CS-W124C/P2102

24" TFT-LCD Sunlight Readable and Modular Panel PC
with 8th Gen. Intel® Core™ U Series Processor

- 24" TFT-LCD with Ultra-high Brightness up to 1,500 nits and 1920 x 1080 Resolution
- Onboard 8th Generation Intel® Core™ U Series Processor
- 2x DDR4 SO-DIMM Socket, Supports Up to 2400MHz, 64GB
- Supports Triple Independent Display
- Integrated USB 3.2 Gen 2 supports up to 10Gbps
- M.2 E Key Socket for Wireless Module or Intel CRF Module
- Supports Ignition Sensing Function (IGN) (with optional CFM module)
- Supports 2x PoE+ Function (with optional CFM module)
- Wide Range Operating Temperature -20℃ to 70℃
- Designed with Rugged Aluminum Die-casting Front Bezel
- True Flat IP65 Compliant Front Panel Protection
- Supports Panel / VESA / Rack Mounting

Overview

The CS-W124C/P2102 is a 24" TFT-LCD sunlight readable panel PC that offers sufficient screen brightness for better image quality in outdoor usage. The panel PC is powered by Intel® 8th generation Core™ U series processor that brings outstanding computing performance boost up to 84% at a TDP of 15 watts, compared to 6th generation Intel® Core™ U series. To enable faster responsiveness and deal with multi tasks with ease, the CS-W124C/P2102 is equipped with two DDR4 2400 SODIMM sockets for up to 64 GB memory.

With its slim design, the CS-W124C/P2102 offers extensive I/O to fulfill different connectivities and can easily fit into almost any space limited environment. For wireless connectivity, the CS-W124C/P2102 has 1x M.2 2230 E key and 2x full-size Mini-PCIe expansions which can be installed various add-on cards to enable Wi-Fi, 3G, and LTE communication. Besides, the CS-W124C/P2102 supports Control Function Module (CFM) Technology to install optional CFM modules for increasing power over ethernet and power ignition sensing functions according to user's specific applications. Featuring rigorous industrial protections, wide range operating temperature (-20℃ to 70℃), IP65 dust/waterproof front panel, and wide range DC power input (9 to 48VDC), the CS-W124C/P2102 is appropriate for tough outdoor applications under direct sunlight.

Furthermore, the CS-W124C/P2102 supports Cincoze patented Convertible Display System (CDS) technology, allowing users to replace display module or computer module on-site easily and thereby reducing maintenance costs and downtime.

Specifications

Display

LCD Size	• 24" (16:9)
Max. Resolution	• 1920x1080 (Full HD)
Brightness (cd/m2)	• 1,500
Contrast Ratio	• 5,000:1
LCD Color	• 16.7M
Pixel Pitch (mm)	• 0.27675 (H) x 0.27675 (V)
Viewing Angle (H-V)	• 178 /178
Backlight MTBF	• 50,000 hrs (LED Backlight)

Audio

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

System

Processor	• Onboard 8th Intel® Core™ U Processors (Whiskey Lake) - Intel® Core™ i5-8365UE Quad Core Processor (6M Cache, up to 4.10 GHz) - Intel® Core™ i3-8145UE Dual Core Processor (4M Cache, up to 3.90 GHz) - TDP: 15 W

Memory	• 2x DDR4 2400 MHz SO-DIMM Sockets
	• Support Un-buffered and Non-ECC Type up to 64 GB
	  (According to CPU Specifications)
	  * Verified maximum capacity: 64GB

Graphics

Graphics Engine	• Integrated Intel® UHD Graphics 620
Maximum Display Output	• Supports Triple Independent Display (via VGA and DisplayPort Outputs)

Touch

Projected Capacitive	V

External I/O Interface

VGA	▪ 1x VGA (1920 x 1200 @60Hz)
DP	▪ 1x DisplayPort Connector (4096 x 2304 @ 60Hz, According to CPU Specifications) * Verified maximum resolution: 3840x2160.
LAN	▪ 2x GbE LAN (Supports WoL, Teaming, Jumbo Frame & PXE), RJ45 - GbE1: Intel® I219-LM - GbE2: Intel® I210
USB	▪ 3x USB 3.2 Gen2 (Type A) ▪ 2x USB 2.0 (Type A)
COM	▪ 4x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9

DIO

DIO	▪ 16x Isolated DIO (8x DI/8x DO), 20-Pin Terminal Block

Storage

SSD/HDD	▪ 2x 2.5" HDD/SSD Drive Bay (SATA 3.0)
RAID	▪ Supports RAID 0/1

Expansion

M.2 Express	▪ 1x M.2 2230 E Key for Socket Wireless Module, Supports Intel CRF Module
Mini PCI Express	▪ 2x Full-size Mini-PCIe Socket
SIM Socket	▪ 1x Front Accessible SIM Socket
CFM (Control Function Module) Interface	▪ 2x Control Function Module (CFM) Interface
Antenna Hole	▪ 4x Antenna Hole

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)	▪ 605 x 373 x 76 mm
Weight Information	▪ 8.9 Kg
Mechanical Construction	▪ Rugged Aluminum Die-casting Front Bezel and Heavy Duty Metal Chassis
Mounting	▪ Panel / VESA / *Rack Mounting (*with optional mounting kit)
Physical Design	▪ Fanless Design ▪ Jumper-less Design

