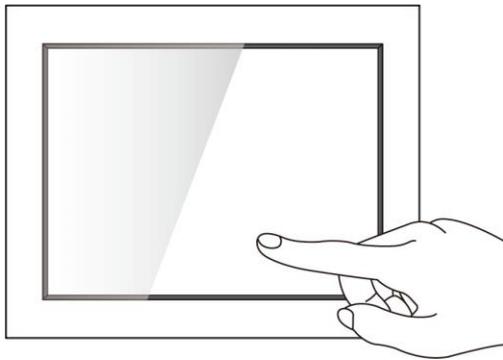


SlimLine IB32-ES



Full IP65 Stainless Resistive Panel PC

Intel® Celeron® Bay Trail-M N2930 1.83 GHz

Quick Start Guide

V1.0

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Industrial IT* **TL** electronic

Safety Information

WARNING! / AVERTISSEMENT!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.



Toujours débrancher le cordon d'alimentation du chassis lorsque vous travaillez sur celui-ci. Ne pas brancher de connexions lorsque l'alimentation est présente. Des composantes électroniques sensibles peuvent être endommagées par des sauts d'alimentation. Seulement du personnel expérimenté devrait ouvrir ces chassis.

CAUTION/ATTENTION

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.



Toujours vérifier votre mise à la terre afin d'éliminer toute charge statique avant de toucher la carte CPU. Les équipements électroniques modernes sont très sensibles aux décharges d'électricité statique. Toujours utiliser un bracelet de mise à la terre comme précaution. Placer toutes les composantes électroniques sur une surface conçue pour dissiper les charges, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

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INTRODUCTION

Congratulations on purchasing IP65 Stainless Resistive Panel PC. IP65 Stainless Resistive Panel PC is rugged, industrial-grade panel PC series built to withstand challenging environments, undergoing rigorous testing to ensure safety and top performance. All of the models in the series are sealed to IP65 standard. Stainless housing features anti-corrosion properties making it suitable for food, chemical and pharmaceutical industries.

IP65 Stainless Resistive Panel PC goes beyond that of the standard industrial panel computers with rugged construction, powerful performance, and flexible mounting options.

Features

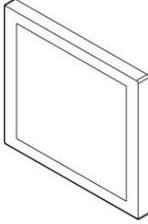
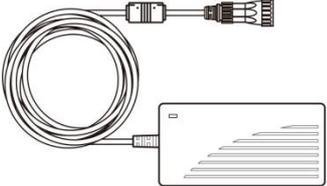
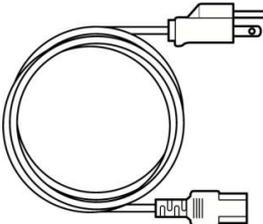
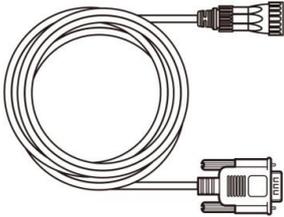
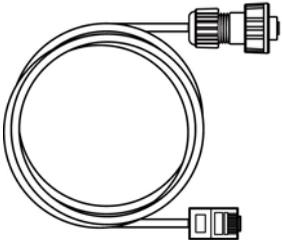
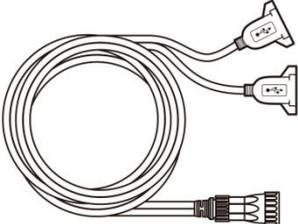
IP65 Stainless Resistive Panel PC features:

- Intel® Celeron Bay Trail-M N2930 1.83 GHz Processor
- Fanless Design
- Full IP65 dust and water resistant
- Stainless Housing with Anti-Corrosion Treatment
- Optical Bonding with Anti-moisture Treatment (Optional)
- 5 Wire Resistive Touch/ Anti-Reflection Protection Glass (Optional)
- Various mounting solutions: Yoke mount and VESA mount

Package Contents

Carefully remove the box and unpack your device. Please check if all the items listed below are inside your package. If any of these items are missing or damaged contact us immediately.

Standard factory shipment list:

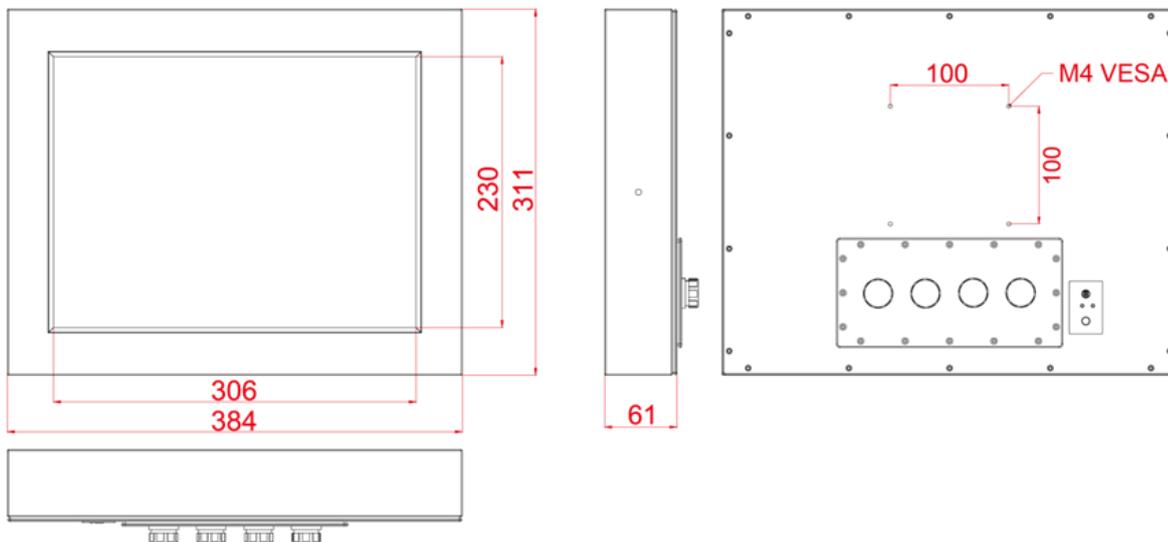
		
Panel PC	Quick Start Guide (Hardcopy)	Driver CD & User Manual
Varies by product specifications	91521111101R	IB32: 91711111101Y
		
AC Adapter	Power Cable	Serial Cable
50W 90PO12050002 80W 90PO12080003	Varies by country	94G0103090Q0
		
Ethernet Cable	USB Cable	VESA Screws
94I0080080KF	9480108080Q0	913511101101

Product Overview

This section contains mechanical drawing of the Panel PC. Notice that this is a simplified drawing and some components are not marked in detail.

