# CS-W115FHC/P2002E

15.6" TFT-LCD Sunlight Readable Touch Panel PC with 6th Gen. Intel® Core™ Processor



- 15.6" TFT-LCD with Ultra High Brightness up to 1,500 nits and 1920 x 1080 Resolution
- Onboard Intel® 6th Generation Core™ Processor U Series (15W)
- Supports 2x DDR4 SO-DIMM Socket, up to 32 GB
- Integrated Intel® HD Graphics 520, Triple Display Support
- 2x 2.5" SATA Drive Bay, 1x mSATA, and 1x CFast Socket
- Rich I/O (2x GbE LAN, 6x COM, 5x USB, 16x Isolated DIO)
- 2x Full-size Mini-PCIe Socket for Wireless and I/O Expansion
- Wide Range Operating Temperature -10°C to 70°C
- Designed with Aluminum Die-casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports Panel / VESA / Rack Mounting
- Convertible Display System (CDS) Technology Supported

## Overview

CS-W115FHC/P2000 Series is a 15.6" TFT-LCD sunlight readable touch panel PC offering 1,500 nits ultra high brightness and 1920 x 1080 resolution. The system is equipped with high-performance Intel® 6th generation Core™ U series processor and provides extensive I/O including 2x GbE, 5x USB, 6x RS232/422/485, 8x DI/8x DO, 1x VGA and 1x DVI-D. It also supports 2x Mini-PCIe slot and 1x SIM socket for a variety of wireless connections, such as BT/WiFi and 3G/LTE. In addition, there are 3 types of storage devices including 2.5" SATA HDD (RAID 0/1), mSATA and CFast. The accessible design of these storage devices allows quick data access and easy maintenance.

CS-W115FHC/P2000 Series supports Convertible Display System (CDS) technology. Comparing to regular standalone panel PCs, it can lower maintenance cost and reduce unplanned downtime.

For greater flexibility, CS-W115FHC/P2000 Series has PCI/PCIe expandable version and PoE/power ignition functions by additional CFM (Control Function Module). Furthermore, CS-W115FHC/P2000 Series is a truly rugged display system supporting wide range operating temperature (-10°C to 70°C), IP65 dust/waterproof front panel, wide range DC power input (9 to 48VDC) and rigorous industrial protections.

## Specifications

### Display

| | |
|---|---|
| LCD Size | ▪ 15.6" (16:9) |
| Max. Resolution | ▪ 1920x1080 (Full HD) |
| Brightness (cd/m2) | ▪ 1,500 |
| Contrast Ratio | ▪ 700:1 |
| LCD Color | ▪ 16.7M |
| Pixel Pitch (mm) | ▪ 0.17925 (H) x 0.17925 (V) |
| Viewing Angle (H-V) | ▪ 160 /140 |
| Backlight MTBF | ▪ 50,000 hrs (LED Backlight) |

### Touch

| | |
|---|---|
| Resistive 5-wire | - |
| Projected Capacitive | V |

### System

| | |
|---|---|
| Processor | ▪ Onboard 6th Intel® Core™ U Processors (Skylake Lake)<br>- Intel® Core™ i5-6300U Processor (3M Cache, up to 3.00 GHz)<br>- Intel® Core™ i3-6100U Processor (3M Cache, up to 2.30 GHz)<br>- TDP: 15 W |
| Memory | ▪ 2x DDR4 2400 MHz 260-Pin SO-DIMM Socket<br>▪ Supports up to 64 GB (un-buffered and non-ECC) |
| BIOS | ▪ AMI 64Mbit SPI BIOS |

### Graphics

| | |
|---|---|
| Graphics Engine | ▪ Intel® HD Graphics 520 |
| Maximum Display Output | ▪ Triple display with 1x VGA, 1x DVI-D and 1x CDS interface |

