

# CO-W121C/P1101 Series

21.5" TFT Full HD 16:9 Panel PC with  
Intel® Atom® / Pentium® Processor



## ALL-NEW OPEN FRAME PANEL PC

| CO-100/P1101 Series Fits Any Machine Perfectly |

### Overview

Cincoze power efficient open frame modular panel PCs (CO-W121C/P1101 Series) support Intel® Atom® and Pentium® processors, and multiple displays. Native I/O ports include LAN, USB, COM, and DIO, and the series supports CFM technology, offering expansion functions such as Power Ignition Sensing (IGN) to meet different application needs. The integrated structure, exclusive adjustable mounting bracket, and support for various mounting methods enable a perfect fit in cabinets of different materials and thicknesses. The robust design also meets the application needs of harsh industrial environments.

- 21.5" TFT-LCD with Projected Capacitive Touch
- Onboard Intel® Atom® / Pentium® Processor
- 1x DDR3L SO-DIMM max. up to 8GB
- Designed with Adjustable Mounting Bracket
- Support Flat / Standard / VESA / Rack Mount
- Front Panel IP65 Compliant
- Wide Operating Temperature
- Cincoze Patent CDS Technology Support

### Power Efficient & Multi-Display

Powered by Intel® Atom® or Pentium® processor with support for multiple displays.



### Rich I/O for Flexible Expansion

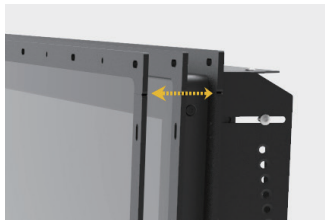
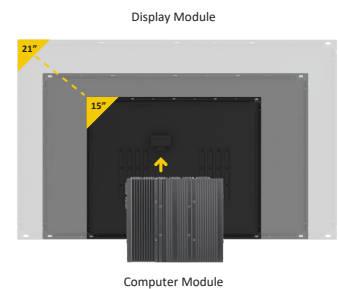


Native I/O ports include LAN, USB, COM, DIO, Mini-PCIe, and SIM slot, while the whole series supports CFM technology for additional expansion functions like Power Ignition Sensing (IGN) or Power over Ethernet (PoE) to meet different application needs.

### Patented CDS Technology

The patented CDS (Convertible Display System) technology makes maintenance easy and offers flexibility for future upgrades. To upgrade the panel size, replace the display module, or to upgrade the system performance, replace the computer module.

Patent No. M482908



### Flexible Design and Easy Installation

Exclusive adjustable mounting bracket with thickness adjustment setting and two panel-locking methods (panel or boss type) make modular panel PC easier and more convenient to integrate into industrial machinery.

Patent Pending

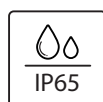
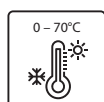
### Integrated Structure

As standard, the open frame modular panel pc can be deployed in equipment machines, but remove the mounting bracket and it becomes a standalone panel pc for use with a VESA mount or in a 19" rack.



### Strong, Reliable and Durable

Meets the requirements for HMI applications in harsh industrial environments: IP65 waterproof and dustproof front panel, fanless, wide temperature (0-70°C), and wide voltage (9-48 VDC).



## CO-W121C Specifications

<b>Display</b>	
LCD Size	• 21.5" (16:9)
Resolution	• 1920 x 1080
Brightness	• 300 cd/m2
Contract Ratio	• 5000 : 1
LCD Color	• 16.7M
Pixel Pitch	• 0.24825 (H) x 0.24825 (V) mm
Viewing Angle	• 178 (H) / 178 (V)
Backlight MTBF	• 50,000 hrs
<b>Touch Screen</b>	
Touchscreen Type	• Projected Capacitive Touch
<b>Physical</b>	
Dimension (W x D x H)	• 550 x 343.7 x 63.3
Weight	• 7.16 kg
Construction	• One-piece and Slim Bezel Design
Mounting Type	• Flat / Standard / VESA / Rack Mount
Mounting Bracket	• Pre-installed Mounting Bracket with Adjustable Design ( Support 11 different stages of adjustment )
<b>Protection</b>	
Ingress Protection	• Front Panel IP65 Compliant * According to IEC60529
<b>Environment</b>	
Operating Temperature	• 0°C to 70°C
Storage Temperature	• -20°C to 70°C
Humidity	• 80% RH @ 40°C (non-condensing)
EMC	• CE, UKCA, FCC, ICES-003 Class A
Safety	• UL, cUL 62368-1 (Pending)

