# Full IP65 Stainless Resistive Panel PC

Intel® Celeron® Bay Trail-M N2930 1.83 GHz
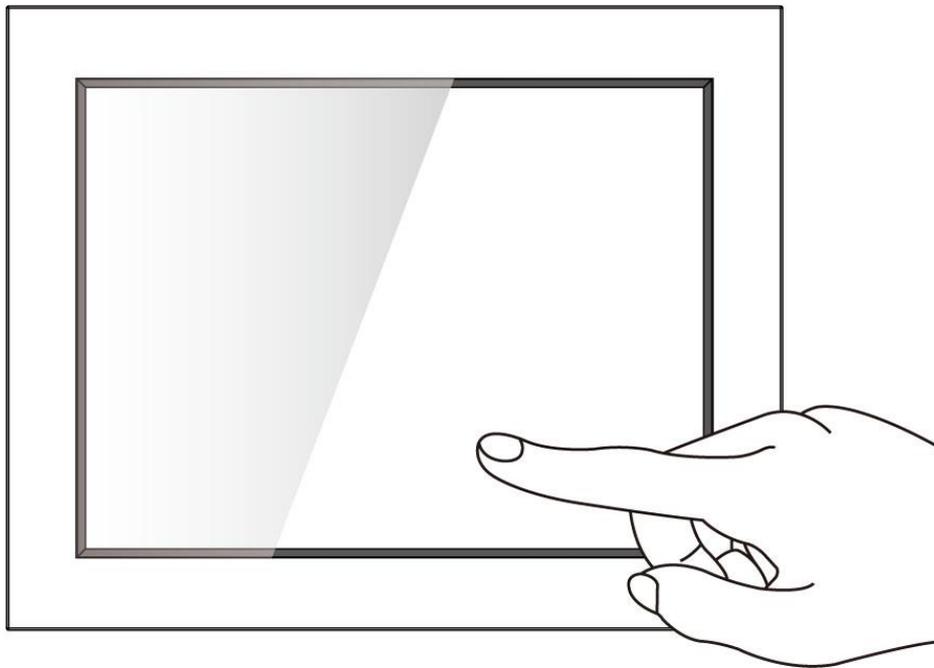
Model No.: R15IB3S-65C3
R17IB3S-65M1
R19IB3S-65M1
W22IB3S-65A3
W24IB3S-65A2

Quick Start Guide

Please read these instructions carefully before using this product, and save this guide for future use.

Contents

FCC Statement

This device complies with part 15 FCC rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "B" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.

European Union

Electromagnetic Compatibility Directive (2014/30/EU)
- EN55024: 2010/ A1: 2015
    - IEC61000-4-2: 2009
    - IEC61000-4-3: 2006+A1: 2007+A2: 2010
    - IEC61000-4-4: 2012
    - IEC61000-4-5: 2014
    - IEC61000-4-6: 2014
    - IEC61000-4-8: 2010
    - IEC61000-4-11: 2004
- EN55032: 2012/AC:2013
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)
- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

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Warranty

Winmate Inc. warranty guarantees that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at his/her option, repair or replace the defective product at no charge to the customer, provide it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service. If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W14Axxxxxxxx means October of year 2014.

Customer Service

We provide a service guide for any problem by the following steps: First, visit the website of our distributor to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance.

You may need the following information ready before you call:

- Product serial number
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

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 connections 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 verifier votre mise à la terre afin d'éliminer toute charge statique avant de toucher la carte CPU. Les équipements électroniques moderns 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 charge, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

Introduction

Congratulations on purchasing Winmate® IP65 Stainless Resistive Panel PC. Winmate® 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.

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

Features

Winmate® 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:
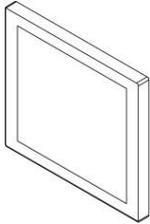
Panel PC	Quick Start Guide (Hardcopy)	Driver CD & User Manual
Varies by product specifications	9152111I101R	IB32: 9171111I101Y
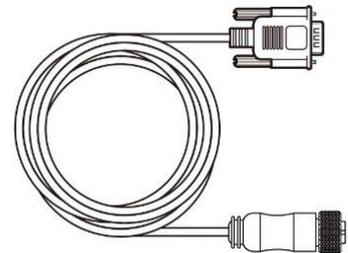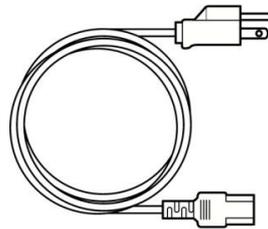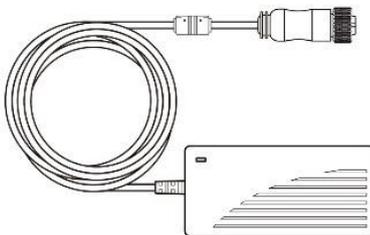
| AC Adapter	Power Cable	Serial Cable
50W 90PO12050006 84W 90PO12084000	Varies by country	94G0123090Q0
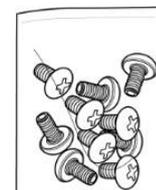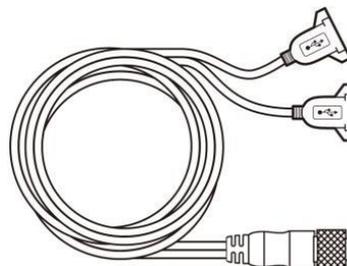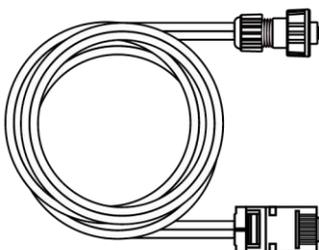
Ethernet Cable	USB Cable	VESA Screws
94I0080080KF	9480128080K0	913511101101