### Audio

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

## External I/O Interface

| | |
|---|---|
| VGA | ▪ 1x VGA (Up to 1920 x 1080 @ 60Hz), DB-15 |
| DVI | ▪ 1x DVI-D (Up to 1920 x 1080 @ 60Hz) |
| CDS | ▪ 1x CDS Interface, Compact PCI Connector |
| LAN | ▪ 2x GbE LAN (Support WoL, Teaming, Jumbo Frame and PXE), RJ45<br>- GbE1: Intel I219LM<br>- GbE2: Intel I210<br>▪ 2x PoE+ (with Optional CFM PoE Module)<br>- Comply with IEEE 802.3at, Offers Up to 25.5W Per Port |
| COM | ▪ 6x RS-232/422/485 with Auto Flow Control (Support 5V/12V), DB9 |
| USB | ▪ 4x USB 3.0, Type-A<br>▪ 1x USB 2.0, Type-A |

## DIO

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

## Storage

| | |
|---|---|
| SSD/HDD | ▪ 2x 2.5" SATA HDD/SSD Bay, Support RAID 0/1 (Gen3) |
| mSATA | ▪ 2x mSATA (One Shared by Mini-PCIe Socket) (Gen2) |
| CFast | ▪ 1x CFast Socket (Gen3) |

## Expansion

| | |
|---|---|
| CFM (Control Function Module) Interface | ▪ 1x CFM IGN Interface<br>▪ 1x CFM PoE Interface |
| Mini PCIe Express | ▪ 2x Full-size Mini-PCIe Socket |
| PCI Express | ▪ 1x PCI or 1x PCIex4 Expansion slot [CS-W115FHC/P2002E]<br>▪ Optional Riser Card: 1x PCI, 1x PCIex4 Support maximum dimension of add-on card (H x L): 100mm x 200mm |
| UB | ▪ 1x Universal I/O Bracket |
| SIM Socket | ▪ 1x SIM Socket |

## Other Function

| | |
|---|---|
| Internal Speaker | ▪ AMP 2W + 2W |
| Power Ignition Sensing | ▪ Support Power Ignition Sensing (IGN) |
| 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 for CDS Display Module |
| External FAN Connector | ▪ 1x External FAN Connector, 4-pin Terminal Block |

## Power

| | |
|---|---|
| Power Button | ▪ 1x AT/ATX 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, 24V/5A 120W or 24V/9.2A 220W |

## Physical

| | |
|---|---|
| Dimension ( W x D x H ) | ▪ 420 x 254 x 109.5 mm |
| Weight Information | ▪ 7.18 Kg |
| Front Panel Construction | ▪ Die-casting Flat Surface |
| Mounting | ▪ Panel / VESA / *Rack Mounting (*with optional mounting kit) |
| Physical Design | ▪ Fanless Design<br>▪ Jumper-less Design |

## Reliability & Protection

| | |
|---|---|
| Reverse Power Input Protection | ▪ Yes |
| Over Voltage Protection | ▪ Protection Range: 51~58V<br>▪ 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

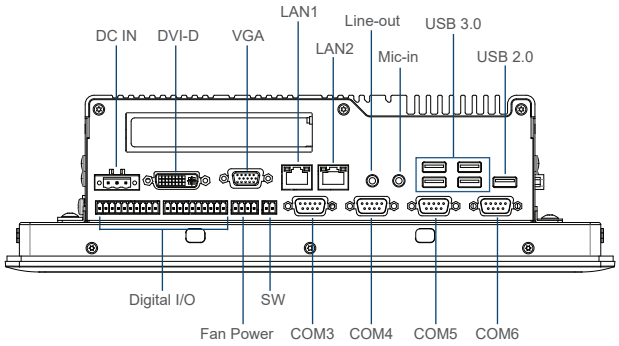
| | |
|---|---|
| Windows | ▪ Windows® 10<br>▪ Windows® 8.1<br>▪ Windows® 7 |
| Linux | ▪ Support by Project |

