CS-112H/P1101 Series

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

POWER EFFICIENT SUNLIGHT READABLE PANEL PC

| CS-100/P1000 Series |

Overview

CONTACT

CS-100/P1101 Series is a 8.4" - 24″ TFT-LCD sunlight readable touch panel PC offering 1,500 nits - 1,800 nits ultra high brightness and 800 x 600 - 1920 x 1080 (SVGA) resolution. The system is based on Intel® Atom® / Pentium® processor and supports triple independent displays (via VGA and DisplayPort outputs). CS-100/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-100/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, IP65 dust/waterproof front panel, and wide range DC power input (9 to 48VDC), CS-100/P1101 Series is appropriate for harsh environments and critical applications.

Key Features

▪ 12.1" TFT-LCD XGA with Ultra High Brightness up to 1,500 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
▪ 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

Certifications

Sunlight Readable

Providing ultra high brightness 1,500 nits - 1,800 nits and resolution up to 800 x 600 - 1920 x 1080 (XGA), CS-100/P1101 Series is suitable for all lighting conditions including direct sunlight.

1500 nits
-
1800 nits

Wide Temperature

CS-100/P1101 Series supports wide range operating temperature and is suitable for deploying in extreme and harsh environments.

Multiple Functions

CS-100/P1101 Series provides extensive I/O, Mini-PCIe slot, 2.5" SATA drive bay, mSATA socket, and SIM card slot. It also supports power ignition sensing and PoE by adding ready-to-use CFM modules.

Power Ignition

PoE

CS-112H Specifications

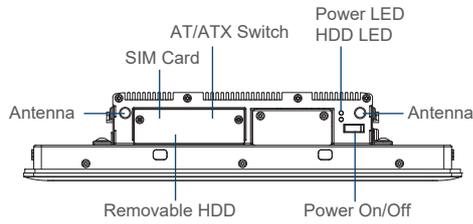| Model Name	CS-112HC
Display	
LCD Size	▪ 12.1" (4:3)
Max. Resolution	▪ 1024 x 768 (XGA)
Brightness (cd/m2)	▪ 1500
Contrast Ratio	▪ 700 : 1
LCD Color	▪ 16.7M
Pixel Pitch (mm)	▪ 0.24 (H) x 0.24 (V)
Viewing Angle (H-V)	▪ 160 / 140
Backlight LED Life Time	▪ 50,000 hrs (LED Backlight)
Touch Screen	
Touch Type	▪ Projected Capacitive
Physical	
Dimension (W x D x H)	▪ 345 x 265.3 x 57 mm
Weight Information	▪ 3.16 kg
Mechanical Construction	▪ Flat Rugged Aluminum Die-casting Bezel
Power	
Power Consumption	▪ 16.22W (Typ.)
Environment	
Front Panel Protection	▪ IP 65 Compliant
Operating Temperature	▪ -20°C to 80°C (With Industrial Grade Peripherals; Ambient with air flow)
Storage Temperature	▪ -30°C to 80°C
Relative Humidity	▪ 90% RH @ 40°C (Non-condensing)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV ▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 3V ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz
Safety	▪ UL, cUL, CB, IEC, EN 62368-1

P1101 Specifications

Model Name	P1101
System	
Processor	▪ Onboard Intel® Atom® x7-E3950 Quad Core Processor, up to 2.00 GHz ▪ Onboard Intel® Pentium® N4200 Quad Core Processor, up to 2.50 GHz
Memory	▪ 1x DDR3L 1333/1600/1866 MHz SO-DIMM Socket, with up to 1600 MHz operation ▪ Supports Un-buffered and Non-ECC Type, Up to 8GB
Graphics	
Graphics Engine	▪ Integrated Intel® HD Graphics 505
Maximum Display Output	▪ Supports Triple Independent Display
CDS (Convertible Display System) Technology	▪ 1x Convertible Display System (CDS) Interface
VGA	▪ 1x VGA (1920 x 1200 @60Hz)
DP	▪ 1x DisplayPort (4K x 2K @60Hz)
Audio	
Audio Codec	▪ Realtek® ALC888, High Definition Audio
Line-out	▪ 1x Line-out, Phone Jack 3.5mm
Mic-in	▪ 1x Mic-in, Phone Jack 3.5mm
I/O	

LAN	▪ 2x GbE LAN (Supports WoL, Teaming, Jumbo Frame & PXE), RJ45
	  - GbE1: Intel® I210
	  - GbE2: Intel® I210

