <li>▪ Pixel Pitch (mm): 0.206 (H) x 0.206 (V)</li> <li>▪ Viewing Angle (H-V): 178 / 178</li> <li>▪ Backlight MTBF: 50000 hrs (LED Backlight)</li> </ul> <p><b>Touch</b></p> <ul style="list-style-type: none"> <li>▪ Projected Capacitive Touch</li> </ul> <p><b>Processor System</b></p> <ul style="list-style-type: none"> <li>▪ Onboard Intel® Atom™ Processor E3845 Quad Core, 1.91 GHz with AMI 64Mbit SPI BIOS</li> </ul> <p><b>Memory</b></p> <ul style="list-style-type: none"> <li>▪ 1x 204-Pin SO-DIMM DDR3L 1066/ 1333MHz (un-buffered and non-ECC), max. up to 8GB</li> </ul> <p><b>I/O Ports</b></p> <ul style="list-style-type: none"> <li>▪ 1x VGA</li> <li>▪ 1x DisplayPort</li> <li>▪ 1x USB 3.0</li> <li>▪ 3x USB 2.0</li> <li>▪ 2x DB9 for COM1~2, Support RS232/422/485 with Auto Flow Control</li> <li>▪ 1x Line-out</li> <li>▪ 1x Mic-in</li> <li>▪ 1x Power Switch</li> <li>▪ 1x Reset Button</li> <li>▪ 1x AT/ATX Switch</li> </ul> <p><b>Digital Input &amp; Output</b></p> <ul style="list-style-type: none"> <li>▪ 4x Digital Input (Source Type) <ul style="list-style-type: none"> <li>- Input Voltage (Dry Contact):</li> <li>Logic 0: Close to GND</li> <li>Logic 1: Open</li> </ul> </li> <li>- Input Voltage: <ul style="list-style-type: none"> <li>Logic 0: -3V(Min/ D1 to COM+)</li> </ul> </li> <li>▪ 4x Digital Output <ul style="list-style-type: none"> <li>- Supply Voltage: 5~30 VDC</li> <li>- Sink Current: 580mA Max</li> <li>- DIO Max: 30V</li> </ul> </li> </ul> <p><b>Expansion</b></p> <ul style="list-style-type: none"> <li>▪ 1x Full-size Mini PCIe Socket for Wi-Fi / GSM / Expansion Module</li> <li>▪ 2x Universal I/O Brackets [CS-110HC/P1001E]</li> </ul> <p><b>Other Features</b></p> <ul style="list-style-type: none"> <li>▪ Watchdog Timer: <ul style="list-style-type: none"> <li>Software Programmable Supports 256 Levels System Reset</li> </ul> </li> <li>▪ Audio: AMP 2W + 2W (Internal Speaker)</li> <li>▪ OSD Function: LCD On/Off, Brightness Up/Down</li> </ul>	<p><b>Ethernet</b></p> <ul style="list-style-type: none"> <li>▪ 2x Intel® i210 GbE LAN Port, Support Wake-on-LAN and PXE</li> </ul> <p><b>Storage</b></p> <ul style="list-style-type: none"> <li>▪ 1x External 2.5" SATA Drive Bay</li> <li>▪ 1x External CFast Socket</li> <li>▪ 1x External SIM Card Socket</li> </ul> <p><b>Power</b></p> <ul style="list-style-type: none"> <li>▪ Support AT, ATX Mode</li> <li>▪ 1x 3-pin Terminal Block Connector with Power Input 9~48VDC</li> <li>▪ 1x Optional AC/DC 12V/5A, 60W Power Adapter</li> </ul> <p><b>Physical</b></p> <ul style="list-style-type: none"> <li>▪ Dimensions (WxDxH, mm): CS-110HC/P1001: 295 x 227.3 x 65 mm CS-110HC/P1001E: 295 x 227.3 x 87.85 mm</li> <li>▪ Weight: CS-110HC/P1001: 3.58 kg CS-110HC/P1001E: 3.78 kg</li> <li>▪ Front Panel Construction: Flat Rugged Aluminum Die-casting Bezel</li> <li>▪ Mounting: Panel / VESA / *Rack Mounting (*with optional mounting kit)</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>▪ Operating Temperature: Ambient with air flow: -20°C to 70°C (with Industrial Grade Peripherals)</li> <li>▪ Storage Temperature: -20°C to 70°C</li> <li>▪ Relative Humidity: 80% RH @ 40°C (Non-Condensing)</li> <li>▪ Shock: Operating, 15 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)</li> <li>▪ Vibration: Operating, 1.5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)</li> <li>▪ IP Level: IP 65 Compliant Front Panel</li> <li>▪ EMC: CE, FCC Class A</li> </ul> <p><b>Protection</b></p> <ul style="list-style-type: none"> <li>▪ Reverse Power Input Protection</li> <li>▪ Over Voltage Protection: <ul style="list-style-type: none"> <li>Protection Range: 51~58V</li> <li>Protection Type: shut down operating voltage, re-power on at the preset level to recover</li> </ul> </li> <li>▪ Over Current Protection: 20A</li> <li>▪ ESD Protection: +/-8kV (air), +/-4kV (contact)</li> <li>▪ Surge Protection: 3kW</li> </ul> <p><b>Operating System</b></p> <ul style="list-style-type: none"> <li>▪ Windows® 10</li> <li>▪ Windows® 8.1</li> <li>▪ Windows® 7</li> </ul> <p><b>Certification</b></p> <ul style="list-style-type: none"> <li>▪ CE</li> <li>▪ FCC Class A</li> </ul>
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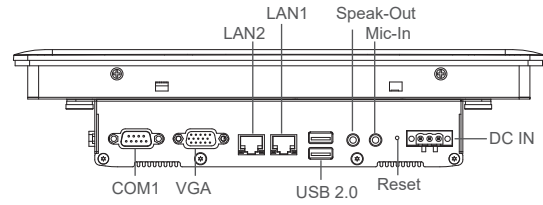
**External Layout**