Reliability & Protection

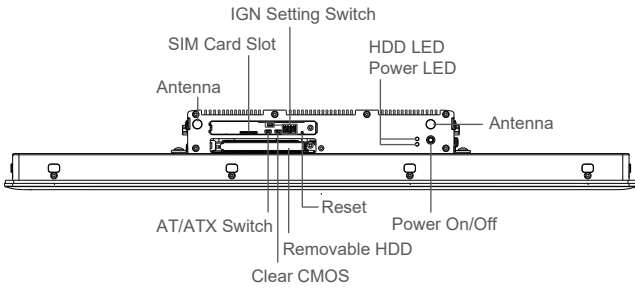|	
Reverse Power Input Protection	▪ Yes
Over Voltage Protection	▪ Protection Range: 51~58V ▪ Protection Type: shut down operating voltage, re-power on at the preset level to recover
Over Current Protection	▪ 15A
CMOS Battery Backup	▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation
ESD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

Operating System

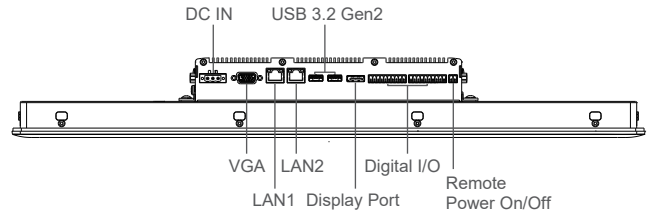|	
Windows	▪ Windows® 10
Linux	▪ Support by Project

Environment

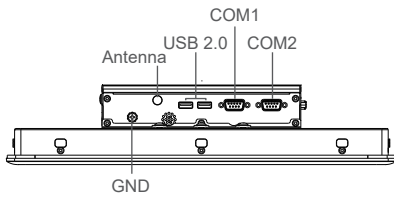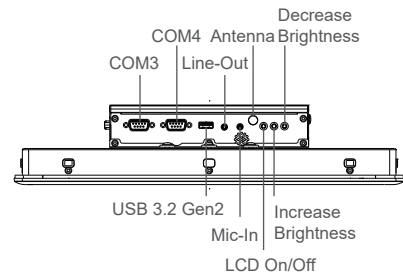|	
Operating Temperature	▪ -20°C to 70°C (with Extended Temperature Peripherals; Ambient with Air Flow)
Storage Temperature	▪ -20°C to 70°C
Relative Humidity	▪ 80% RH @ 50°C (Non-condensing)
EMC	▪ CE, FCC, ICES-003 Class A
IP Level	▪ IP65 Compliant Front Panel

External Layout

Front I/O

IGN Setting Switch
SIM Card Slot
HDD LED
Power LED
Antenna
Antenna
AT/ATX Switch
Reset
Power On/Off
Removable HDD
Clear CMOS

Rear I/O

DC IN
USB 3.2 Gen2
VGA LAN2
Digital I/O
LAN1 Display Port
Remote Power On/Off

Left I/O

COM1
USB 2.0 COM2
Antenna
GND

Right I/O

Decrease
COM4 Antenna Brightness
COM3 Line-Out
USB 3.2 Gen2
Increase
Mic-In
Brightness
LCD On/Off

Dimensions

589
8
1.5
25.5
28.5
255
85
170
510

100
75
80
40
60
50
37.5
75
100
30
321.5
578

1.5
35.7
533.7 (Active Area)
R4
R8
76 (Outline)
8
all5
all12
83.5
95
134.5
357
95
190
300.7 (Active Area)
350.7 (Bezel Opening)
373 (Outline)
134.5
178.5
all7
8
18.6
567.7 (Bezel Opening)
11.2
34.5

38.1

R8

12 (Max. Wall Thickness)

605 (Outline)
170
85
41.5
167.2
254.5

591
Suggested Cut Out Dimensions
359

Unit: mm

Ordering Information

Available Models

Model No.	Description
CS-W124C-R10/P2102-i5-R10	24" TFT-LCD Full HD Modular Panel PC with 8th Gen. Intel Core i5-8365UE Quad Core Processor and P-Cap. Touch
CS-W124C-R10/P2102-i3-R10	24" TFT-LCD Full HD Modular Panel PC with 8th Gen. Intel Core i3-8145UE Dual Core Processor and P-Cap. Touch

Package Checklist

- CS-W124C/P2102 Panel PC x 1
- Thermal Pad (for CPU Thermal Block) x 1
- Power Terminal Block Connector x 1
- Remote Power On/Off Terminal Block Connector x 1

- DIO Terminal Block Connector x 2
- Utility Driver DVD x 1
- Screws Pack x 5
- Panel Mounting Kit x 1

Optional Modules

Model No.	Description
CFM-IGN101	CFM Module with Power Ignition Sensing Control Function, 12V/24V Voltage Detection Selectable
CFM-PoE04	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℃ ~ +70℃), level VI
GST120A24-CIN	Adapter AC/DC 24V 5A 120W, GST120A24-CIN, wide temp (-30℃ ~ +70℃), level VI