USB	▪ 4x USB 3.2 Gen1 (Type A)
Serial Port	▪ 4x RS-232/422/485 with Auto Flow Control Support 5V/12V, DB9
DIO	▪ 8x Isolated Digital I/O (4in/4out), 10-Pin Terminal Block
Storage	
SSD/HDD	▪ 1x 2.5"SATA HDD Bay (SATA 3.0)
SIM Socket	▪ 1 x SIM Socket
mSATA	▪ 1x mSATA Socket (SATA 3.0, Shared by Mini-PCIe Socket)
Expansion	
Mini PCI Express	▪ 2x Full-size Mini-PCIe Socket
CFM (Control Function Module) Interface	▪ Optional CFM IGN Module for Power Ignition Function ▪ Optional CFM PoE Module for Power over Ethernet Function
CDS (Convertible Display System) Technology	▪ 1x Convertible Display System (CDS) Interface
Antenna Holes	▪ 4x Antenna Holes
Other Function	
Instant Reboot	▪ Support 0.2sec
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset
Internal Speaker	▪ AMP 2W + 2W

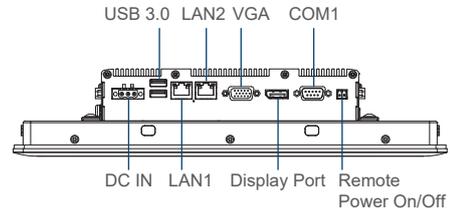| OSD Function	LCD On/Off, Brightness Up, Brightness Down
Clear CMOS Switch	1x Clear CMOS Switch
Reset Button	1x Reset Button
Power	
Power Switch	▪ 1x Power Switch
Power Mode Switch	▪ 1x AT/ATX Mode Switch
Power Input	▪ 1x 3-pin Terminal Block Connector with Power Input 9~48VDC
Power Adapter (Optional)	▪ 1x Optional AC/DC 12V/5A 60W or 24V/5A 120W
Remote Power On/Off	▪ 1x Remote Power On/Off Connector, 2-pin Terminal Block
Physical	
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
Physical Design	▪ Fanless Design ▪ Jumper-less Design
Mounting	▪ Wall / VESA / CDS / DIN Mounting
Reliability & Protection	
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
CMOS Battery Backup	▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation
MTBF	▪ Time: 294,617 hours
Operating System	
Microsoft® Windows®	▪ Windows®10
Linux	▪ Supports by project
Environment	
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
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A

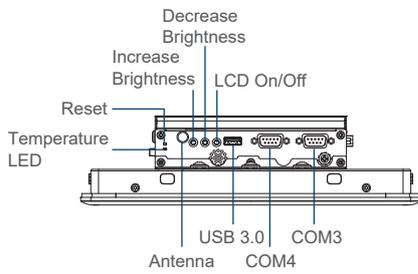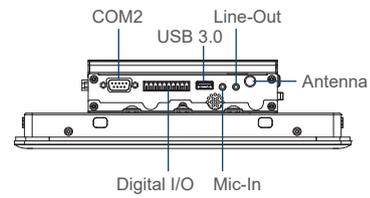| EMS	• EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV • EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m • EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV • EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV • EN/IEC 61000-4-6 CS: 3V • EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m • EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz
Safety	• LVD IEC/EN 62368-1

CS-112H/P1101 External Layout

Front I/O

Antenna
SIM Card
AT/ATX Switch
Power LED
HDD LED
Antenna
Removable HDD
Power On/Off

Rear I/O

USB 3.0 LAN2 VGA COM1
DC IN LAN1 Display Port Remote Power On/Off

Left I/O

Decrease Brightness
Increase Brightness
LCD On/Off
Reset
Temperature LED
Antenna
USB 3.0
COM4
COM3

Right I/O

COM2 Line-Out
USB 3.0
Antenna
Digital I/O Mic-In

CS-112H/P1101 Dimensions

8
329
19
22
all 12
65
all 7
all 5
130

8
48.75
247.5(Active Area)
39.65
249.3
130
186(Active Area)
245.15(Bezel Opening)
1.5
18.92
307.15(Bezel Opening)

