CS-W115FH/P1301 Series

15.6" TFT-LCD 1200nits Sunlight Readable Touch Panel PC with Intel® Alder Lake-N Platform, Slim Embedded Computer & P-Cap. Touch

POWER EFFICIENT SUNLIGHT READABLE PANEL PC

| CS-100/P1000 Series |

Overview

CONTACT

The CS-100/P1301 series is a sunlight-readable panel PC that provides ultra-high brightness of up to 1,800 nits. It is equipped with an Intel® Alder Lake-N processor that provides a complete selection of screen sizes, ratios, and brightnesses. Rich I/O, flexible expansion, rugged, easy on-site maintenance, and other features make the CS-100/P1301 series the best choice for outdoor kiosk or HMI applications.

Key Features

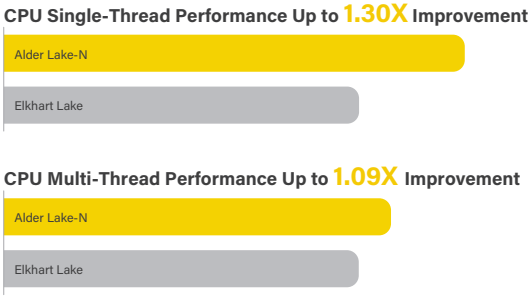
- 15.6" TFT-LCD with Ultra High Brightness up to 1,200 nits and 1920x1080 (Full HD) Resolution
- Onboard Intel® Alder Lake-N Core™ i3-N305, Processor N97 and Atom® x7425E Processor
- 1x DDR5 SO-DIMM Socket, Supports up to 4800MHz & 16GB Memory
- 1x M.2 Key E Type 2230 Socket for Wireless/Intel CNVi Module Expansion
- 1x M.2 Key B Type 3042/3052 Socket for 5G/Storage/Add-on Card Expansion
- Front Panel IP65 Compliant
- Designed with Rugged Aluminum Die-casting Front Bezel
- Supports Panel / VESA / Rack Mount
- Supports Cincoze Patent CDS Technology (Patent No. M482908)

Certifications

IP65 FC CE

AI & Multitasking Performance

The CS-100/P1301 is equipped with an Intel Alder Lake-N quad-core processor based on the Intel® 7 process. Compared with the previous generation Elkhart Lake platform, the CPU single-thread performance is improved by up to 130%, and the multi-thread performance is improved by 109%. The built-in UHD graphics chip improves AI inference, with 6.85 times the object recognition performance.



Convenient Upgrades & Repairs

Cincoze Convertible Display System (CDS) patented technology makes field-side maintenance and future upgrades easier. Replacing a display or improving system performance only requires replacing a single component, which significantly cuts upgrade costs.

Patent No. M482908

Complete Product Portfolio

The CS-100/P1301 series offers a variety of display options, with screen sizes from 8.4 to 24 inches, support for up to full HD resolution, high brightness up to 1,800 nits, and multi-point P-Cap touchscreen, which can be selected according to application needs.

Wide Temps, Safe, & Reliable

In order to overcome the harsh outdoor environment and unpredictable climate, the CS-100/P1301 series has a series of industrial-grade protections, including a wide operating temperature range that beats the industry standard and an IP65 dustproof/water resistant front panel to ensure a high degree of product safety.

CS-W115FH Specifications

Model Name	CS-W115FH
Display	
LCD Size	▪ 15.6" (16:9)
Max. Resolution	▪ 1920 x 1080 (Full HD)
Brightness (cd/m2)	▪ 1200
Contrast Ratio	▪ 800 : 1
LCD Color	▪ 16.7M
Pixel Pitch (mm)	▪ 0.17925 (H) x 0.17925 (V)
Viewing Angle (H-V)	▪ 178 / 178
Backlight LED Life Time	▪ 50,000 hrs (LED Backlight)
Touch Screen	
Touch Type	▪ Projected Capacitive
Physical	
Dimension (W x D x H)	▪ 420 x 254 x 66.2 mm
Weight Information	▪ 3.58 kg
Mechanical Construction	▪ Flat Rugged Aluminum Die-casting Bezel
Power	
Power Consumption	▪ 25W (Max.)
Environment	
Front Panel Protection	▪ IP 65 Compliant
Operating Temperature	▪ -20°C to 70°C (With Industrial Grade Peripherals; Ambient with air flow)
Storage Temperature	▪ -40°C to 80°C
Relative Humidity	▪ 90% RH @ 39°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