## Environment

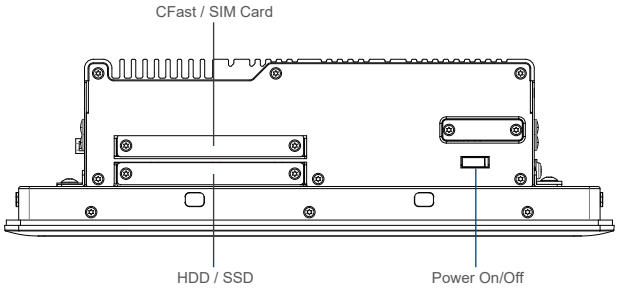
| | |
|---|---|
| Operating Temperature | ▪ -10°C to 70°C (With extended temperature peripherals; Ambient with air flow According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14) |
| Storage Temperature | ▪ -20°C to 70°C |
| Relative Humidity | ▪ 95% RH @ 39°C (Non-condensing) |
| EMC | ▪ CE, FCC, ICES-003 Class A |
| IP Level | ▪ IP65 Compliant Front Panel |

## External Layout

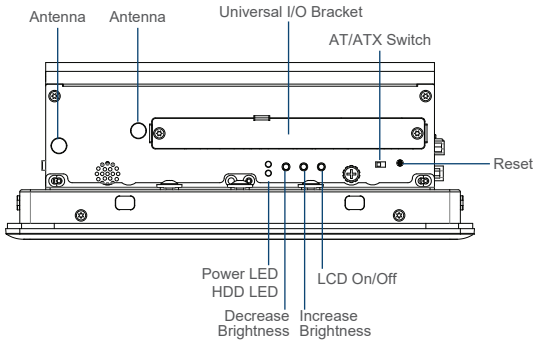
### Front I/O



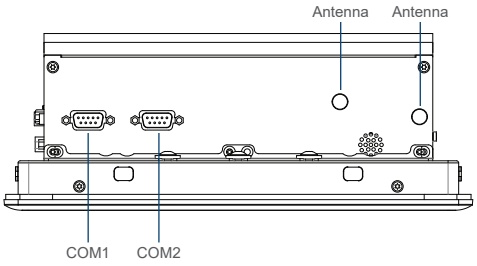

### Rear I/O



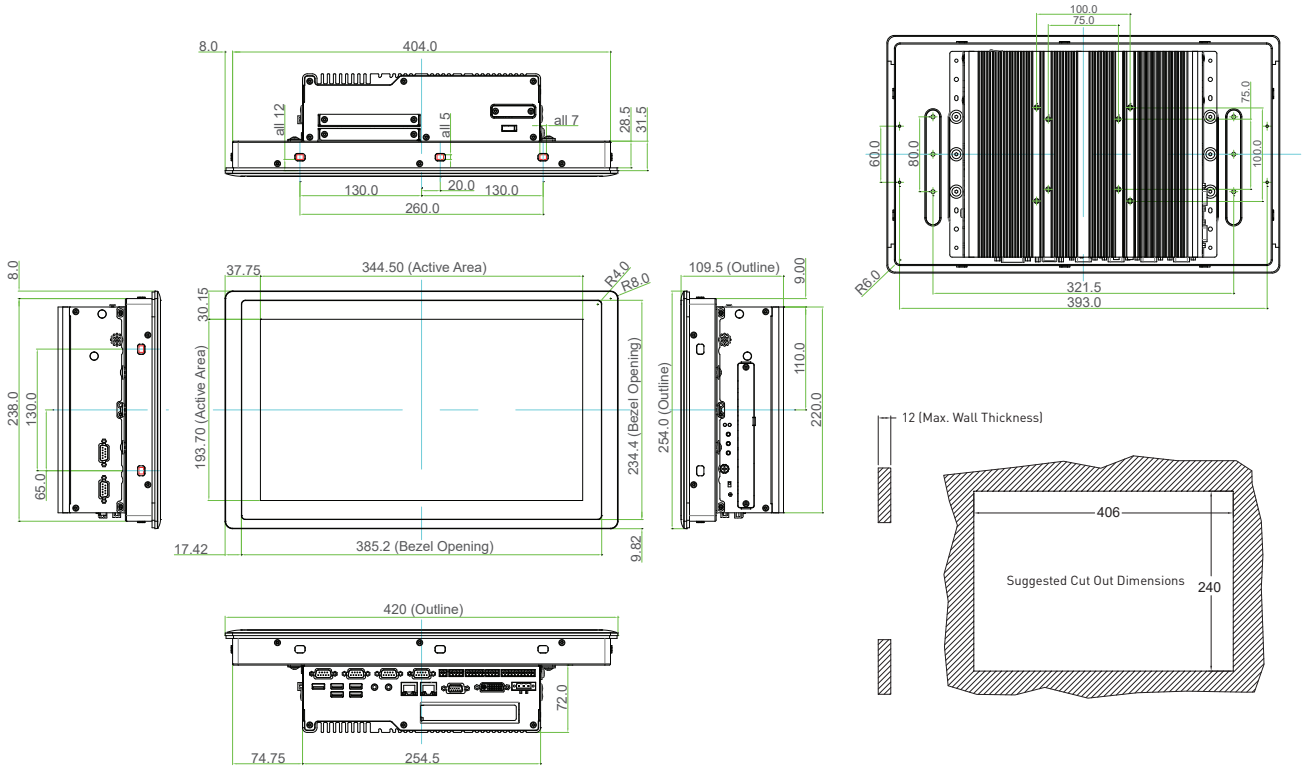

### Left I/O




### Right I/O




## Dimensions




Unit: mm

# Ordering Information

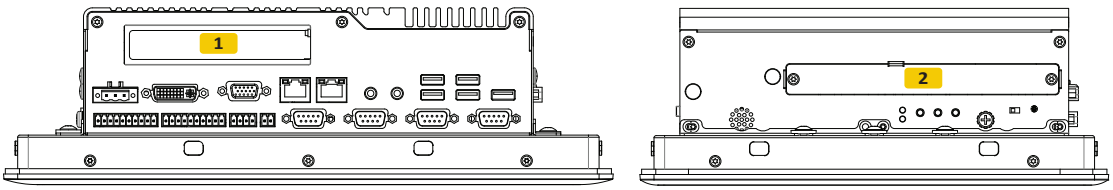
## Available Models

| Model No. | Description |
|---|---|
| CS-W115FHC-R10/P2002E-i5-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i5-6300U Expandable Fanless Computer, CFM Interface, CDS Interface |
| CS-W115FHC-R10/P2002E-i5-E4-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i5-6300U Expandable Fanless Computer, CFM Interface, CDS Interface, 1x PCIex4 Expansion |
| CS-W115FHC-R10/P2002E-i5-PI-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i5-6300U Expandable Fanless Computer, CFM Interface, CDS Interface, 1x PCI Expansion |