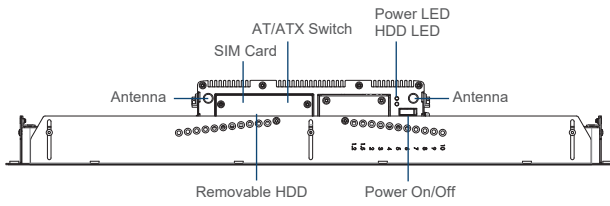
## P1101 Specifications

Model Name	P1101
<b>System</b>	
Processor	<ul style="list-style-type: none"> <li>Onboard Intel® Atom® x7-E3950 Quad Core Processor, up to 2.00 GHz</li> <li>Onboard Intel® Pentium® N4200 Quad Core Processor, up to 2.50 GHz</li> </ul>
Memory	<ul style="list-style-type: none"> <li>1x DDR3L 1333/1600/1866 MHz 204-Pin SO-DIMM Socket</li> <li>Supports up to 8GB (un-buffered and non-ECC)</li> </ul>
<b>Graphics</b>	
Graphics Engine	<ul style="list-style-type: none"> <li>Integrated Intel® HD Graphics 505</li> </ul>
Maximum Display Output	<ul style="list-style-type: none"> <li>Supports Triple Independent Display (1x CDS, 1x VGA, 1x DisplayPort)</li> </ul>
VGA	<ul style="list-style-type: none"> <li>1x VGA Connector (1920 x 1200 @60Hz)</li> </ul>
DP	<ul style="list-style-type: none"> <li>1x DisplayPort Connector (4K x 2K @60Hz)</li> </ul>
<b>Audio</b>	
Audio Codec	<ul style="list-style-type: none"> <li>Realtek® ALC888, High Definition Audio</li> </ul>
Line-out	<ul style="list-style-type: none"> <li>1x Line-out, Phone Jack 3.5mm</li> </ul>
Mic-in	<ul style="list-style-type: none"> <li>1x Mic-in, Phone Jack 3.5mm</li> </ul>
<b>I/O</b>	
LAN	<ul style="list-style-type: none"> <li>2x GbE LAN (Supports WoL, Teaming, Jumbo Frame &amp; PXE), RJ45                             <ul style="list-style-type: none"> <li>- GbE1: Intel® I210</li> <li>- GbE2: Intel® I210</li> </ul> </li> </ul>
USB	<ul style="list-style-type: none"> <li>4x USB 3.2 Gen1 (Type A)</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>4x RS-232/422/485 with Auto Flow Control Support 5V/12V, DB9</li> </ul>
DIO	<ul style="list-style-type: none"> <li>8x Isolated Digital I/O (4in/4out), 10-Pin Terminal Block</li> </ul>
Power Mode Switch	<ul style="list-style-type: none"> <li>1x AT/ATX Mode Switch</li> </ul>
Power Switch	<ul style="list-style-type: none"> <li>1x Power Switch</li> </ul>
Reset Button	<ul style="list-style-type: none"> <li>1x Reset Button</li> </ul>
Clear CMOS Switch	<ul style="list-style-type: none"> <li>1x Clear CMOS Switch</li> </ul>
Remote Power On/Off	<ul style="list-style-type: none"> <li>1x Remote Power On/Off Connector, 2-pin Terminal Block</li> </ul>
<b>Storage</b>	
SSD/HDD	<ul style="list-style-type: none"> <li>1x 2.5" SATA HDD Bay (SATA 3.0)</li> </ul>
mSATA	<ul style="list-style-type: none"> <li>1x mSATA Socket (SATA 3.0, Shared by Mini-PCIe Socket)</li> </ul>
<b>Expansion</b>	
Mini PCI Express	<ul style="list-style-type: none"> <li>2x Full-size Mini-PCIe Sockets</li> </ul>
SIM Socket	<ul style="list-style-type: none"> <li>1 x SIM Socket</li> </ul>
CFM (Control Function Module) Interface	<ul style="list-style-type: none"> <li>Optional CFM IGN Module for Power Ignition Function</li> <li>Optional CFM PoE Module for Power over Ethernet Function</li> </ul>
CDS (Convertible Display System) Technology	<ul style="list-style-type: none"> <li>1x CDS Interface for Convertible Display Module</li> </ul>
Antenna Holes	<ul style="list-style-type: none"> <li>4x Antenna Holes</li> </ul>