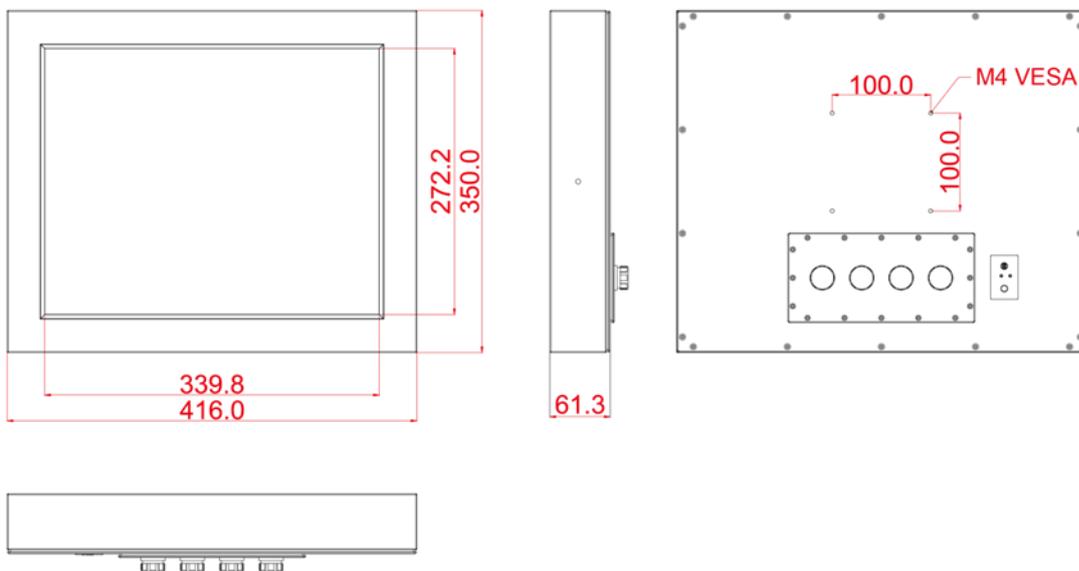
Dimensions 15"

Unit: mm



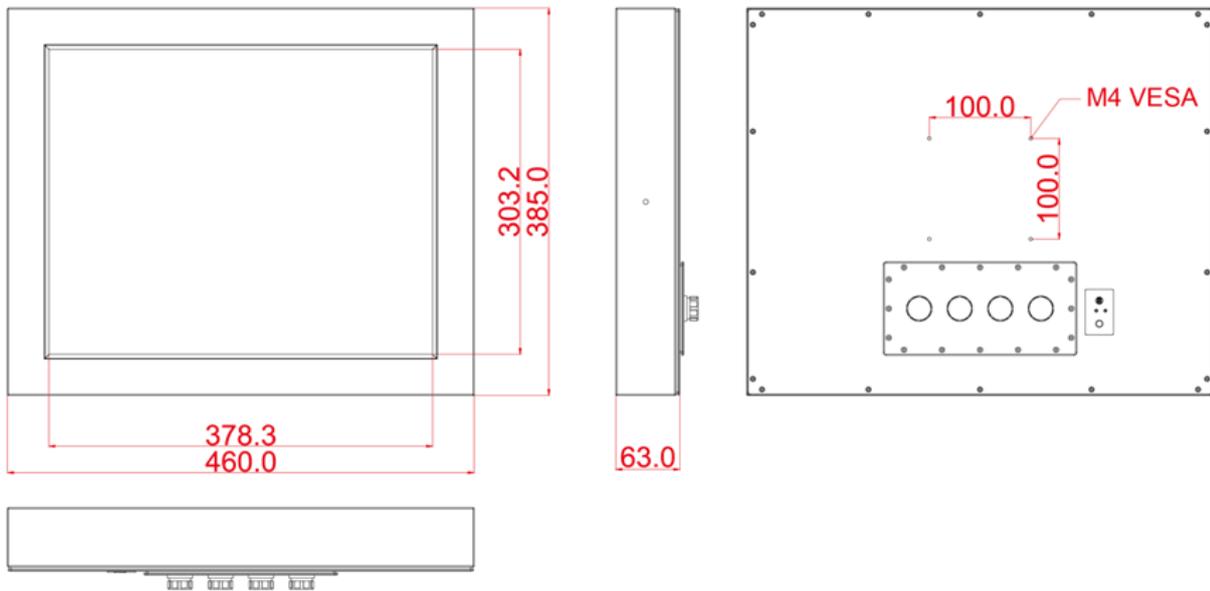
Dimensions 17"

