



Industrial PC

# PPC-J1900-215-C



PN: PPC-J1900-215-C

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# PPC-J1900-215-C

## Front View



# Rear View



## Side View 1



## Side View 2



## Product Overview

The PPC-J1900 series PPC-J1900-215-C is a rugged, high-quality NEMA/IP65-compliant industrial panel PC. This single board computer features a 21.5" multi-point capacitive touch screen with a resolution of 1920 x 1080 pixels.

### Key Applications

- Human Machine Interface HMI
- Industrial Automation
- Process Control
- Smart Grid Management
- CNC Manufacturing
- Environmental Monitoring
- Machine Vision Inspection
- ATM, Kiosk, Infotainment...

The PPC-J1900-215-C Industrial Panel PC is powered by Intel® Celeron® J1900 quad-core CPU and equipped with a broad range of connectivity options, allowing it to meet highly demanding application requirements in harsh industrial or outdoor environments.

A specially designed magnesium-aluminum alloy housing with fins for increased heat dissipation serves as a passive cooler, eliminating the need for built-in fans. The fan-less design reduces noise, as well as the maintenance costs and efforts, increasing reliability at the same time.

#### Caution

Be careful when handling the product while it is operating: the back panel might become hot under heavy CPU load.

# Product Changes

## Ver 2.0

- Released on Jul 1, 2025

### Warning

**Breaking Changes: this product is completely redesigned.**

If you bought PPC-J1900-215-C before **July 1, 2025**, please note the new board (ver 2.0) is **not compatible** with the previous board (ver 1.1).

## Ver 1.1

- Initial Release
- **Download Archived Manual: [PPC-J1900-215-C-ver1.1.pdf](#)**

# Ordering Options

Most of the Chipsee products can be customized during the ordering process. The product will be shipped with the pre-installed factory defaults if no extra requirements are specified. The table in the **Hardware Features** section provides information about the default options bundled with the product.

### Note

You can order **PPC-J1900-215-C** from the official **Chipsee Store** or from your nearest distributor.

# Operating System

By default, PPC-J1900-215-C comes with the Ubuntu Linux operating system (OS) pre-installed. A different OS can be selected during the ordering process.

In addition to Linux, PPC-J1900-215-C also supports Windows 7, Windows 8 and Windows 10.



## Optional Features

The PPC-J1900-215-C Industrial Panel PC does not include WiFi/BT and/or 3G/4G modules by default. The Wi-Fi/BT module is optional and can be selected during the ordering process.

The 3G/4G module is a mini-PCIe module, WiFi/BT module is also a mini-PCIe module. There is only 1 mini-PCIe socket on the board, so only one (4G or WiFi) module can be installed. You may use a USB module together with the mini-PCIe module if you need both 4G and WiFi, though.



### Warning

Installation, repair, and maintenance tasks should be performed by trained personnel only.  
Chipsee does not bear any responsibility for damage caused by inadequate handling of the product.

## Hardware Features

The PPC-J1900-215-C Industrial Panel PC offers a broad range of performance and connectivity options for scalable integration, providing expandability according to future needs.

Some of the key features are listed in the table below.

PPC-J1900-215-C	
<b>CPU</b>	Intel® Celeron® J1900, 2GHz, Quad-Core, 2MB Cache, TDP=10W
<b>GPU</b>	Intel® HD integrated GPU, 512MB shared memory
<b>RAM</b>	Default 4GB, maximum 8GB, DDR3L 1333 SO-DIMM
<b>Display</b>	21.5" LCD, resolution 1920 x 1080 px, brightness 250 cd/m <sup>2</sup>
<b>Storage</b>	Default mSATA 128GB SSD, supports 256/512GB
<b>Touch</b>	Multi-point capacitive touch screen
<b>USB</b>	1 x USB 3.0 HOST, 3 x USB 2.0 HOST ports (Type A)
<b>LAN</b>	2 x RJ45, 1 Gbps Ethernet Controller
<b>UART</b>	4 x RS232, 2 x RS485
<b>GPIO</b>	N/A
<b>3G/4G</b>	Optional, module available from other manufacturers/stores
<b>WiFi/BT</b>	Optional, module available from the Chipsee store
<b>HDMI</b>	1 x HDMI out
<b>VGA</b>	N/A
<b>mini-PCIe</b>	1 x mini PCIe
<b>Power IN</b>	12V DC
<b>Power Consumption</b>	30W
<b>OS</b>	Ubuntu Linux (default), Windows 7 / 8 / 10 (optional)
<b>Operating Temp.</b>	From 0°C to 50°C (no condensation)
<b>Storage Temp.</b>	From -20°C to 60°C (no condensation)
<b>Dimensions</b>	535 x 331 x 52.5mm
<b>Mounting</b>	VESA 100, Panel mounting with fixtures
<b>Weight</b>	5200g

Table 299 Table 1: Key Features

## Power Input

The PPC-J1900-215-C Industrial Panel PC can be powered by 12V DC power supply. The power input connector is a 2-pin, 3.81mm screw terminal.