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
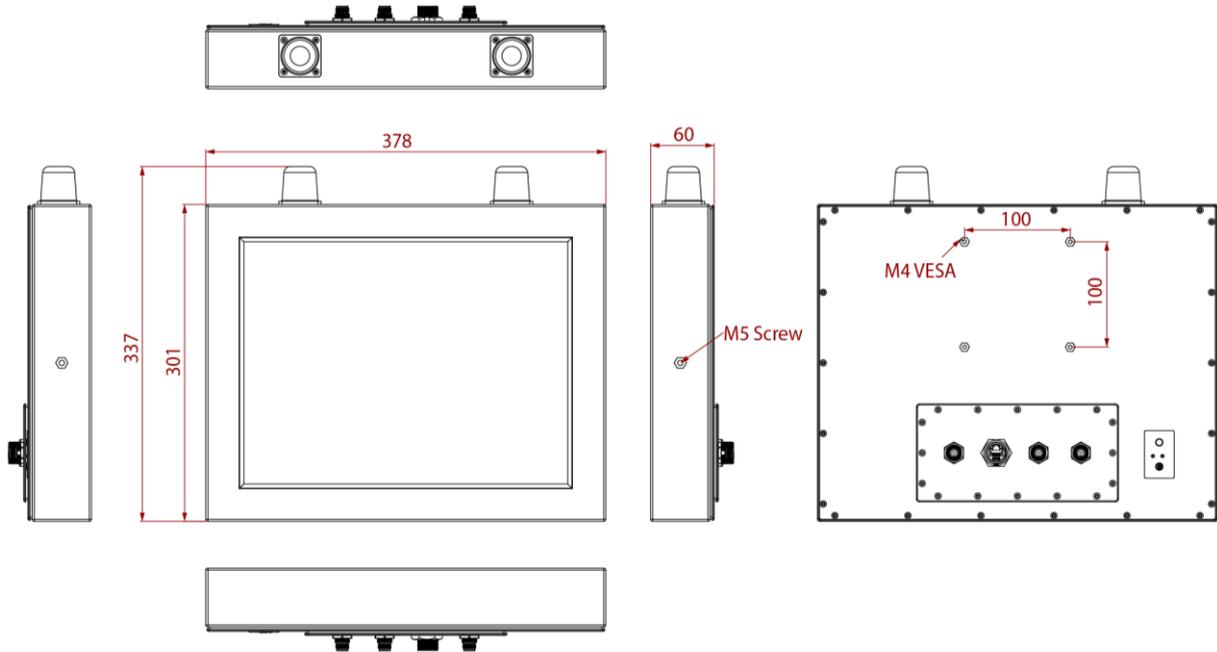
Dimensions 17"

Unit: mm

Dimensions 19"