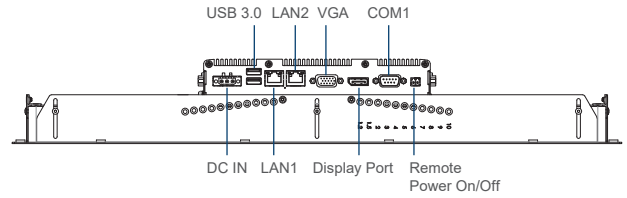
<b>Other Function</b>	
Instant Reboot	• Support 0.2sec
Watchdog Timer	• Software Programmable Supports 256 Levels System Reset
Internal Speaker	• AMP 2W + 2W
OSD Function	• LCD On/Off, Brightness Up, Brightness Down
<b>Power</b>	
AT/ATX Power	• Support AT, ATX Mode
Power Input	• 1x 3-pin Terminal Block Connector with Power Input 9~48VDC
Power Adapter (Optional)	• 1x Optional AC/DC 12V/5A, 60W or 24V/5A 120W
<b>Physical</b>	
Dimension ( W x D x H )	• 204.5 x 149 x 41.5 mm
Weight Information	• 1.49kg
Mechanical Construction	• Extruded Aluminum with Heavy Duty Metal
Mounting	• Wall / VESA / CDS / DIN Rail
Physical Design	• Fanless Design • Jumper-less Design
<b>Reliability &amp; Protection</b>	
Reverse Power Input	• Yes
Over Voltage Protection	• Protection Range: 51~58V • Protection Type: shut down operating voltage, re-power on at the present level to recover
Over Current Protection	• 15A
ESD Protection	• +/-8kV (air), +/-4kV (contact)
Surge Protection	• 2kV
CMOS Battery Backup	• SuperCap Integrated for CMOS Battery Maintenance-free Operation
MTBF	• Time: 294,617 hours
<b>Operating System</b>	
Microsoft® Windows®	• Windows®10
Linux	• Supports by project
<b>Environment</b>	
Operating Temperature	• Ambient with Air Flow: -40°C to 70°C (with Extended Temperature Peripherals)
Storage Temperature	• -40°C to 85°C
Relative humidity	• 95% RH @ 75°C (Non-condensing)
Shock	• Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Vibration	• Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
EMC	• CE, UKCA, FCC, ICES-003 Class A
Safety	• LVD IEC/EN 62368-1