**CS-110/P1001**

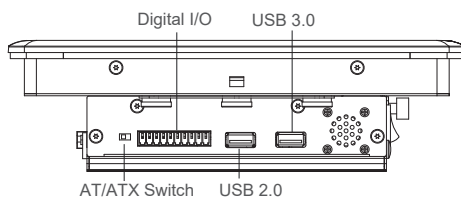
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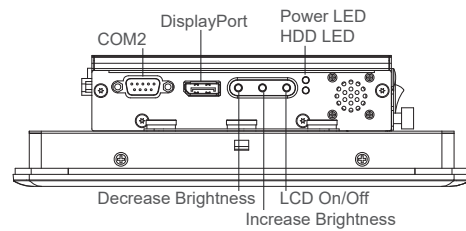
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Left

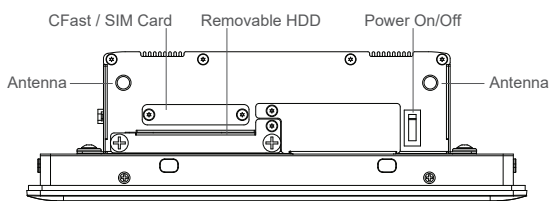


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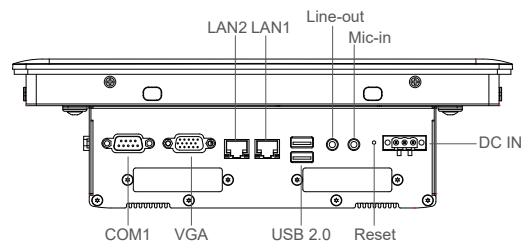