| CS-W115FHC-R10/P2002E-i3-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i3-6100U Expandable Fanless Computer, CFM Interface, CDS Interface |
| CS-W115FHC-R10/P2002E-i3-E4-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i3-6100U Expandable Fanless Computer, CFM Interface, CDS Interface, 1x PCIex4 Expansion |
| CS-W115FHC-R10/P2002E-i3-PI-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i3-6100U Expandable Fanless Computer, CFM Interface, CDS Interface, 1x PCI Expansion |

## Package Checklist

- CS-W115FHC/P2002E Panel PC x 1
- Fan Terminal Block Connector x 1
- Power Terminal Block Connector x 1
- Power On/Off Terminal Block Connector x 1
- DIO Terminal Block Connector x 2
- Utility Driver DVD x 1
- Screws Pack x 1
- Panel Mounting Kit x 1

## Optional Module Configuration




| Model No. | Description | 1 | 2 |
|---|---|---|---|
| RC-E4-01 | Riser Card with 1x PCIex4 Slot | V | - |
| RC-PI-01 | Riser Card with 1x PCI Slot | V | - |
| MEC-COM-M212-DB9/UB0503 | Mini-PCIe Module with 2x RS-232 Serial Ports, 1x Standatd DB9 Cable | - | V |
| MEC-COM-M334-TDB9/UB0504 | Mini-PCIe Module with 4x RS-232/422/485 Serial Ports, 2x Thin DB9 Cable | - | V |
| MEC-LAN-M102-30/UB0511 | Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable | - | V |
| MEC-USB-M102-30/UB0514 | Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable | - | V |