69.85(Outline)
50.15
265.3(Outline)
149

345
41.85
62.25
204.5

100
75
80
60
75
100
271.5
318

5.5 (Max. Wall Thickness)
331
Cut Out Dimension
251.3
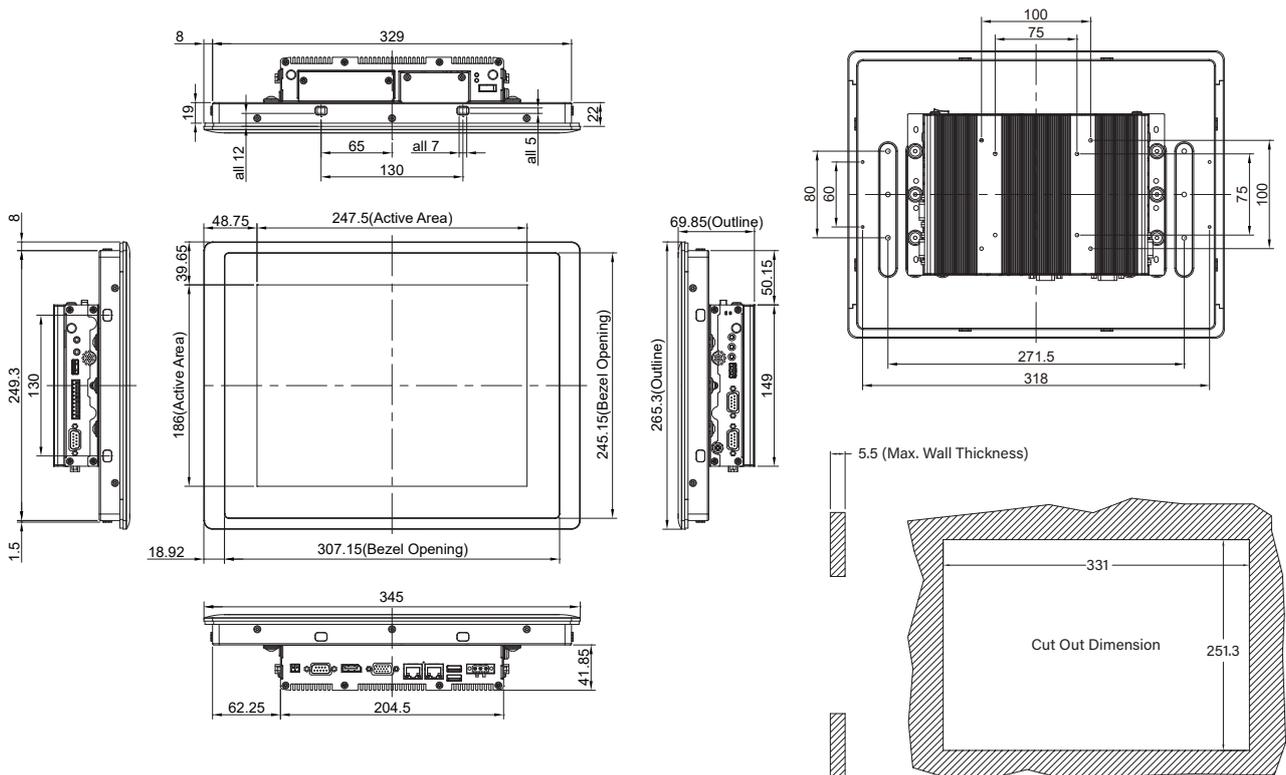
Unit: mm

Ordering Information

Available Models

Model No.	Description
CS-112HC-R11/P1101-E50-R11	12.1" TFT-LCD 1500nits Sunlight Readable Touch Panel PC with Intel® Atom® E3950 Quad Core Processor and P-Cap. Touch
CS-112HC-R11/P1101-N42-R10	12.1" TFT-LCD 1500nits Sunlight Readable Touch Panel PC with Intel® Pentium® N4200 Quad Core Processor and P-Cap. Touch

Model Configuration

	CS-112HC	P1101-E50	P1101-N42
CS-112HC/P1101-E50	V	V	--
CS-112HC/P1101-N42	V	--	V

V : Compatible

Package Checklist

- ▪ CS-112H/P1101 Series Panel PC x 1
- ▪ Power Terminal Block Connector (Female) x 1
- ▪ Panel Mounting Kit x 1
- ▪ HDD Screw Pack x 1
- ▪ DIO Terminal Block Connector (Female) x 1
- ▪ Mini PCIe Screw Pack 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℃ ~ +70℃)
GST120A24-CIN	Adapter AC/DC 24V 5A 120W, GST120A24-CIN, wide temp (-30℃ ~ +70℃), 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