Unit: mm

468
395
431
63
M5 Screw
M4 VESA   100
100

## **Dimensions 21.5"**

Unit: mm

468
395
431
63
M5 Screw
M4 VESA   100
100
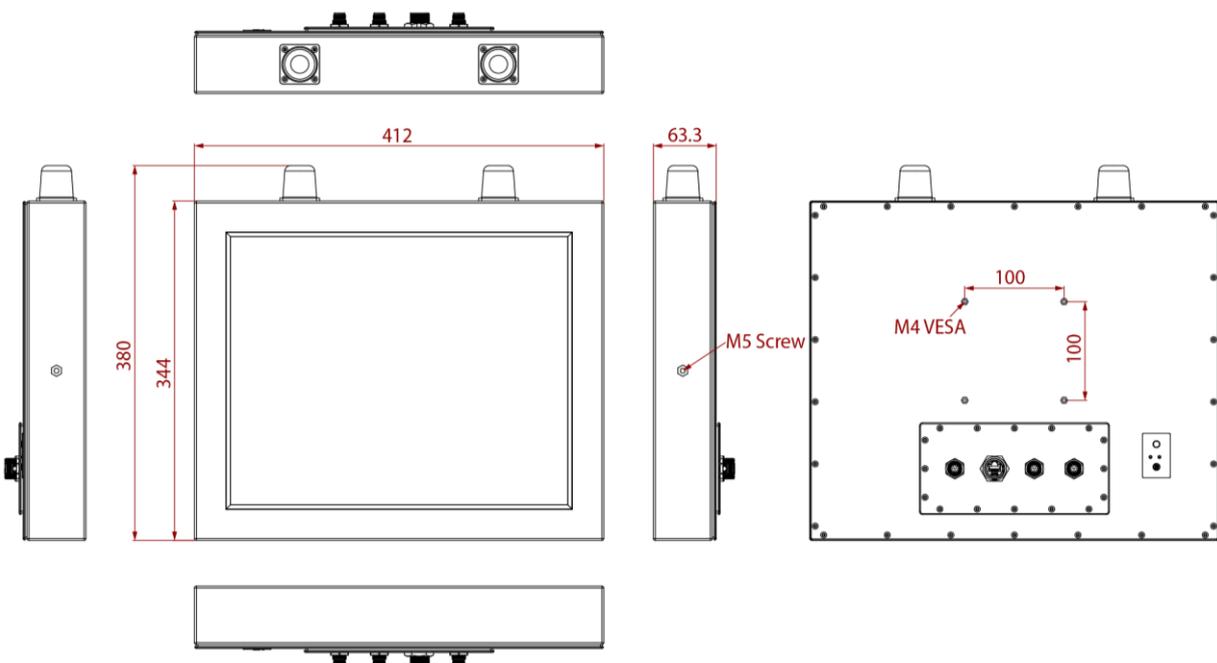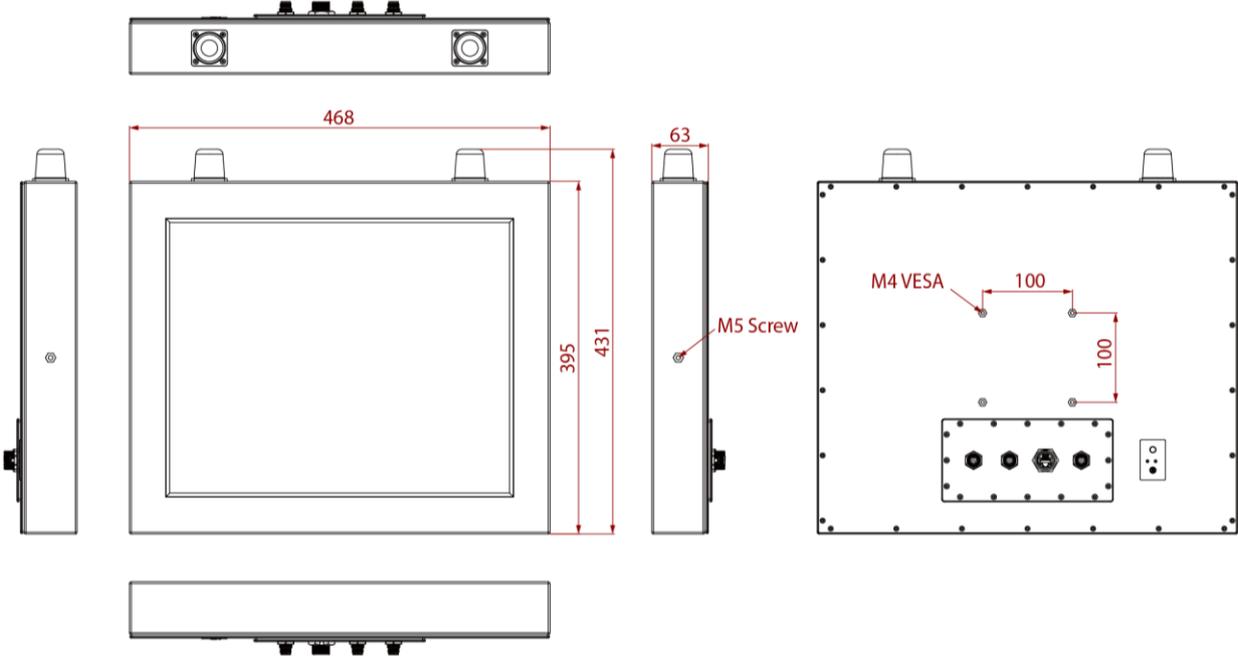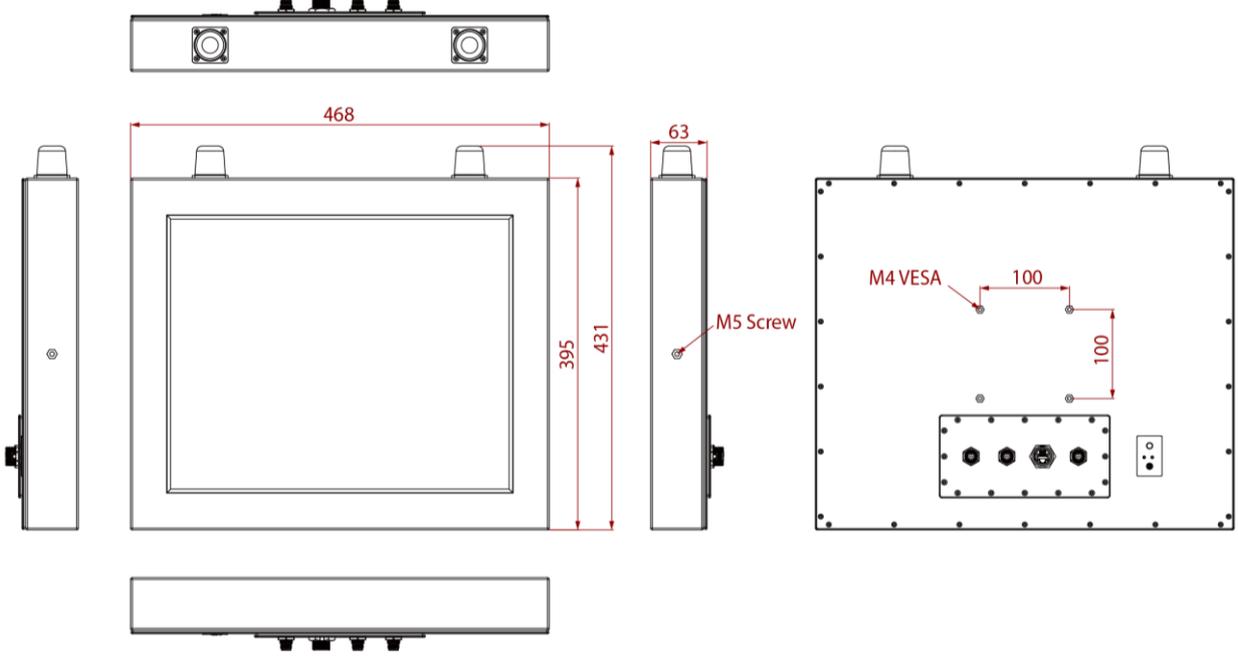
Dimensions 23.8"

