

# CS-W121C/P1101

21.5" TFT-LCD Sunlight Readable Touch Panel PC with Intel® Atom® / Pentium® Processor



- 21.5" TFT-LCD with Ultra High Brightness up to 1,000 nits
- Onboard Intel® Atom® / Pentium® Processor
- Triple Independent Displays (via VGA and DisplayPort outputs)
- Rich I/O (2x GbE LAN, 4x USB 3.0, 4x COM, 8x Isolated DIO)
- 2x Full Size Mini-PCIe, 1x 2.5" SATA Drive Bay, 1x mSATA Socket
- Wide Range Operating Temperature 0°C to 70°C
- Designed with Aluminum Die-casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports CDS Technology, Ignition Sensing and Power over Ethernet
- Supports Panel / VESA / Rack Mounting

## Overview

CS-W121C/P1101 Series is a 21.5" TFT-LCD sunlight readable touch panel PC offering 1,000 nits ultra high brightness and 1920 x 1080 resolution. The system is based on Intel® Atom® / Pentium® processor and supports triple independent displays (via VGA and DisplayPort outputs). CS-W121C/P1101 Series features extensive connectivity including 2x GbE, 4x USB 3.0, 4x COM, and 8x isolated DIO. It also offers 2x full size Mini-PCIe socket and 1x SIM socket for a variety of wireless data connections. Through the ready-to-use CFM modules, users can easily add power ignition sensing and Power over Ethernet (PoE) functions for a variety of applications.

CS-W121C/P1101 Series also supports Convertible Display System (CDS) technology. Comparing with regular standalone panel PCs, it is more flexible and reduces maintenance cost dramatically. Featuring with rigorous industrial protections, wide range operating temperature (0°C to 70°C), IP65 dust/waterproof front panel, and wide range DC power input (9 to 48VDC), CS-W121C/P1101 Series is appropriate for harsh environments and critical applications.

## Specifications

### Display

LCD Size	• 21.5" (16:9)
Max. Resolution	• 1920x1080 (Full HD)
Brightness (cd/m2)	• 1,000
Contrast Ratio	• 5,000:1
LCD Color	• 16.7M
Pixel Pitch (mm)	• 0.24825 (H) x 0.24825 (V)
Viewing Angle (H-V)	• 178 /178
Backlight MTBF	• 50,000 hrs (LED Backlight)

### Touch

Projected Capacitive	V
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### System

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-buered and non-ECC)</li> </ul>

### Graphics

Graphics Engine	• Integrated Intel® HD Graphics 505
Maximum Display Output	• Supports Triple Independent Display (via VGA and DisplayPort outputs)

### Audio

Audio Codec	• Realtek ALC888-GR
Line-out	• 1x Speaker-out Phone Jack 3.5mm
Mic-in	• 1x Mic-in, Phone Jack 3.5mm

**External I/O Interface**

VGA	• 1x VGA (1920 x 1200 @60Hz)
DP	• 1x DisplayPort (4K x 2K @60Hz)
LAN	• 2x GbE LAN (Supports WoL, Teaming, Jumbo Frame & PXE), RJ45 - GbE1: Intel® I210 - GbE2: Intel® I210
USB	• 4x USB 3.0 (Type A)
COM	• 4x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9
CDS	• Supports Convertible Display System (CDS) Technology

**DIO**

DIO	• 8x Isolated DIO (4x DI/4x DO), 10-Pin Terminal Block
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**Storage**

SSD/HDD	• 1x 2.5" HDD/SSD Drive Bay (SATA 3.0)
mSATA	• 1x mSATA Socket (SATA 3.0, Shared by Mini-PCIe Socket)

**Expansion**

Mini PCI Express	• 2x Full-size Mini-PCIe Socket
SIM Socket	• 1x SIM Socket
Antenna Hole	• 4x Antenna Hole
CFM (Control Function Module) Interface	• Supports Control Function Module (CFM) Technology - Optional CFM IGN Module for Power Ignition Function - Optional CFM PoE Module for Power over Ethernet Function