V : Compatible

## Optional Function Modules

| Model No. | Description |
|---|---|
| CFM-IGN100 | CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable (41 x 35 mm) |
| CFM-PoE101 | PoE Control Function Module, Individual Port 25.5W (50 x 44 x 33 mm) (For CS-100/P2002E only) |
| 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 |
| GST220A24-CIN | Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, GST220A24-CIN |

contradata®

**Distributore per l'Italia: Contradata Milano S.r.l.**

Via Solferino 12 - 20900 Monza (MB) - Italy
Tel: (+39) 039-230.14.92 Email: info@contradata.it

**www.contradata.it**

Updated: Dec. 2, 2021.

© Cincoze Co., Ltd. All Rights Reserved. Specifications subject to change without notice.
All product names, logos, and brands are the property of their respective owners. All company, product and service names used in this document are for identification purposes only. The use of these names, logos, and brands does not imply endorsement.

# CS-W115FHC/P2002

15.6" TFT-LCD Sunlight Readable Touch Panel PC with 6th Gen. Intel® Core™ Processor



- 15.6" TFT-LCD with Ultra High Brightness up to 1,500 nits and 1920 x 1080 Resolution
- Onboard Intel® 6th Generation Core™ Processor U Series (15W)
- Supports 2x DDR4 SO-DIMM Socket, up to 32 GB
- Integrated Intel® HD Graphics 520, Triple Display Support
- 2x 2.5" SATA Drive Bay, 1x mSATA, and 1x CFast Socket
- Rich I/O (2x GbE LAN, 6x COM, 5x USB, 16x Isolated DIO)
- 2x Full-size Mini-PCIe Socket for Wireless and I/O Expansion
- Wide Range Operating Temperature -10°C to 70°C
- Designed with Aluminum Die-casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports Panel / VESA / Rack Mounting
- Convertible Display System (CDS) Technology Supported

## Overview

CS-W115FHC/P2000 Series is a 15.6" TFT-LCD sunlight readable touch panel PC offering 1,500 nits ultra high brightness and 1920 x 1080 resolution. The system is equipped with high-performance Intel® 6th generation Core™ U series processor and provides extensive I/O including 2x GbE, 5x USB, 6x RS232/422/485, 8x DI/8x DO, 1x VGA and 1x DVI-D. It also supports 2x Mini-PCIe slot and 1x SIM socket for a variety of wireless connections, such as BT/WiFi and 3G/LTE. In addition, there are 3 types of storage devices including 2.5" SATA HDD (RAID 0/1), mSATA and CFast. The accessible design of these storage devices allows quick data access and easy maintenance.

CS-W115FHC/P2000 Series supports Convertible Display System (CDS) technology. Comparing to regular standalone panel PCs, it can lower maintenance cost and reduce unplanned downtime.

For greater flexibility, CS-W115FHC/P2000 Series has PCI/PCIe expandable version and PoE/power ignition functions by additional CFM (Control Function Module). Furthermore, CS-W115FHC/P2000 Series is a truly rugged display system supporting wide range operating temperature (-10°C to 70°C), IP65 dust/waterproof front panel, wide range DC power input (9 to 48VDC) and rigorous industrial protections.

## Specifications

### Display

| | |
|---|---|
| LCD Size | ▪ 15.6" (16:9) |
| Max. Resolution | ▪ 1920x1080 (Full HD) |
| Brightness (cd/m2) | ▪ 1,500 |
| Contrast Ratio | ▪ 700:1 |
| LCD Color | ▪ 16.7M |
| Pixel Pitch (mm) | ▪ 0.17925 (H) x 0.17925 (V) |
| Viewing Angle (H-V) | ▪ 160 /140 |
| Backlight MTBF | ▪ 50,000 hrs (LED Backlight) |