Unit: mm
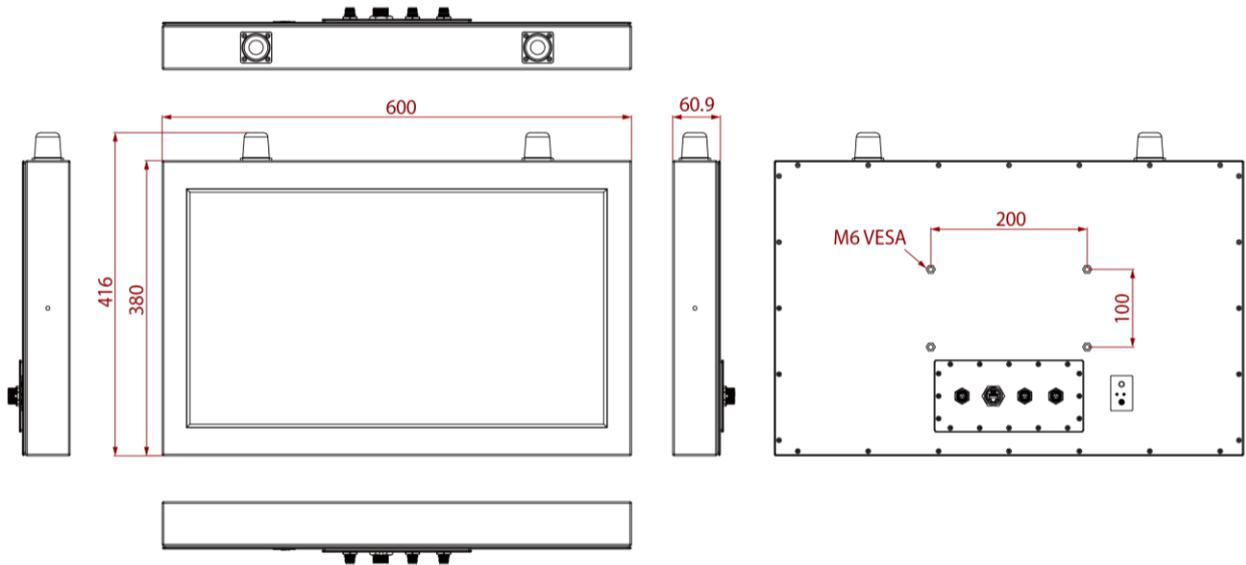
Physical Buttons and LED Indicators

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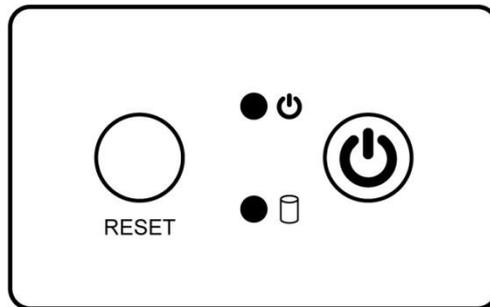

Physical Buttons

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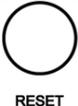
LED Indicators

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.


2 x USB2.0 LAN COM2 Power
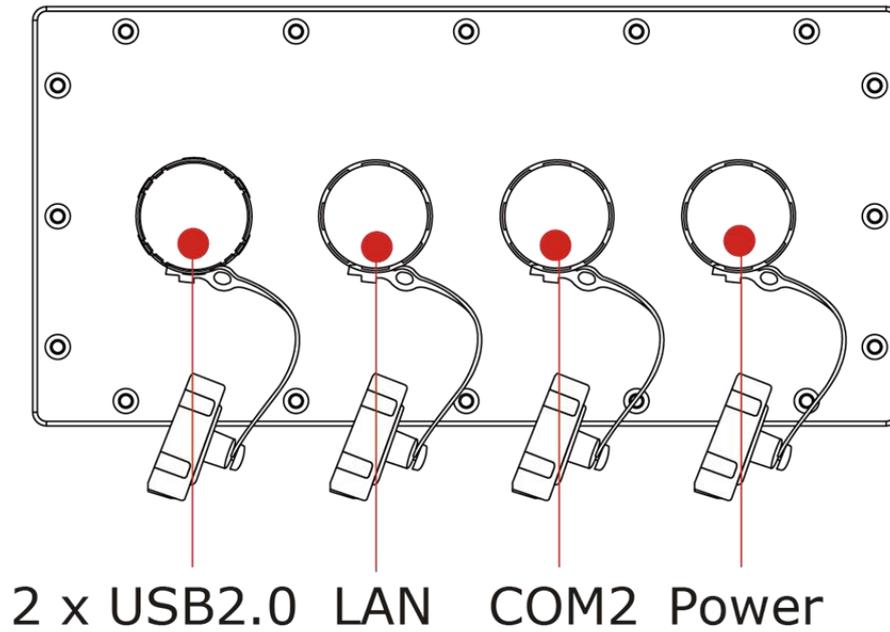
Getting Started