P1301 Specifications

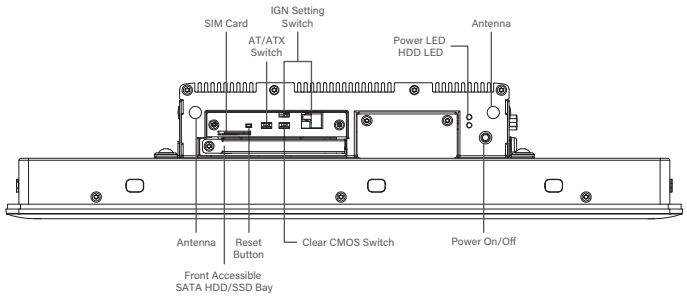
Model Name	P1301
System	
Processor	▪ Onboard Intel® Alder Lake-N Series Processor: - Intel® Core™ i3-N305 8 Cores Up to 3.80 GHz, TDP 15W - Intel® Processor N97 4 Cores Up to 3.60 GHz, TDP 12W - Intel Atom® x7425E 4 Cores Up to 3.40 GHz, TDP 12W
Memory	▪ 1x DDR5 4800MHz SO-DIMM Socket Supports Un-buffered and Non-ECC Type, Up to 16GB
BIOS	▪ AMI BIOS
Graphics	
Graphics Engine	▪ Integrated Intel® UHD Graphics
Maximum Display Output	▪ Supports Triple Independent Display
CDS	▪ 1x CDS Connector (1920 x 1080 @60Hz)
DP	▪ 1x DisplayPort Connector (4096 x 2304 @60Hz) * Verified maximum resolution: 3840 x 2160 @ 60Hz
VGA	▪ 1x VGA Connector (1920 x 1200 @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 2.5GbE LAN, RJ45 - GbE1 / GbE2: Intel® I225
COM	▪ 2x RS-232/422/485 with Auto Flow Control Support 5V/12V, DB9
USB	▪ 3 x USB 3.2 Gen2x1 (10Gbps), Type A ▪ 1 x USB 2.0 (480Mbps), Type A
DIO	▪ 8x Isolated Digital I/O (4in/4out), 10-Pin Terminal Block
Storage	
SSD/HDD	▪ 1x 2.5" Front Accessible SATA HDD/SSD Bay
M.2 SSD	▪ 1 x M.2 SSD shared by M.2 Key B Type 3052 Socket, Support SATA SSD (SATA 3.0)
Expansion	
M.2 Key E Socket	▪ 1x M.2 Key E Type 2230 Socket (PCIe Gen 3x1 / USB2.0), Support Wireless/Intel CNVi Module Expansion
M.2 Key B Socket	▪ 1x M.2 Key B Type 3042/3052 Socket (PCIe Gen 3x1 / USB3.2 Gen2 x1 / SATA), Support 5G/Storage/Add-on Card Expansion
SIM Socket	▪ 1x Front Accessible SIM Socket
CFM (Control Function Module) Interface	▪ 1x CFM Interface for optional IGN Module Expansion ▪ 1x CFM Interface for optional PoE Module Expansion
Other Function	
Clear CMOS Switch	▪ 1x Clear CMOS Switch
Reset Button	▪ 1x Reset Button
Instant Reboot	▪ Support 0.2sec Instant Reboot Technology

Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset
OSD Button	▪ LCD On/Off, Brightness Up, Brightness Down
Internal Speaker	▪ AMP 2W + 2W
Status LED Indicator	▪ Power LED, HDD LED
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, 2-pin Terminal Block
Remote Power LED	▪ 1x Remote Power LED, 2-pin Terminal Block
Max. Power Consumption	▪ i3-N305 CPU: 48.59W ▪ N97 CPU: 34.04W - Test conducted with CPU, 1x RAM, and 1x storage - 100% load during burn-in testing
Inrush Current (Peak)	▪ i3-N305 CPU: 5.538 A@12V ▪ N97 CPU: 5.242 A@12V
Operating System	
Microsoft® Windows®	▪ Windows®11, Windows®10
Linux	▪ Ubuntu Desktop 22.04 LTS
Physical	
Dimension (W x D x H)	▪ 204.5 x 149 x 46.5mm
Weight	▪ 1.57 kg
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal
Mounting	▪ Wall / VESA / CDS / DIN Rail
Physical Design	▪ Fanless Design ▪ Jumper-less Design
Reliability & Protection	
Reverse Power Input	▪ 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
CMOS Battery Backup	▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation
MTBF	▪ 306,338 Hours - Database: Telcordia SR-332 Issue3, Method 1, Case 3
Environment	
Operating Temperature	▪ Intel® Processor N97 / Atom® x7425E: -40°C to 70°C ▪ Intel® Core™ i3-N305: -40°C to 60°C * PassMark Burn-In Test: 100% CPU, 2D/3D Graphics (without thermal throttling) * With extended temperature peripherals; Ambient with air flow * According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14
Storage Temperature	▪ -40°C to 70°C
Relative Humidity	▪ Intel® Processor N97 / Atom® x7425E: 95%RH @ 70°C (non-Condensing) ▪ Intel® Core™ i3-N305: 95%RH @ 60°C (non-Condensing)
Shock	▪ Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)

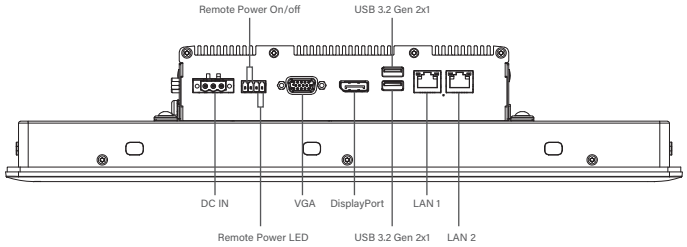
Vibration	▪ Operating, 1 Grms, 10-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-6) ▪ Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A ▪ EN61000-6-4, EN61000-6-2 @ DC-input 24V
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 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: 10 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 2 kV; DC Power: 1 kV; Signal: 1 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 10V (**Compliant with the standard when utilizing shielded ethernet cable.) ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 30A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 1 cycles at 60 Hz
Safety	▪ UL, cUL, CB, IEC, EN 62368-1