### Touch

| | |
|---|---|
| Resistive 5-wire | - |
| Projected Capacitive | V |

### System

| | |
|---|---|
| Processor | ▪ Onboard 6th Intel® Core™ U Processors (Skylake Lake)<br>- Intel® Core™ i5-6300U Processor (3M Cache, up to 3.00 GHz)<br>- Intel® Core™ i3-6100U Processor (3M Cache, up to 2.30 GHz)<br>- TDP: 15 W |
| Memory | ▪ 2x DDR4 2400 MHz 260-Pin SO-DIMM Socket<br>▪ Supports up to 64 GB (un-buffered and non-ECC) |
| BIOS | ▪ AMI 64Mbit SPI BIOS |

### Graphics

| | |
|---|---|
| Graphics Engine | ▪ Intel® HD Graphics 520 |
| Maximum Display Output | ▪ Triple display with 1x VGA, 1x DVI-D and 1x CDS interface |

### Audio

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

## External I/O Interface

| | |
|---|---|
| VGA | ▪ 1x VGA (Up to 1920 x 1080 @ 60Hz), DB-15 |
| DVI | ▪ 1x DVI-D (Up to 1920 x 1080 @ 60Hz) |
| CDS | ▪ 1x CDS Interface, Compact PCI Connector |
| LAN | ▪ 2x GbE LAN (Support WoL, Teaming, Jumbo Frame and PXE), RJ45<br>- GbE1: Intel I219LM<br>- GbE2: Intel I210<br>▪ 2x PoE+ (with Optional CFM PoE Module)<br>- Comply with IEEE 802.3at, Offers Up to 25.5W Per Port |
| COM | ▪ 6x RS-232/422/485 with Auto Flow Control (Support 5V/12V), DB9 |
| USB | ▪ 4x USB 3.0, Type-A<br>▪ 1x USB 2.0, Type-A |

## DIO

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

## Storage

| | |
|---|---|
| SSD/HDD | ▪ 2x 2.5" SATA HDD/SSD Bay, Support RAID 0/1 (Gen3) |
| mSATA | ▪ 2x mSATA (One Shared by Mini-PCIe Socket) (Gen2) |
| CFast | ▪ 1x CFast Socket (Gen3) |

## Expansion

| | |
|---|---|
| CFM (Control Function Module) Interface | ▪ 1x CFM IGN Interface<br>▪ 1x CFM PoE Interface |
| Mini PCIe Express | ▪ 2x Full-size Mini-PCIe Socket |
| UB | ▪ 1x Universal I/O Bracket |
| SIM Socket | ▪ 1x SIM Socket |

## Other Function

| | |
|---|---|
| Internal Speaker | ▪ AMP 2W + 2W |
| Power Ignition Sensing | ▪ Support Power Ignition Sensing (IGN) |
| 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 for CDS Display Module |
| External FAN Connector | ▪ 1x External FAN Connector, 4-pin Terminal Block |

## Power

| | |
|---|---|
| Power Button | ▪ 1x AT/ATX 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 ) | ▪ 420 x 254 x 91.5 mm |
| Weight Information | ▪ 6.92 Kg |
| Front Panel Construction | ▪ Die-casting Flat Surface |
| Mounting | ▪ Panel / VESA / *Rack Mounting (*with optional mounting kit) |
| Physical Design | ▪ Fanless Design<br>▪ Jumper-less Design |

## Reliability & Protection

| | |
|---|---|
| Reverse Power Input Protection | ▪ Yes |
| Over Voltage Protection | ▪ Protection Range: 51~58V<br>▪ 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

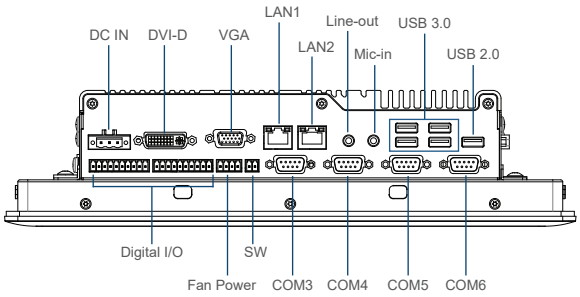
| | |
|---|---|
| Windows | ▪ Windows® 10<br>▪ Windows® 8.1<br>▪ Windows® 7 |
| Linux | ▪ Support by Project |