**CS-110/P1001E**

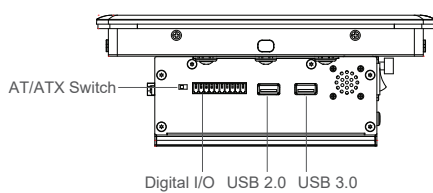
Front



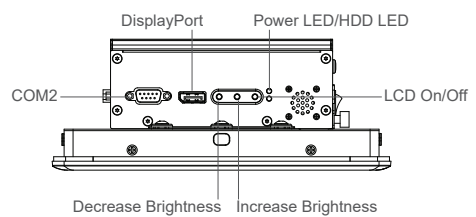
Rear



Left

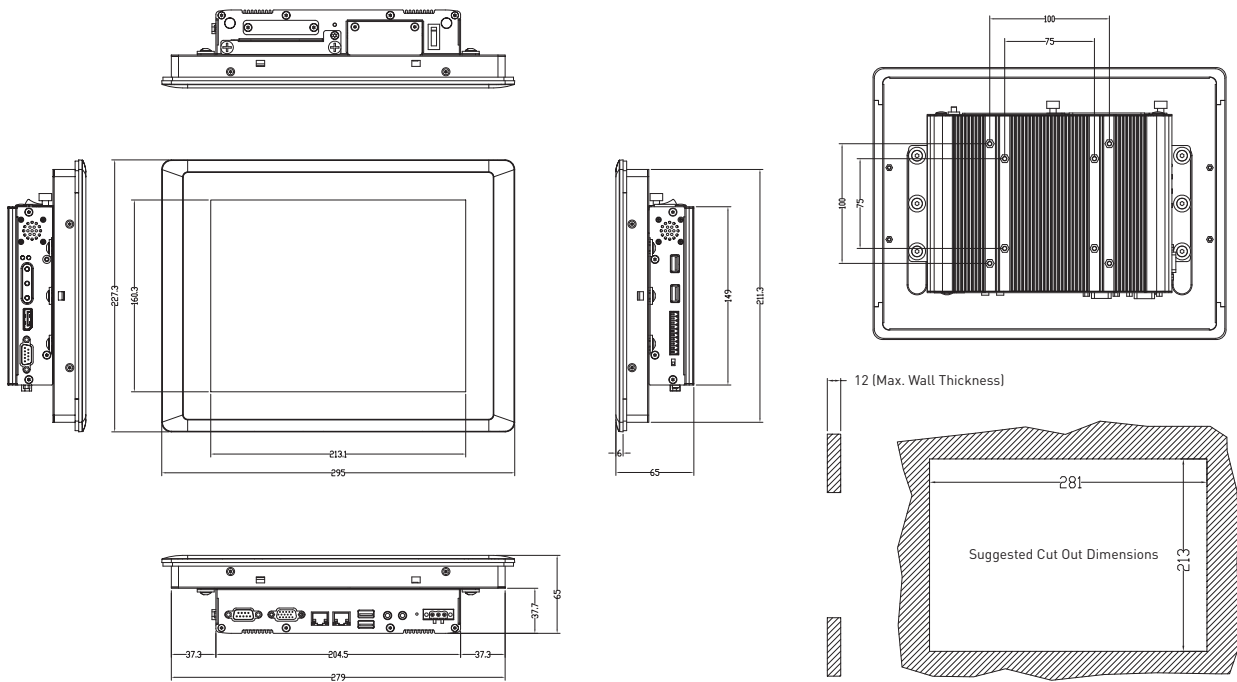


Right

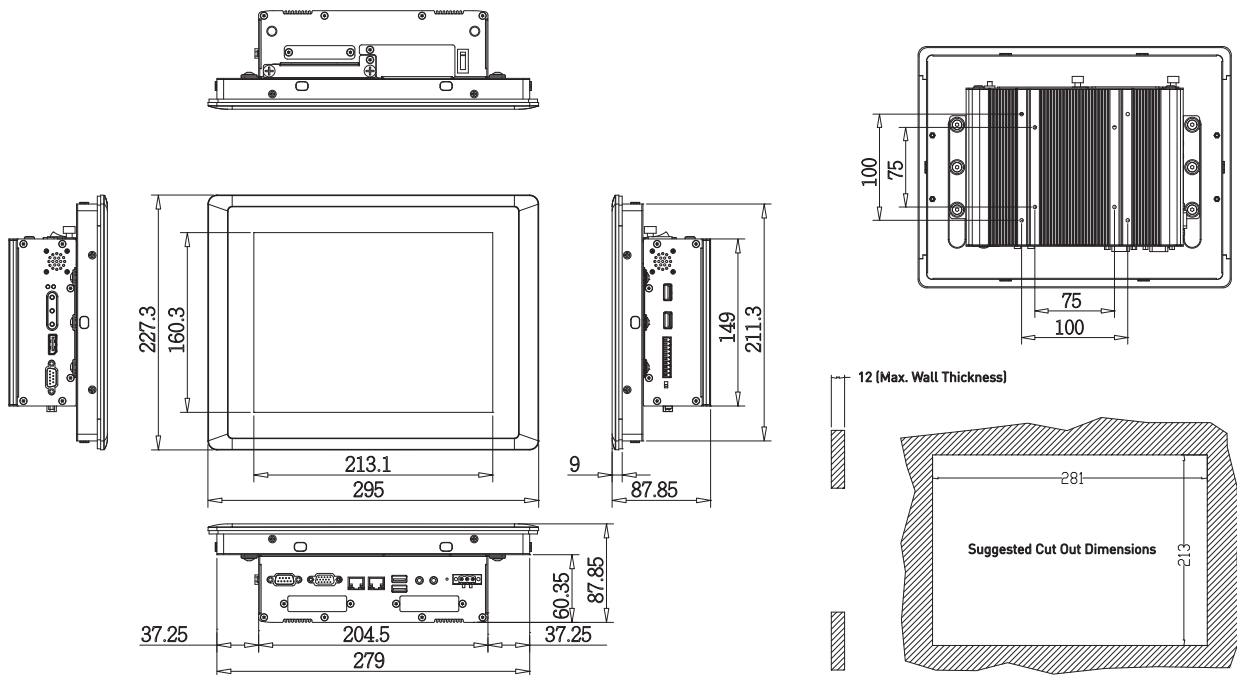


**Dimensions**

**CS-110/P1001**



**CS-110/P1001E**



## Ordering Information

### Available Models

Model No.	Description
CS-110HC-R10/P1001-R10	10.4" TFT-LCD 1500 nits Sunlight Readable Touch Panel PC with Intel® Atom™ E3845 Quad Core Processor and P-Cap. Touch
CS-110HC-R10/P1001E-R10	10.4" TFT-LCD 1500 nits Sunlight Readable Touch Panel PC with Intel® Atom™ E3845 Quad Core Processor, P-Cap. Touch and 2x Universal I/O Bracket

### Package Checklist

- Panel PC x 1
- Panel Mounting Kit x 1
- Utility DVD Driver x 1
- DIO Terminal Block Connector x 1
- Power Terminal Block Connector x 1
- HDD Screw Pack x 1
- Mini PCIe Screw Pack x 1

### Optional Modules & Accessories

Model No.	Description
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, GST60A12-CIN1, wide temp(-30°C ~ +70°C)
SL2-SL3	US 2 heads power cord, US B type to IEC C13, SVT 18AWG/3C Black 1.8M SL-2+SL-3
SL6-SL3	EU 2 heads power cord, EU G type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M SL-6+SL-3
QP026-SL3	UK 2 heads power cord, UK I type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M QP026+SL-3
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor
MEC-COM-M212/UB0303	Mini-PCIe Module with 2x COM Ports, 2x Universal Brackets (65 x 16 mm)
MEC-LAN-M002-R1/UB0311	Mini-PCIe Module with 2x LAN Ports, 1x Universal Bracket (65 x 16 mm)
MEC-USB-M002/UB0314	Mini-PCIe Module with 2x USB 3.0 Ports, 1x Universal Bracket (65 x 16 mm)