**Other Function**

Internal Speaker	• AMP 2W + 2W
Power Ignition Sensing	• 1x Ignition DIP Switch (12V/24V, need to work with CFM module)
Clear CMOS Switch	• 1x Clear CMOS Switch
Rest Button	• 1x Reset Button
Instant Reboot	• Supports Instant Reboot Technology (0.2 sec)
Watchdog Timer	• Software Programmable Supports 256 Levels System Reset
OSD Function	• LCD On/Off, Brightness Up, Brightness Down

**Power**

Power Button	• 1x ATX Power On/Off Button
Power Mode Switch	• 1x AT/ATX Mode Switch
Power Input	• 9 - 48VDC, 3-pin Terminal Block
Remote Power On/Off	• 1x Remote Power On/Off Connector, 2-pin Terminal Block
Power Adapter (Optional)	• AC/DC 12V/5A 60W or AC/DC 24V/5A 120W

**Physical**

Dimension ( W x D x H )	• 550 x 330.5 x 76.35mm
Weight Information	• 7.05 Kg
Front Panel Construction	• Flat Rugged Aluminum Die-casting Bezel
Mounting	• Panel / VESA / *Rack Mounting (*with optional mounting kit)
Physical Design	• Fanless Design

**Reliability & Protection**

Reverse Power Input Protection	• Yes
Over Voltage Protection	• Protection Range: 51~58V • Protection Type: shut down operating voltage, re-power on at the preset level to recover
Over Current Protection	• 15A
Surge Protection	• 3.84 kV (impedance 12 ohm 1.2/50µs waveform)
CMOS Battery Backup	• SuperCap Integrated for CMOS Battery Maintenance-free Operation
ESD Protection	• +/-8kV (air), +/-4kV (contact)

**Operating System**

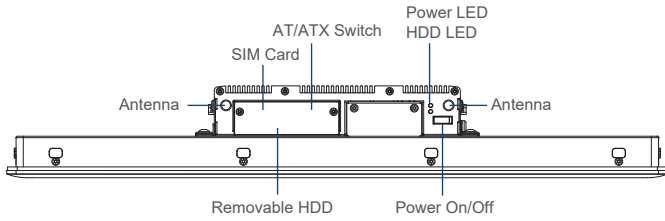
Windows	• Windows® 10
Linux	• Support by Project

**Environment**

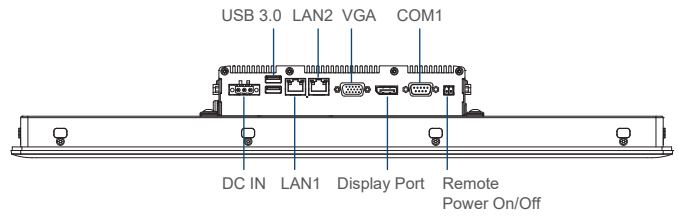
Operating Temperature	• 0°C to 70°C (with Extended Temperature Peripherals; Ambient with Air Flow)
Storage Temperature	• -20°C to 70°C
Relative Humidity	• 95% RH @ 39°C (Non-condensing)
EMC	• CE, FCC, ICES-003 Class A
IP Level	• IP65 Compliant Front Panel