Unit: mm



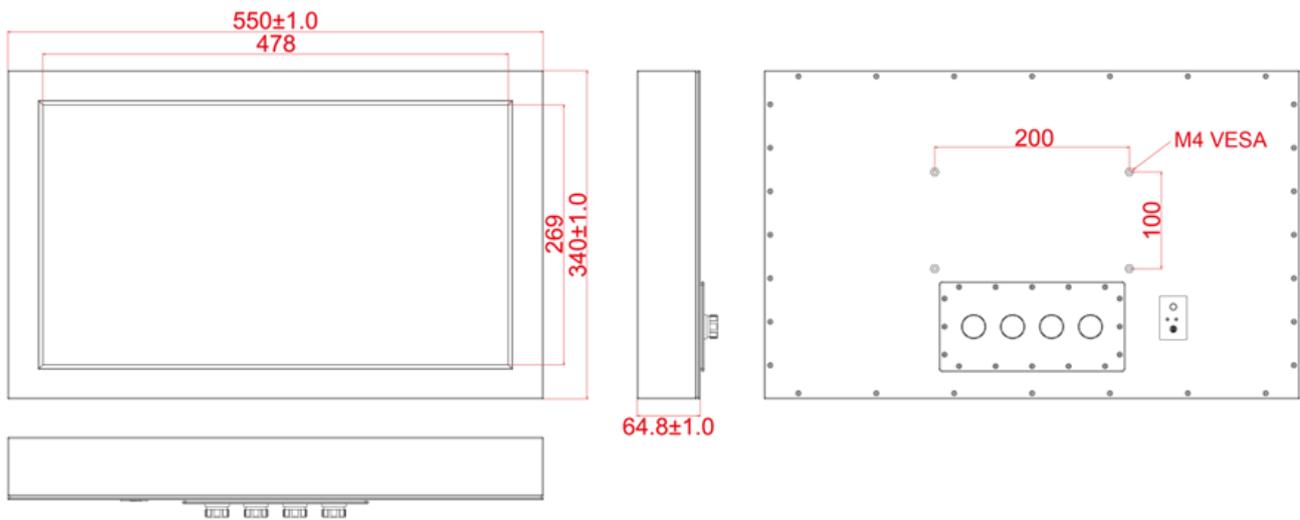
Dimensions 19"

Unit: mm



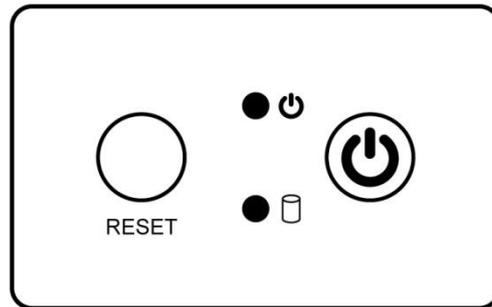
Dimensions 21.5"

Unit: mm

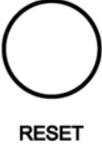


Physical Buttons and LED Indicators

Physical buttons and LED indicators located on the rear side of the Panel PC.



Physical Buttons

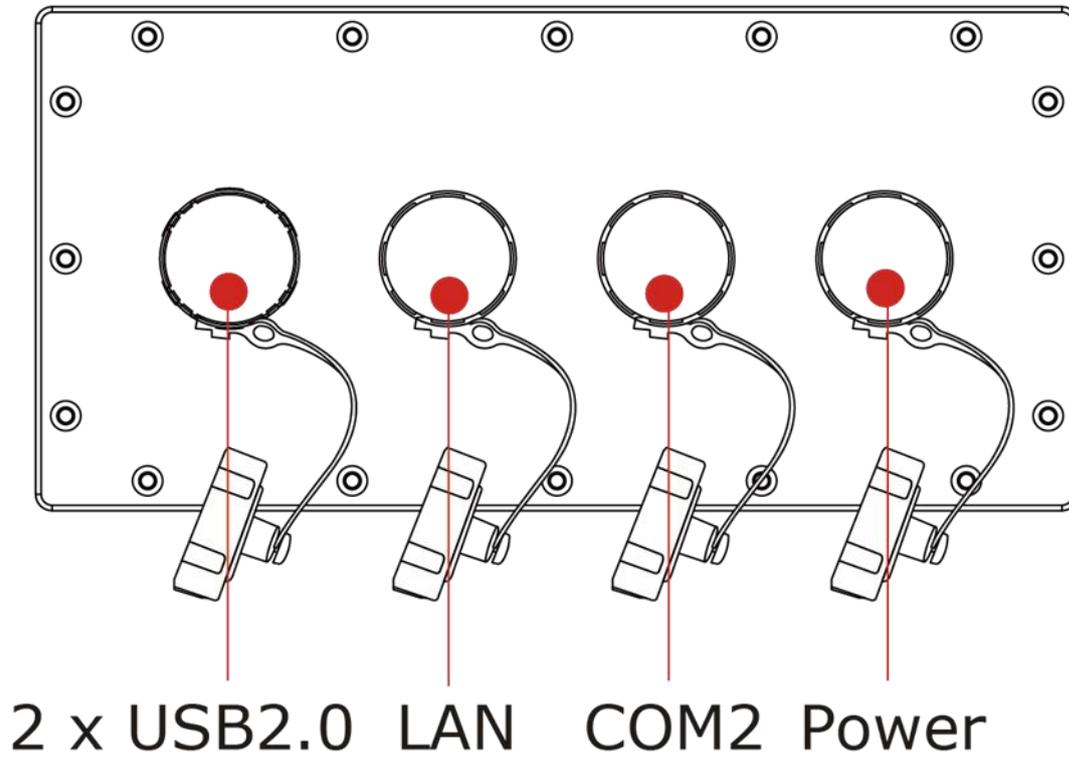
Icon	Button	Description
	Reset	Press to reset the system
	Power On/ Off	Press to power on or power off the device

LED Indicators

LED Type	Status	Description
	On	Power is on
	Off	Power is off
	Blinking	Storage activity (Data is being read or written)
	Off	System is idle

Connectors

IP65 Stainless Resistive Panel PC has IP65 type connectors with protection cap.