## Environment

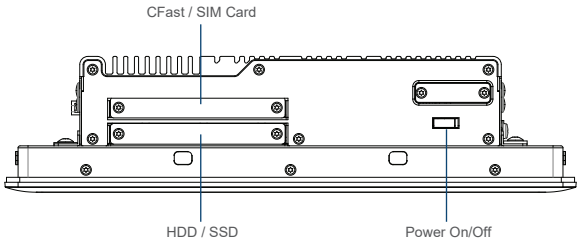
| | |
|---|---|
| Operating Temperature | ▪ -10°C to 70°C (With extended temperature peripherals; Ambient with air flow According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14) |
| Storage Temperature | ▪ -20°C to 70°C |
| Relative Humidity | ▪ 95% RH @ 39°C (Non-condensing) |
| EMC | ▪ CE, FCC, ICES-003 Class A |
| IP Level | ▪ IP65 Compliant Front Panel |

## External Layout

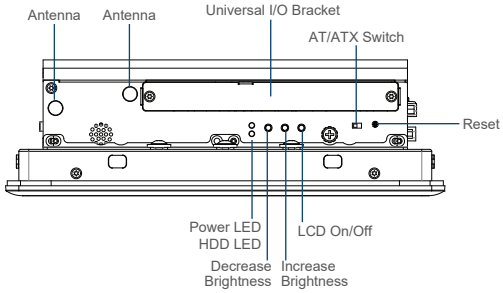
### Front I/O



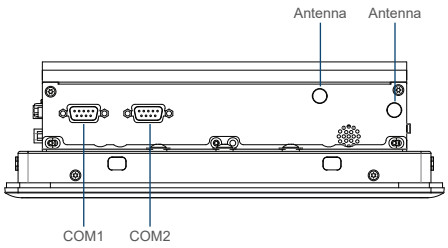

### Rear I/O



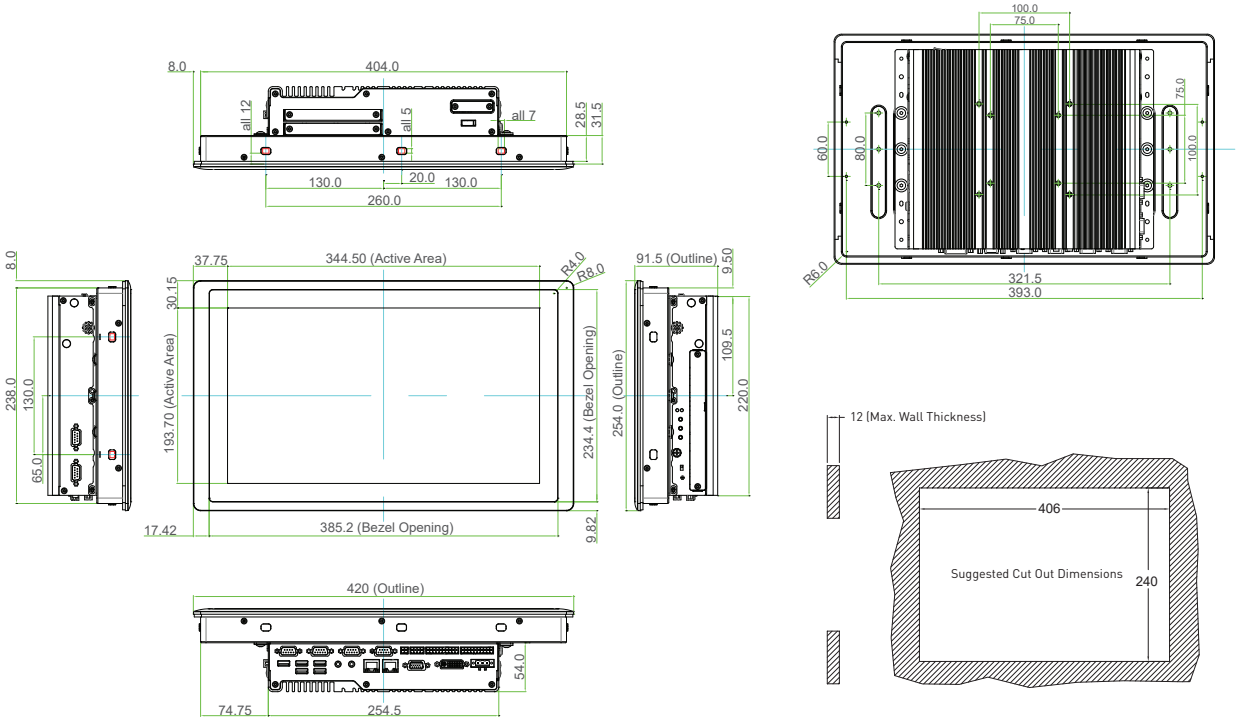

### Left I/O




### Right I/O




## Dimensions




Unit: mm

# Ordering Information

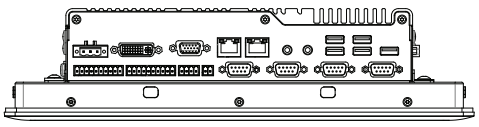
## Available Models

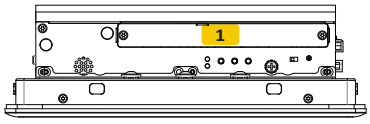
| Model No. | Description |
|---|---|
| CS-W115FHC-R10/P2002-i5-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i5-6300U Fanless Computer, CFM Interface, CDS Interface |
| CS-W115FHC-R10/P2002-i3-R10 | 15.6" TFT-LCD 16:9 Panel PC with Projected Capacitive Touch and Intel 6th Gen. Core i3-6100U Fanless Computer, CFM Interface, CDS Interface |

## Package Checklist

- CS-W115FHC/P2002 Panel PC x 1
- DIO Terminal Block Connector x 2
- Fan Terminal Block Connector x 1
- Utility Driver DVD x 1
- Power Terminal Block Connector x 1
- Screws Pack x 1
- Power On/Off Terminal Block Connector x 1
- Panel Mounting Kit x 1

## Optional Module Configuration






| Model No. | Description | 1 |