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.
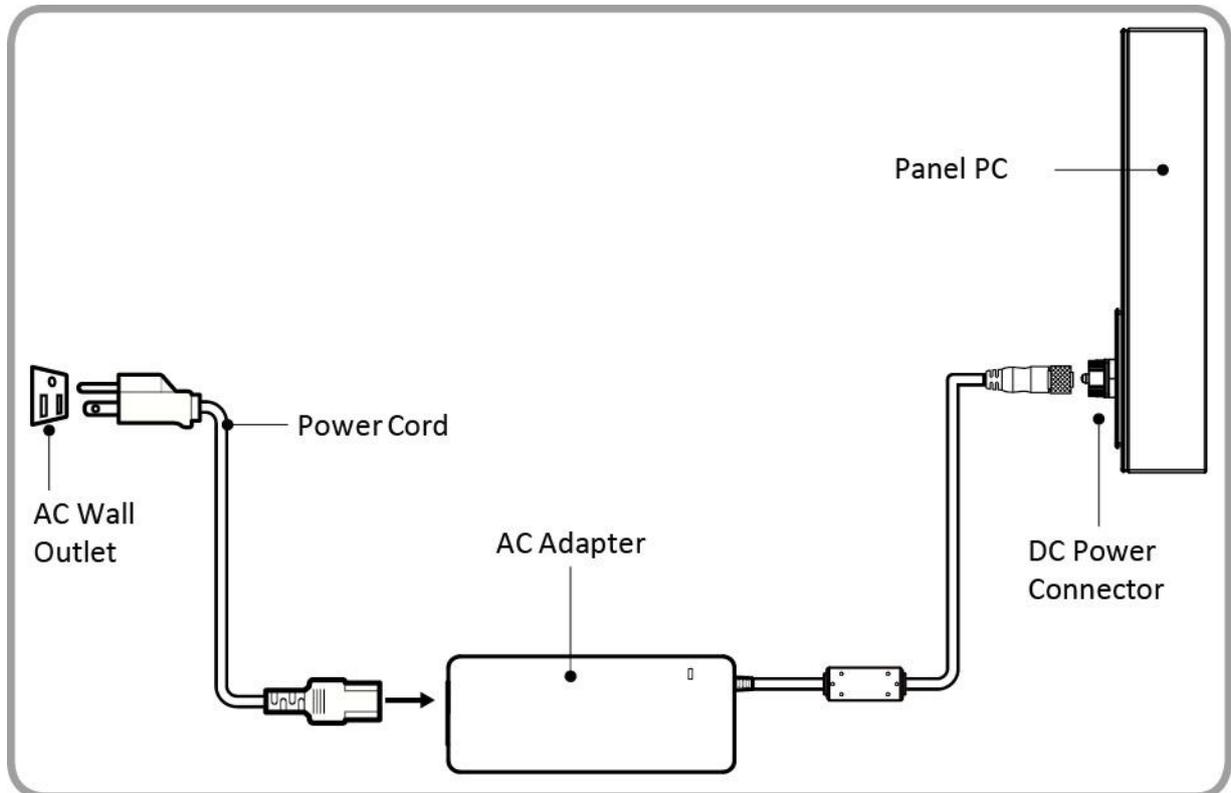
AC Adapter specifications vary by panel size.

| Size	15"	17"	19"	21.5"	23.8"
AC Adapter	12V/ 50W	12V/ 80W	12V/ 80W	12V/ 80W	12V/ 80W
Power Consumption*	38W (typ.)	43W (typ.)	45W (typ.)	56W (typ.)	56W (typ.)

With maximum backlight and high CPU load.

How to Enable Watchdog

To enable Watchdog, you need to download Winmate Watchdog utility. Find more information on Watchdog in "Watchdog Guide" that you can download from Winmate Download Center or File Share. Refer to the User Manual for more details.

To enable watchdog in Watchdog AP follow the instructions below:

1. On the right bottom side of the desktop screen, click [icon] **triangle button** to show hidden icons.

2. Click [icon] icon to open Watchdog utility.
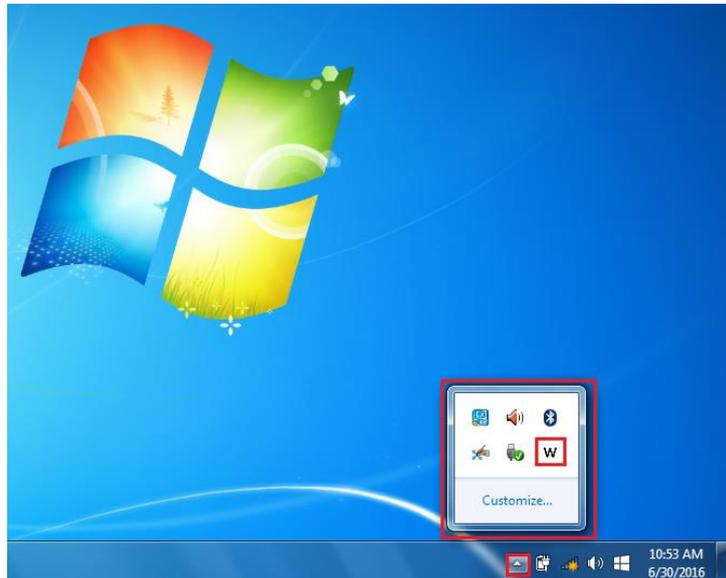
3. In Watchdog utility window set countdown time and periodically feed time, or disable watchdog.
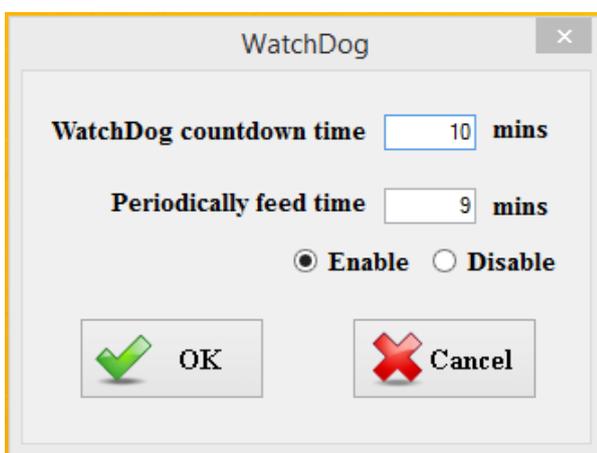
Example:

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. *Default: 10 min*
Periodically Feed Time	To set a cycle time to automatically reset watchdog timer. *Default: 9 min*
Enable / Disable	Enable or disable watchdog. *Default: Enable*

Turning Off Your Device

To shut down your device, do the following:

Tap **Start** ( ) > **Shut down**.
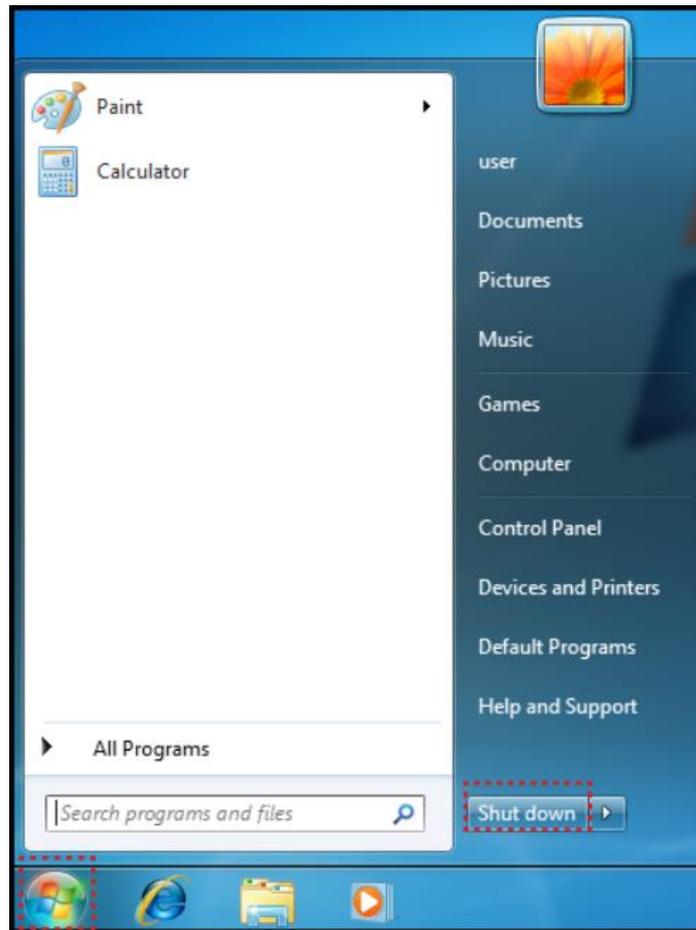
Wait for your Panel PC to completely turn off before disconnecting the power cord (if necessary).

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.

- 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.
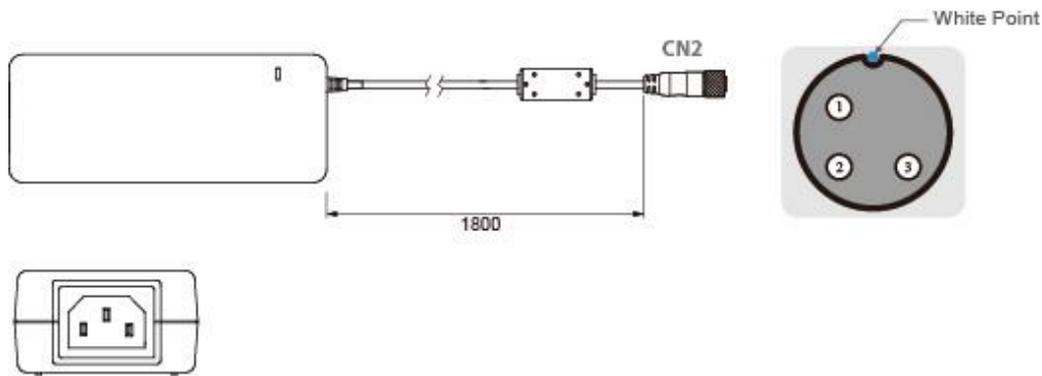
| Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	VIN -	NO ASSIGN	⟷	CN2-1	VCC+	Flow Adapter
CN1-2	VIN -	NO ASSIGN	⟷	CN2-2	GND	Flow Adapter
CN1-3	VIN -	NO ASSIGN	⟷	CN2-3	VCC -	Flow Adapter