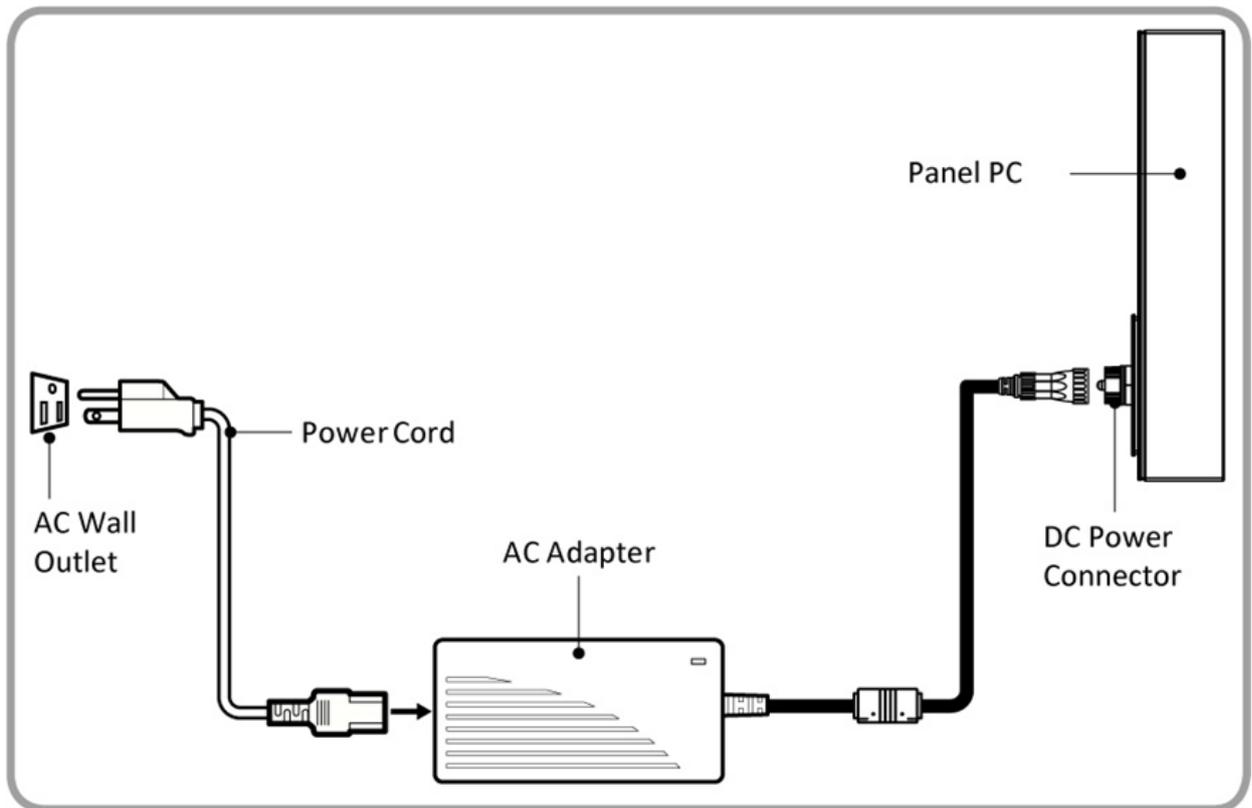


GETTING STARTED

Turning On Your Device

Follow the following steps to turn on your device:

1. Connect the AC adapter to the DC-in jack connector located on the back side of the Panel PC.
2. Connect the power cord to AC adapter.
3. Plug the power cord to the AC outlet and the device will turn on automatically.



AC Adapter specifications vary by panel size.

Size	15"	17"	19"	21.5"
AC Adapter	12V/ 50W	12V/ 80W	12V/ 80W	12V/ 80W
Power Consumption*	38W (typ.)	43W (typ.)	45W (typ.)	56W (typ.)

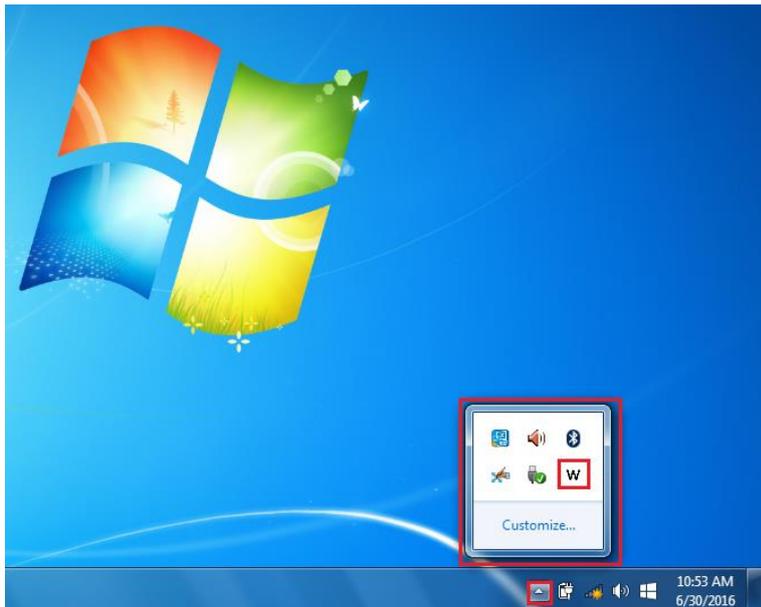
*With maximum backlight and high CPU load.

How to Enable Watchdog

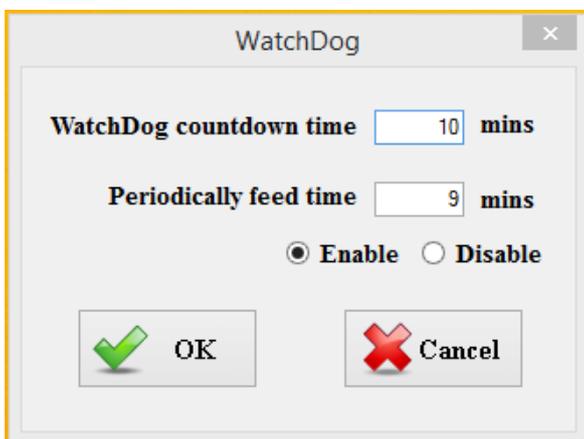
To enable Watchdog, you need to download the Watchdog utility.

To enable watchdog in Watchdog AP follow the instructions below:

1. On the right bottom side of the desktop screen, click  **triangle button** to show hidden icons.
2. Click  icon to open Watchdog utility.



3. In Watchdog utility window set countdown time and periodically feed time, or disable watchdog.



Example:

Every 10 min watchdog will monitor the system, in case any error occurs the system will restart automatically when the countdown time reaches 0.