**CO-W121C/P1101 External Layout**

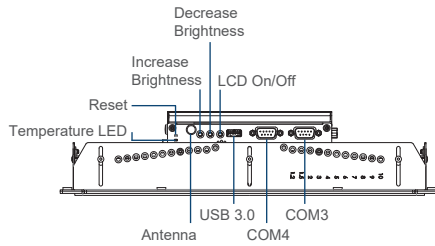
Front I/O



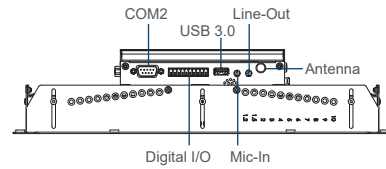
Rear I/O



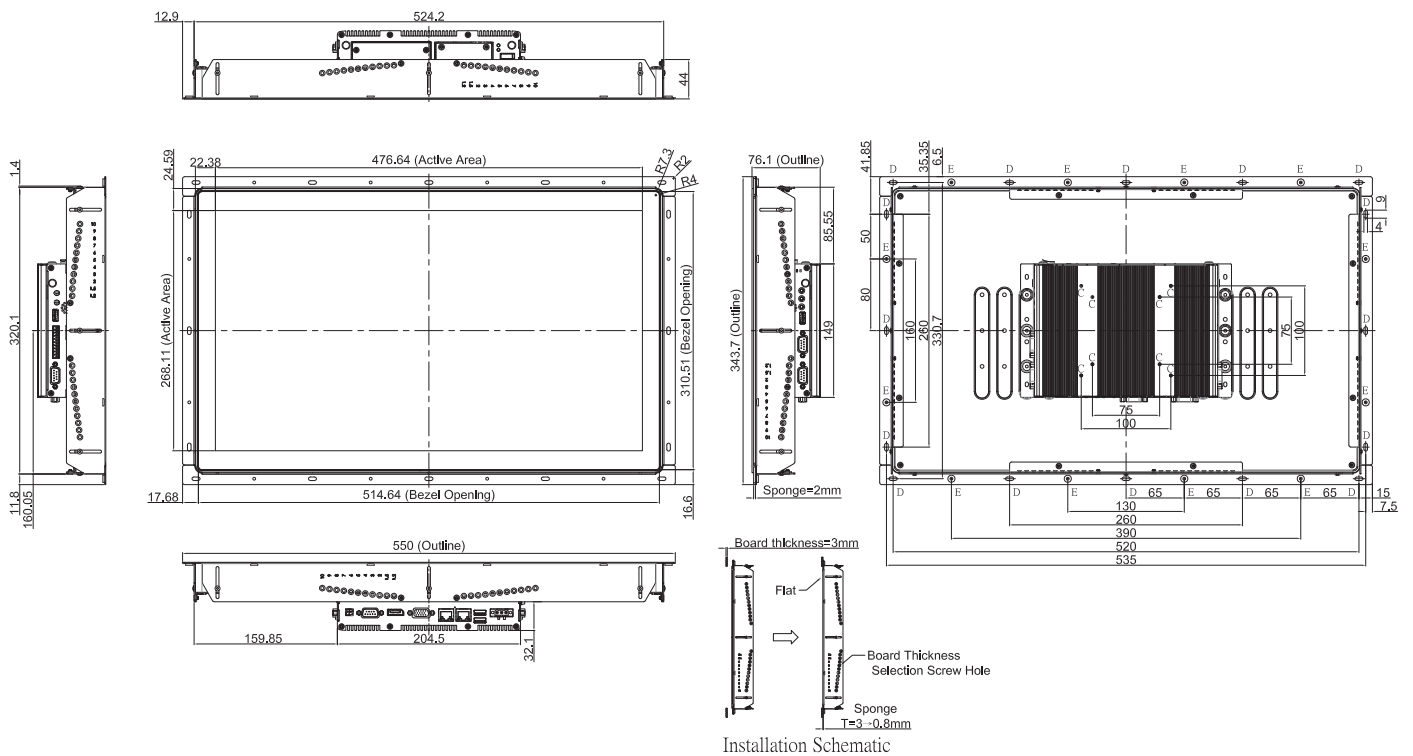
Left I/O



Right I/O



**CO-W121C/P1101 Dimensions**



## Ordering Information

### Available Models

Model No.	Description
CO-W121C-R10/P1101-E50-R10	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular Panel PC with Intel Atom E3950 Quad Core Processor and P-Cap. Touch
CO-W121C-R10/P1101-N42-R10	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular Panel PC with Intel Pentium N4200 Quad Core Processor and P-Cap. Touch

### Model Configuration

	CO-W121C	P1101-E50	P1101-N42
CO-W121C/P1101-E50	V	V	--
CO-W121C/P1101-N42	V	--	V

V : Compatible

### Package Checklist

• CO-W121C/P1101 Series Panel PC x 1	• Power Terminal Block Connector (Female) x 1
• Utility DVD Driver x 1	• Screw Pack x 1
• DIO Terminal Block Connector (Female) x 1	• Remote Power On/Off Terminal Block Connector x 1
• Thermal Pad (for CPU Thermal Block) x 1	

### Optional Modules and Accessories

Model No.	Description
CFM-IGN101	CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable (43 x 36 mm)
CFM-PoE02	CFM Module with PoE Control Function, Individual Port 25.5W
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, GST60A12-CIN1, wide temp (-30°C ~ +70°C)
GST120A24-CIN	Adapter AC/DC 24V 5A 120W, GST120A24-CIN, wide temp (-30°C ~ +70°C), level VI
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