Serial Cable

The IP65 Stainless Resistive Panel PC has IP65 serial port connector. Use serial cable to connect serial interfaces.
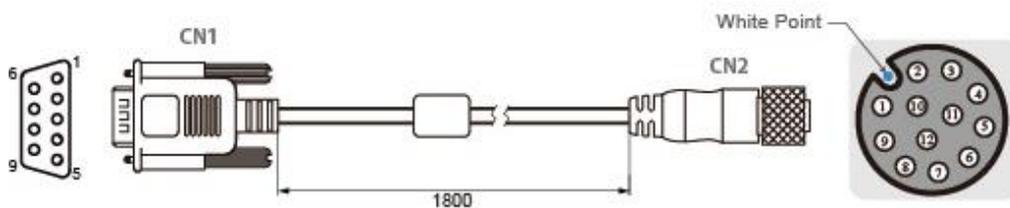
| Pin No.	Symbols	Color		Pin No.	Symbols	Color
CN1-1	DCD-CON2	Green	⟷	CN2-1	DCD-CON2	Green
CN1-6	DSR-CON2	Brown	⟷	CN2-2	DSR-CON2	Brown
CN1-2	RXD-CON2	Red	⟷	CN2-3	RXD-CON2	Red
CN1-7	RTS-CON2	Orange	⟷	CN2-4	RTS-CON2	Orange
CN1-3	TXD-CON2	Blue	⟷	CN2-5	TXD-CON2	Blue
CN1-8	CTS-CON2	White	⟷	CN2-6	CTS-CON2	White
CN1-4	DTR-CON2	Purple	⟷	CN2-7	DTR-CON2	Purple
CN1-9	RI-CON2	Yellow	⟷	CN2-8	RI-CON2	Yellow
CN1-5	GND-CON2	Black	⟷	CN2-9	GND-CON2	Black

Ethernet Cable

The IP65 Stainless Resistive Panel PC has IP65 Ethernet connector. Use Ethernet cable to connect the Panel PC to the Internet.
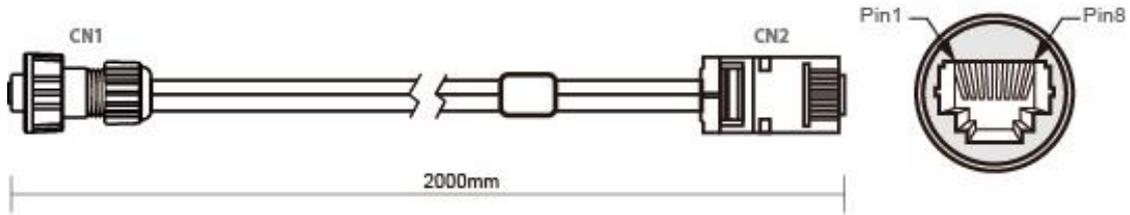
Plug	Wire Color	Conn.	
1	Orange / White	1	Twist
2	Orange	2	
3	Green / White	3	Twist (Twist)
4	Blue	4	
5	Blue / White	5	
6	Green	6	
7	Brown / White	7	Twist
8	Brown	8	

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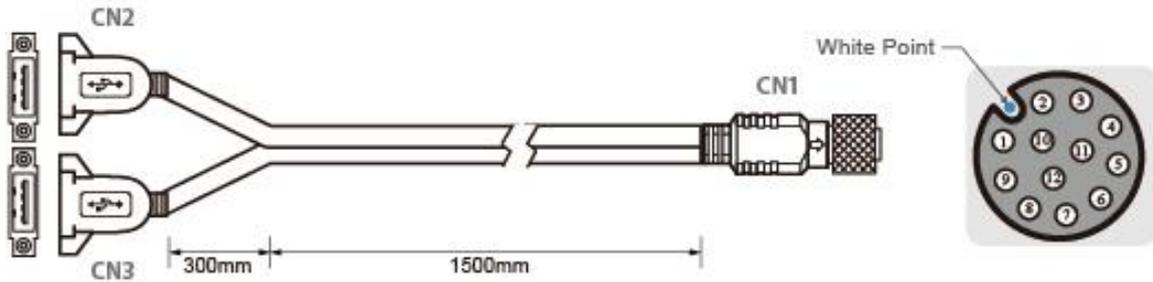
Pin No.	Symbols	Color		Pin No.	Symbols	Color	
CN1-2	VCC	RED	←→	CN2-1	VCC	RED	
CN1-3	D-	WHITE	←→	CN2-2	D-	WHITE	twisted pair
CN1-4	D+	GREEN	←→	CN2-3	D+	GREEN	
CN1-5	GND	BLACK	←→	CN2-4	GND	BLACK	
CN1-6	VCC	RED	←→	CN3-1	VCC	RED	
CN1-7	D-	WHITE	←→	CN3-2	D-	WHITE	twisted pair
CN1-8	D+	GREEN	←→	CN3-3	D+	GREEN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

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 by Winmate).