|---|---|---|
| MEC-COM-M212-DB9/UB0503 | Mini-PCIe Module with 2x COM Ports, 2x Universal Brackets (154 x 17 mm) | V |
| MEC-COM-M334-TDB9/UB0504 | Mini-PCIe Module with 4x RS-232/422/485 Serial Ports,1x Universal Bracket (154 x 17 mm) | V |
| MEC-LAN-M102-30/UB0511 | Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable / 1x Universal Bracket with 2x RJ45 Cutout for P2000 Series | V |
| MEC-USB-M102-30/UB0514 | Mini-PCIe Module with 2x USB 3.0 Ports, 1x Universal Bracket (154 x 17 mm) | V |

V : Compatible

## Optional Function Modules

| Model No. | Description |
|---|---|
| CFM-IGN100 | CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable (41 x 35 mm) |
| CFM-PoE100 | PoE Control Function Module, Individual Port 25.5W (50 x 44 x 15 mm) (For CS-100/P2002 only) |
| 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 |
| GST220A24-CIN | Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, GST220A24-CIN |

contradata®

**Distributore per l'Italia: Contradata Milano S.r.l.**

Via Solferino 12 - 20900 Monza (MB) - Italy
Tel: (+39) 039-230.14.92 Email: info@contradata.it

**www.contradata.it**

Updated: Dec. 2, 2021.

© Cincoze Co., Ltd. All Rights Reserved. Specifications subject to change without notice.
All product names, logos, and brands are the property of their respective owners. All company, product and service names used in this document are for identification purposes only. The use of these names, logos, and brands does not imply endorsement.