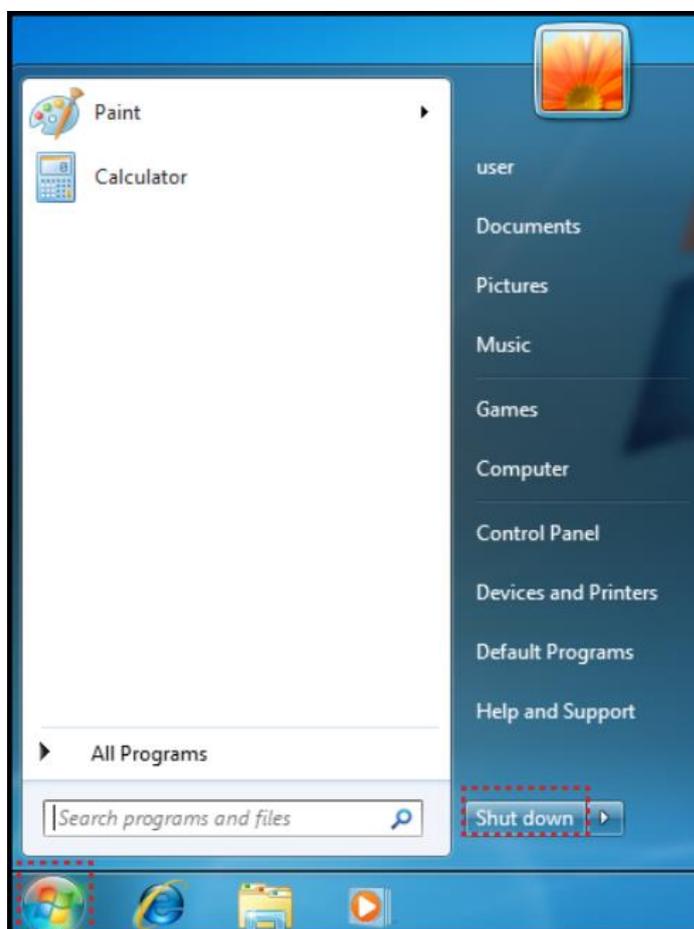
Every 9 min watchdog timer will be reset to 10 min.

Settings	Description
Watchdog Countdown Time	The system automaticity restarts when this countdown time reaches zero. <i>Default: 10 min</i>
Periodically Feed Time	To set a cycle time to automatically reset watchdog timer. <i>Default: 9 min</i>
Enable / Disable	Enable or disable watchdog. <i>Default: Enable</i>

Turning Off Your Device

To shut down your device, do the following:

Tap **Start** () > **Shut down**.



Wait for your Panel PC to completely turn off before disconnecting the power cord (if necessary).

INSTALLATION

Wiring Requirements

The following common safety precautions should be observed before installing any electronic device:

- Strive to use separate, non-intersecting paths to route power and networking wires. If power wiring and device wiring paths must cross make sure the wires are perpendicular at the intersection point.
- Keep the wires separated according to interface. The rule of thumb is that wiring that shares similar electrical characteristics may be bundled together.
- Do not bundle input wiring with output wiring. Keep them separate.
- When necessary, it is strongly advised that you label wiring to all devices in the system.



CAUTION

- Do not run signal or communication wiring and power wiring in the same conduit. To avoid interference, wires with different signal characteristics (i.e., different interfaces) should be routed separately.
- Be sure to disconnect the power cord before installing and/or wiring your device.
- Verify the maximum possible current for each wire gauge, especially for the power cords. Observe all electrical codes dictating the maximum current allowable for each wire gauge.
- If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.
- Be careful when handling the unit. When the unit is plugged in, the internal components generate a lot of heat which may leave the outer casing too hot to touch.

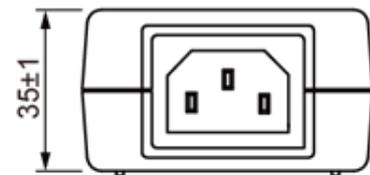
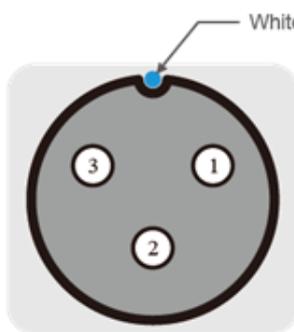
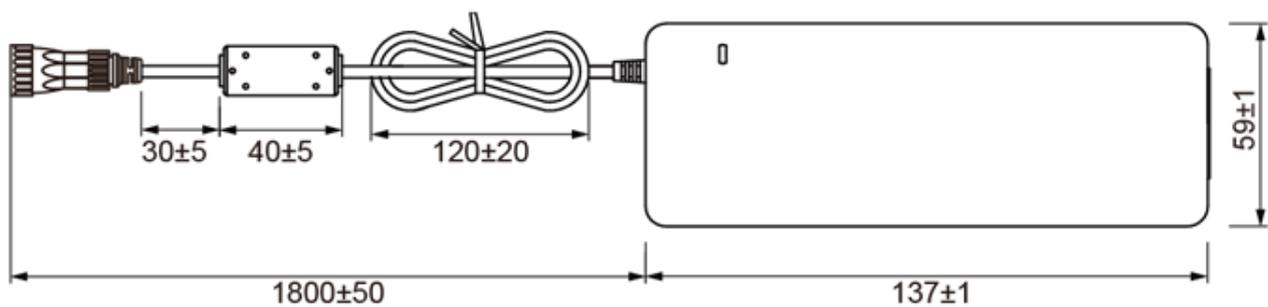
Connector Pin Assignment

This Panel PC is equipped with four connectors which are IP65 level and fool-proofing design. Use only the cables that are included in the package. The pin assignments of the cables are as follows.

Power Cable

The IP65 Stainless Resistive Panel PC has IP65 connector. Use power cable to connect Panel PC to the source of power.