The **POWER** button can be used to switch the power ON or OFF.

Check the image below for positive and negative DC input, you can use either pair of the two ports:



*12V DC Power Input*

### Note

If the product is used to control some key processes, it is highly recommended to use an Uninterruptible Power Supply (UPS) to prevent critical data loss.

## Touch Screen

PPC-J1900-215-C is equipped with a multi-point capacitive touch screen. Its multitouch detection capability enables implementation of some advanced GUI operations, such as two-finger zoom or rotation.

The capacitive touch screen can be operated by fingers, gloves with a special coating, or a conductive stylus.

**Size/Type:** 21.5" multi-point capacitive touch screen

**Touch screen structure:** G+F+F

**Surface Strength:** 7H

**Surface Hardness:** 50G steel ball 70cm impact drop 3 times not broken

**Service Life (MTBF):** 50 million touch events

**Light Transmittance:** > 92%


# Connectivity

There are many connectivity options available on the PPC-J1900-215-C industrial PC. It has 4 x USB Type A connectors configured as HOSTS, 1 x HDMI out port, 2 x RJ45 supporting Gigabit Ethernet (GbE), and 4 x RS232, 2 x RS485 connectors.

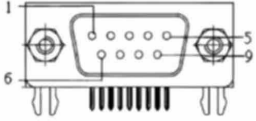
## RS232/RS485

The PPC-J1900-215-C Industrial Panel PC has 2 x 9-pin D-sub connectors and 1 x 16-pin 3.81mm connector with pluggable terminal block. The 9-pin D-sub connectors labeled as **COM1/COM2** are RS485.

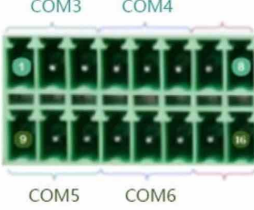
**COM 3/4/5/6** are RS232:



COM1/COM2 RS485									
PIN	1	2	3	4	5	6	7	8	9
Definition	485 -	485 +							



PIN	COM3 RS232			COM4 RS232				
	1	2	3	4	5	6	7	8
	RXD	TXD	GND	RXD	TXD	GND		
PIN	COM5 RS232			COM6 RS232				
	9	10	11	12	13	14	15	16
	RXD	TXD	GND	RXD	TXD	GND		



RS232 / RS485 Interfaces

## USB HOST

PPC-J1900-215-C is equipped with 3 x USB 2.0 connectors and 1 x USB 3.0 HOST connectors.



*USB 2.0 HOST Port*



*USB 3.0 HOST Port*



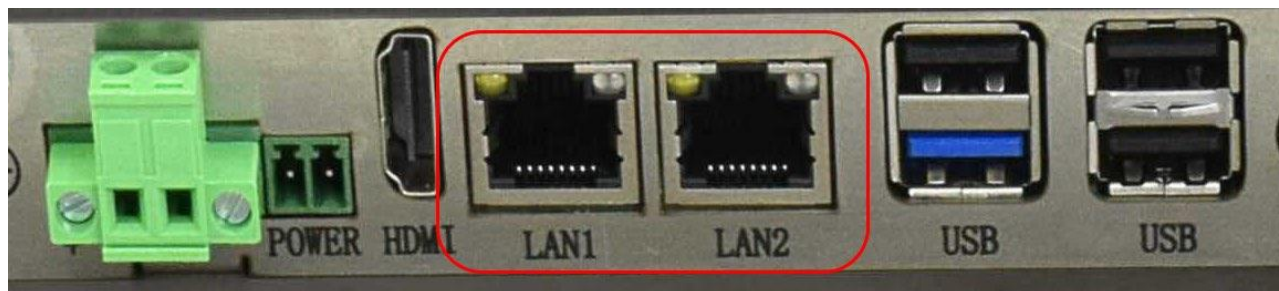
### Warning

Be careful not to touch surrounding electronic components accidentally while plugging USB devices into the embedded IPC version.

## LAN

2 x **LAN (RJ45)** provide Ethernet connectivity over standardized Ethernet cables. The integrated two-port Ethernet interface supports 10/100/1000BASE-T/TX specifications with automatic speed negotiation and Wake on LAN (WoL) functionality.