## External Layout

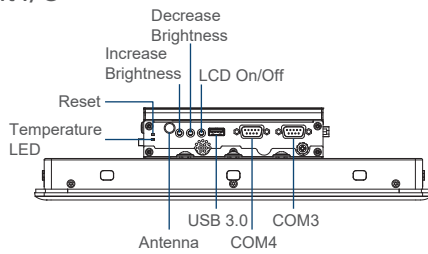
Front I/O



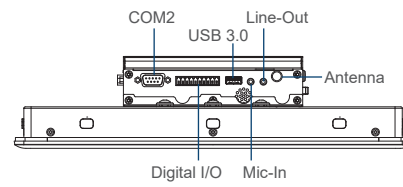
Rear I/O



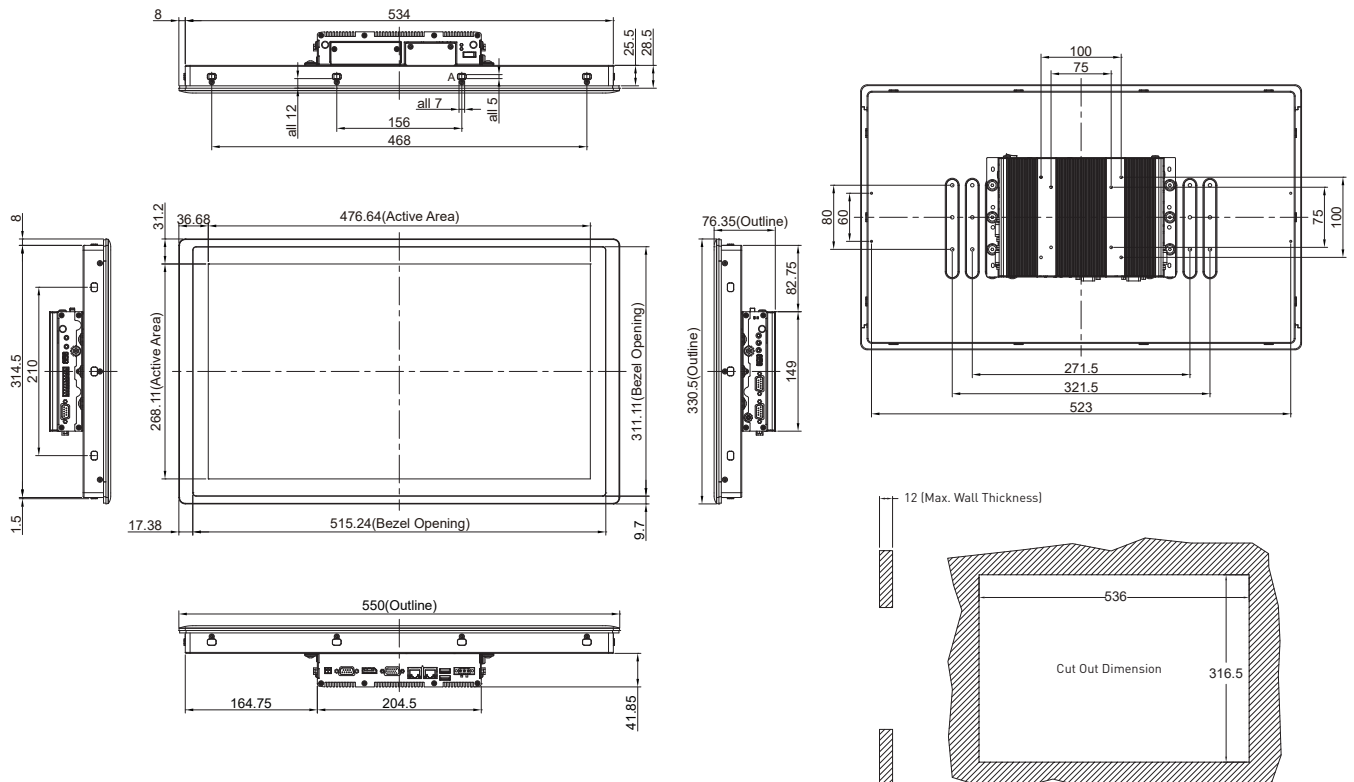
Left I/O



Right I/O



## Dimensions



Unit: mm

## Ordering Information

### Available Models

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

### Package Checklist

• CS-W121C/P1101 Panel PC x 1	• DIO Terminal Block Connector x 1
• Thermal Pad (for CPU Thermal Block) x 1	• Utility Driver DVD x 1
• Power Terminal Block Connector x 1	• Screws Pack x 1
• Remote Power On/Off Terminal Block Connector x 1	• Panel Mounting Kit x 1

### Optional Modules

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

### Optional Accessories

Model No.	Description
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



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