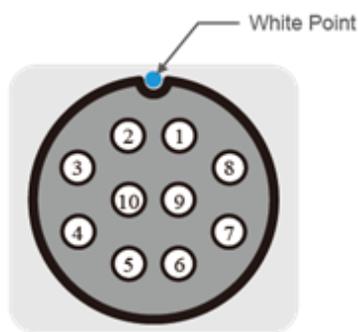
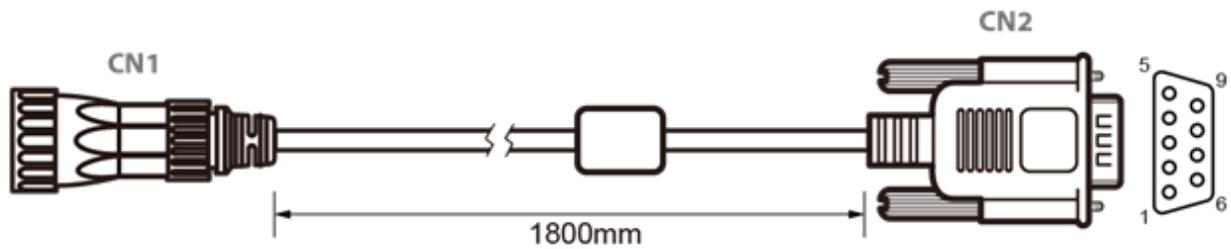
IP65 Stainless Resistive Panel PC supports 12V DC power input.



Pin No.	Symbols	Color
CN1-3	GND	Black
CN1-2	shield	
CN1-1	VCC	White

Serial Cable

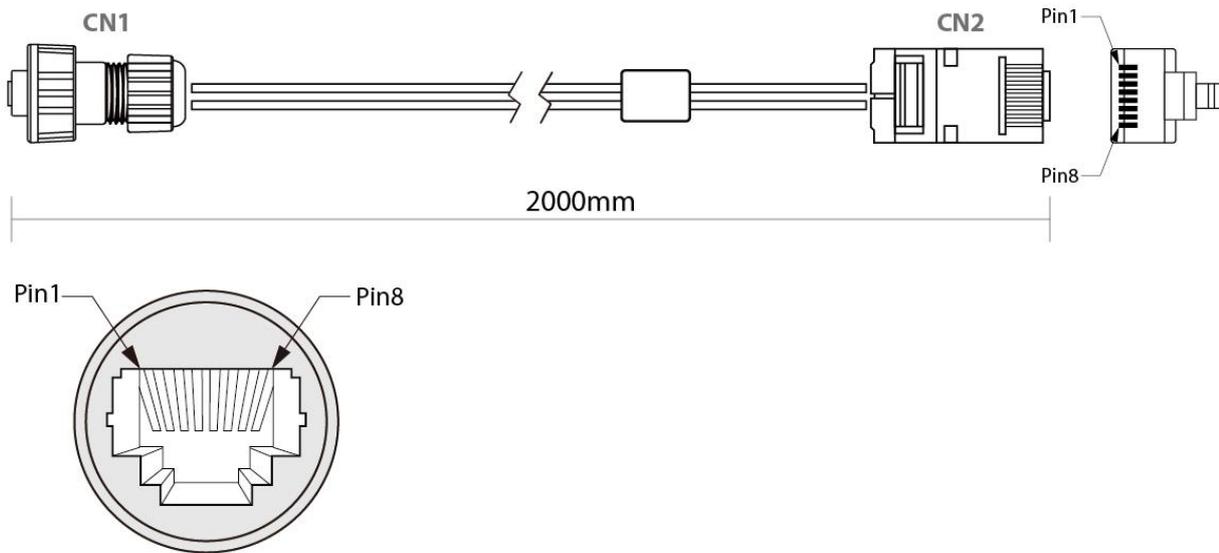
The IP65 Stainless Resistive Panel PC has IP65 serial port connector. Use serial cable to connect serial interfaces.



Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	DCD-CON2	Green	↔	CN2-1	DCD-CON2	Green
CN1-2	DSR-CON2	Brown	↔	CN2-6	DSR-CON2	Brown
CN1-3	RXD-CON2	Red	↔	CN2-2	RXD-CON2	Red
CN1-4	RTS-CON2	Orange	↔	CN2-7	RTS-CON2	Orange
CN1-5	TXD-CON2	Blue	↔	CN2-3	TXD-CON2	Blue
CN1-6	CTS-CON2	White	↔	CN2-8	CTS-CON2	White
CN1-7	DTR-CON2	Purple	↔	CN2-4	DTR-CON2	Purple
CN1-8	RI-CON2	Yellow	↔	CN2-9	RI-CON2	Yellow
CN1-9	GND-CON2	Black	↔	CN2-5	GND-CON2	Black
CN1-10	NC		↔	CN2-10	NC	

Ethernet Cable

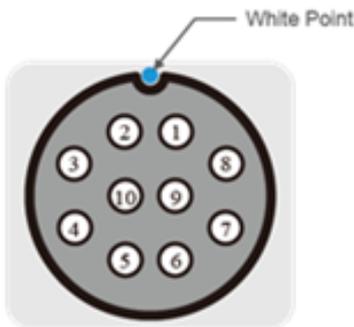
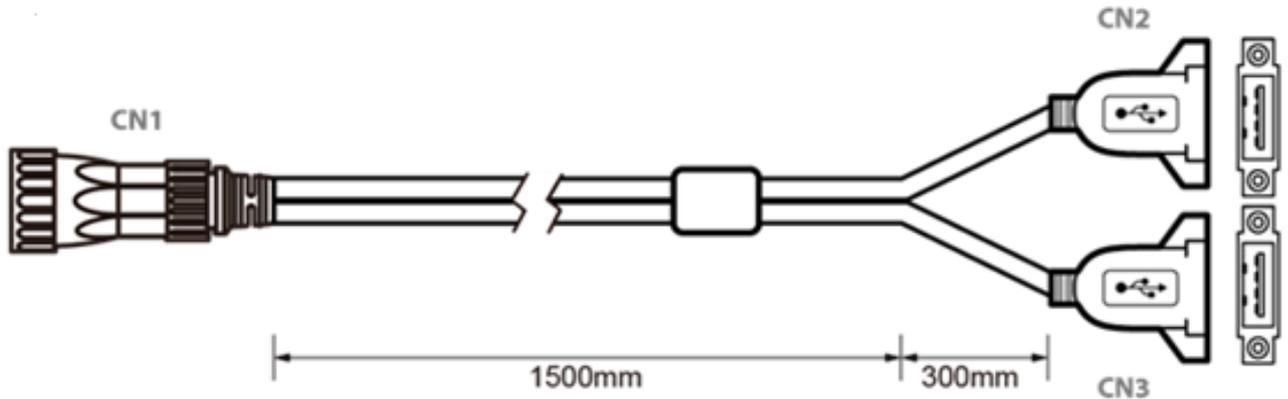
The IP65 Stainless Resistive Panel PC has IP65 Ethernet connector. Use Ethernet cable to connect the Panel PC to the Internet.