Power over Ethernet (PoE) is not supported.



*LAN/RJ45*

### Note

Use CAT5 or better cables to achieve full data throughput over maximum distance defined by the 1000BASE-T standard (100m).

## HDMI

The PPC-J1900-215-C Industrial Panel PC is equipped with 1 x **HDMI** connector. The HDMI connector allows connecting an additional (external) monitor.

HDMI output resolution can be configured by the software.



*HDMI Connector*



## Mounting Procedure

The PPC-J1900-215-C Industrial Panel PC supports VESA 100 x 100 mounting pattern with 4 x M4 screws, enabling simplified installation onto any standard VESA mounting rack. Other mounting options might also be supported according to the table in the [Hardware Features](#) section.

You can find detailed information about mounting in the [Mount IPC Guide](#).

## Mechanical Specifications

The outer mechanical dimensions of The PPC-J1900-215-C Industrial Panel PC are 535 x 331 x 52.5mm (W x L x H). Please refer to the technical drawing in the figure below for details related to the specific product measurements.

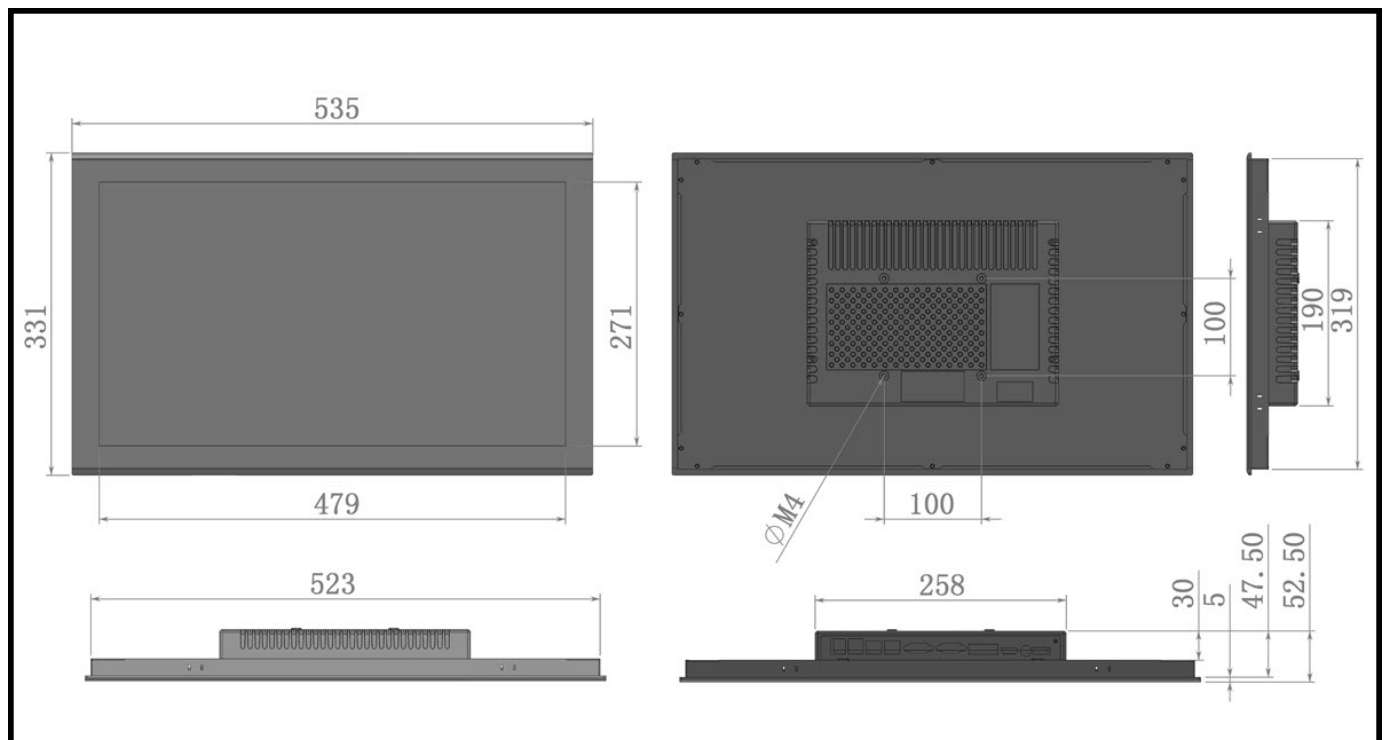


Figure 862: PPC-J1900-215-C Technical Drawing

## Disclaimer

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