CS-W115FH/P1301 External Layout

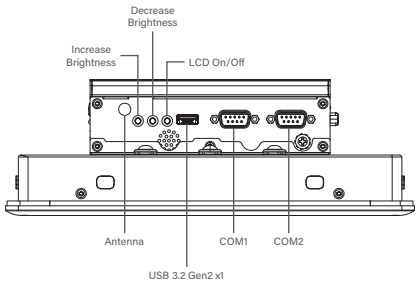
Front I/O



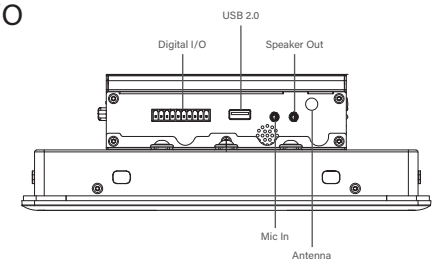
Rear I/O



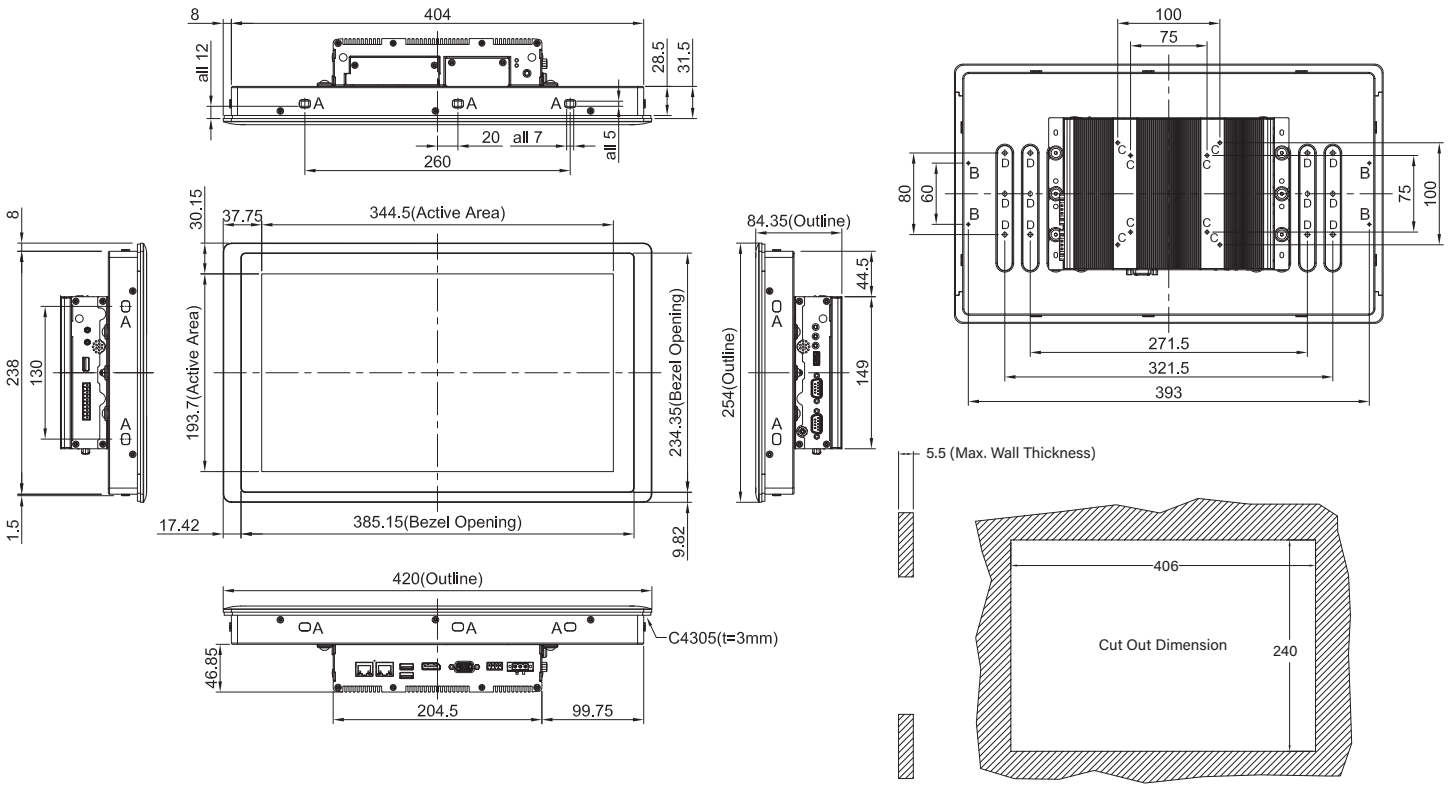
Left I/O



Right I/O



CS-W115FH/P1301 Dimensions



Unit: mm

Ordering Information

Available Models

Model No.	Description
CS-W115FHC-R20/P1301-N97-R10	15.6" TFT-LCD 1200 nits Full HD Sunlight Readable Display Modular Panel PC with Intel® Processor N97 Quad Core Slim Embedded Computer and P-Cap. Touch
CS-W115FHC-R20/P1301-X7425E-R10	15.6" TFT-LCD 1200 nits Full HD Sunlight Readable Display Modular Panel PC with Intel® Atom® x7425E Quad Core Slim Embedded Computer and P-Cap. Touch
CS-W115FHC-R20/P1301-i3-R10	15.6" TFT-LCD 1200 nits Full HD Sunlight Readable Display Modular Panel PC with Intel® Core i3-N305 Octa Core Slim Embedded Computer and P-Cap. Touch

Model Configuration

	CS-W115FHC	P1301-N97	P1301-X7425E	P1301-i3
CS-W115FHC/P1301-N97	V	V	--	--
CS-W115FHC/P1301-X7425E	V	--	V	--
CS-W115FHC/P1301-i3	V	--	--	V

V : Compatible

Package Checklist

▪ CS-W115FH/P1301 Series Panel PC x 1	▪ Power Terminal Block Connector x 1
▪ Thermal Pad (for CPU Thermal Block) x 1	▪ Remote Function Terminal Block Connector x 1
▪ Screw Pack x 2	▪ DIO Terminal Block Connector x 1
▪ Panel Mounting Kit x 10	▪ M.2 Key B Type 3052 to 3042 Adapter Bracket 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

Updated: Mar. 31, 2025.

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