Plug	Wire Color	Conn.	
1	Orange / White	1	Twist
2	Orange	2	
3	Green / White	3	Twist
4	Blue	4	
5	Blue / White	5	
6	Green	6	Twist
7	Brown / White	7	
8	Brown	8	Twist

USB 2.0 Cable

The IP65 Stainless Resistive Panel PC has one Full IP65 USB2.0 connector. Use USB2.0 cable to connect external devices such as mouse or keyboard to the Panel PC.



Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	VCC	RED	↔	CN2-1	VCC	RED
CN1-2	VCC	RED	↔	CN3-1	VCC	RED
CN1-3	D-	WHITE	↔	CN2-2	D-	WHITE
CN1-4	D-	WHITE	↔	CN3-2	D-	WHITE
CN1-5	D+	GREEN	↔	CN2-3	D+	GREEN
CN1-6	D+	GREEN	↔	CN3-3	D+	GREEN
CN1-7	GND	BLACK	↔	CN2-4	GND	BLACK
CN1-8	GND	BLACK	↔	CN3-4	GND	BLACK
CN1-9	Braid		↔	Braid connect to the housing		

twisted pair

twisted pair

Mounting

IP65 Stainless Resistive Panel PC devices come with different mounting options suitable for most of the industrial and commercial applications.

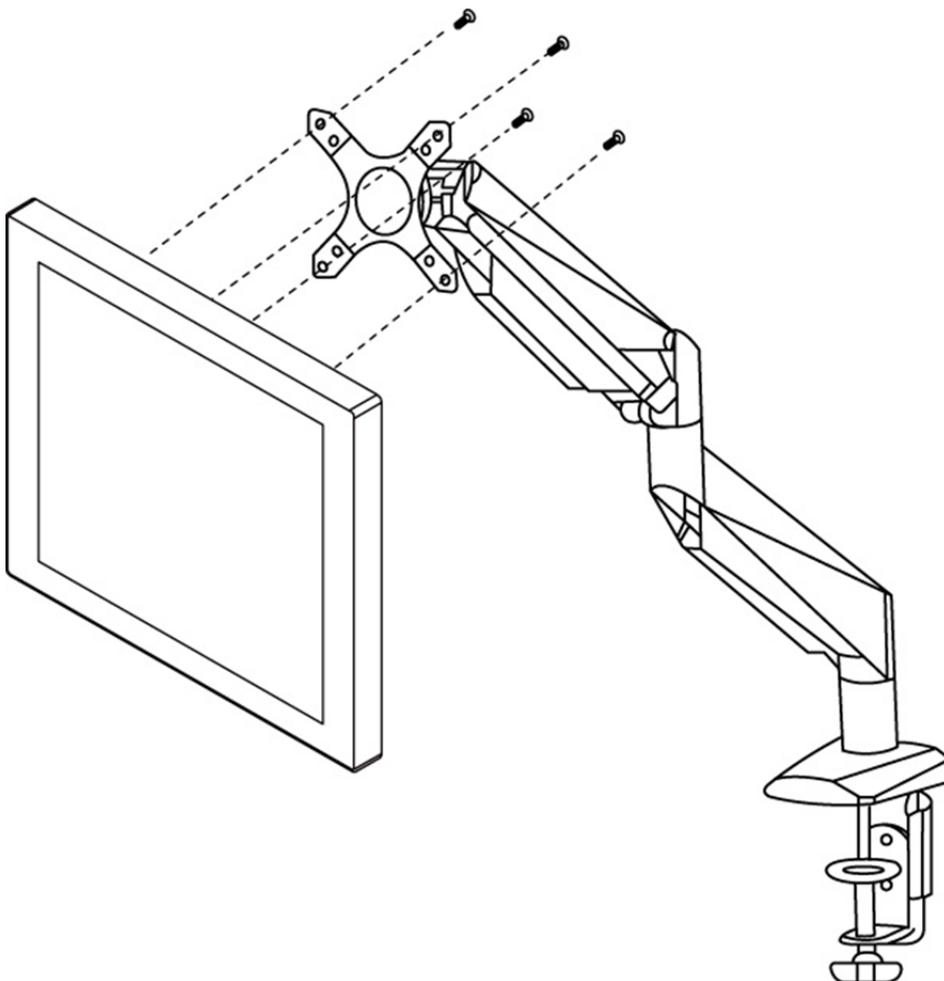
VESA Mounting

IP65 Stainless Resistive Panel PC has VESA mount holes on the rear side. Follow instructions below to mount the unit with VESA Mount bracket (not supplied).

Size	VESA Plate Dimensions	Screw Hole Diameter
15", 17", 19"	100 x 100 mm	VESA M4x5 mm
21.5"	100 x 200 mm	VESA M4x5 mm

Mounting Steps:

1. Screw VESA bracket to the fixture (ex. swing arm) with four VESA screws.
2. Place the device on VESA bracket.

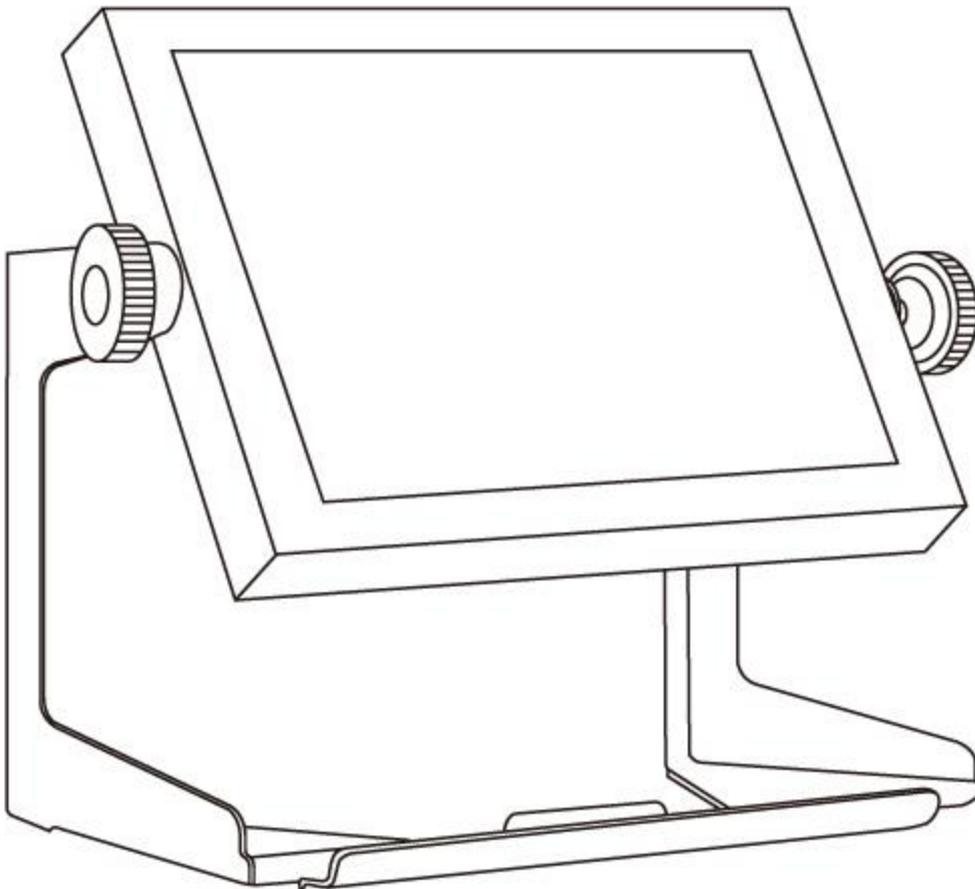


Yoke Mounting

Yoke Mount solution allows installing the Panel PC with the bracket (not supplied).

Mounting instruction:

1. Place the Panel PC on the bracket stand, aiming screw holes for each other.
2. Secure screws to fix the device upon the bracket stand.
3. Firmly secure the locking handle to the Panel PC.



SPECIFICATIONS

Hardware Specifications

	Model Name			
	WM 15-IB32-ES	WM 17-IB32-ES	WM 19-IB32-ES	WM 22W-IB32-ES
Display				
Size	15"	17"	19"	21.5"
Resolution	1024 x 768	1280 x 1024	1280 x 1024	1920 x 1080
Brightness	250 <i>cd/m²</i> (typ.)	350 <i>cd/m²</i> (typ.)	250 <i>cd/m²</i> (typ.)	250 <i>cd/m²</i> (typ.)
Contrast Ratio	700 : 1 (typ.)	1000 : 1 (typ.)	1000 : 1 (typ.)	1000 : 1 (typ.)
Viewing Angle	-70~70(H);- 65~60(V)	-85~85(H);- 80~80(V)	-85~85(H);- 80~80(V)	-85~85(H);- 80~80(V)
Max Colors	16.2M	16.7M	16.7M	16.7M
System				
Processor	Intel® Celeron® Bay Trail-M N2930 1.83 GHz			
BIOS	AMI 16Mbit Flash			
System Chipset	Intel® Atom™ SoC Integrate			
System Memory	1 x SO-DIMM, Default 4GB, Max 8GB DDR3L 1600			
Storage	Default 64GB			
Audio	Built in ALC886 HD Audio Codec			
Ethernet	2 x RJ45 Gigabit LAN (1 x RJ45 internal)			
USB	6 x USB2.0 (4 x USB internal) 4 x RS232 (3 x RS232 internal)			
Expansion Slot	1 x Mini PCIe (Internal)			
SSD Interface	1 x Mini PCIe SSD			
Power Input	DC-IN (Lockable, Power Jack)			
Security	Trusted Platform Module (TPM 1.2)			

Input/ Output Connectors				
Ethernet LAN	1 x RJ45 - 10/100/1000 Mbps			
COM	1 x RS232			
USB	2 x USB Type-A Receptacle			
Power	1 x 12V DC			
Mechanical Specification				
Cooling System	Fanless			
Mounting	Yoke Mount, VESA Mount			
Environmental Consideration				
Operating Temperature	0°C to +45°C			
Operating Humidity	30% to 90% (non-condensing)			
IP Rating	Full IP65			
Power Specifications				
Power Input	12V DC IN (Lockable Power Jack)			
Power Consumption	38W (typ.)	43W (typ.)	45W (typ.)	56W (typ.)
Standards and Certification				
Certification	CE, FCC, RoHs			

APPENDIX

Appendix A: Cleaning the Monitor

Before cleaning:

- Make sure the device is turned off.
- Disconnect the power cable from any AC outlet.

When cleaning:

- Never spray or pour any liquid directly on the screen or case.
- Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles.
- The display area is highly prone to scratching. Do not use ketene type material (ex. Acetone), Ethyl alcohol, toluene, ethyl acid or Methyl chloride to clear the panel. It may permanently damage the panel and void the warranty.
- If it is still not clean enough, apply a small amount of non-ammonia, non-alcohol based glass cleaner onto a clean, soft, lint-free cloth, and wipe the screen.
- Don not use water or oil directly on the display screen. If droplets are allowed to drop on the screen, permanent staining or discoloration may occur.