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
23.8"	100 x 200 mm	VESA M6x8 mm

Mounting Steps:

1. Screw VESA bracket to the fixture (ex. swing arm) with four VESA screws.
2. Place the device on VESA bracket.
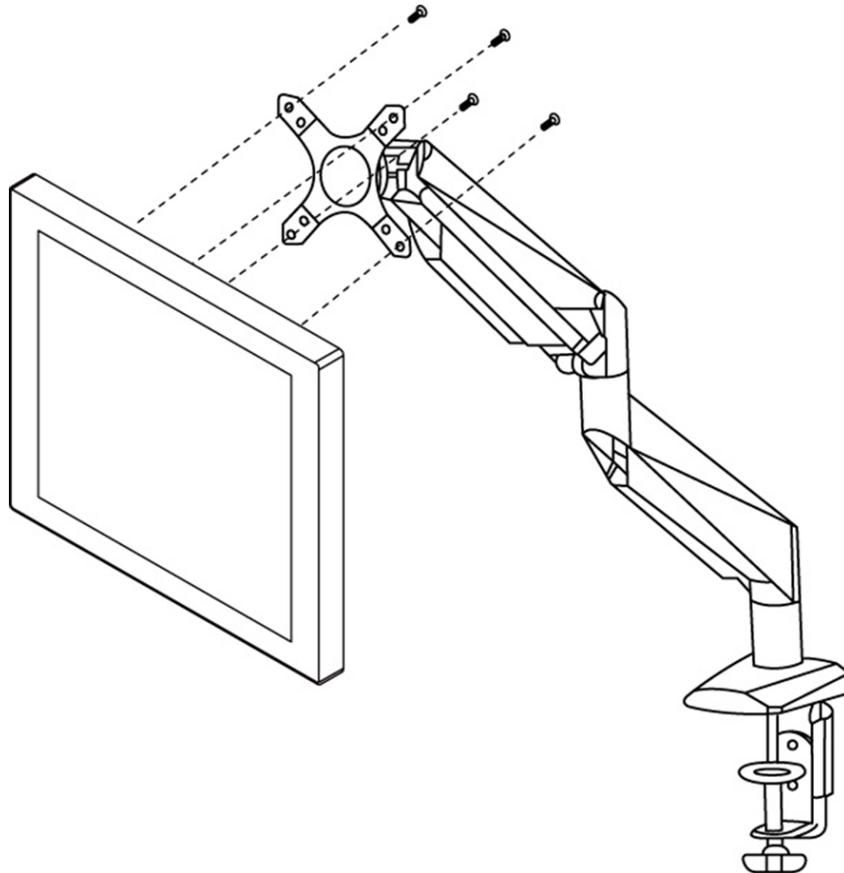
<u>Yoke Mounting</u>

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

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.
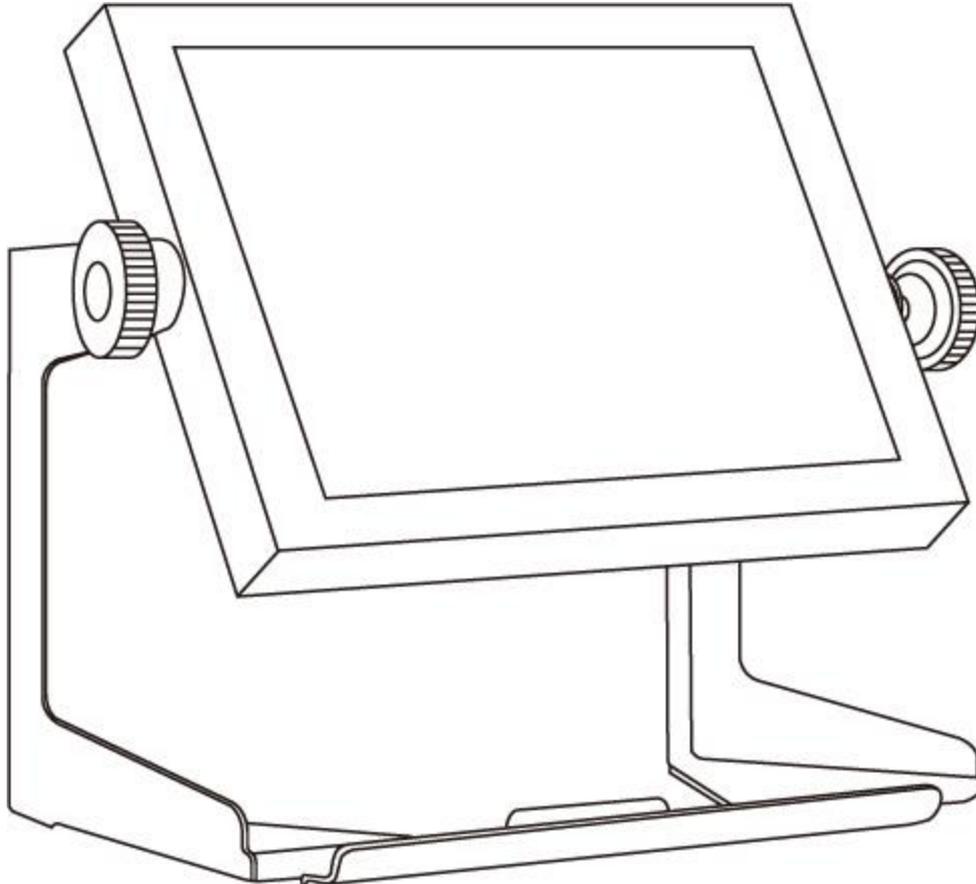
Specifications

Hardware Specifications

	Model Name				
	R15IB3S-65C3	R17IB3S-65M1	R19IB3S-65M1	W22IB3S-65A3	W24IB3S-65A2
Display					
Size	15"	17"	19"	21.5"	23.8"
Resolution	1024 x 768	1280 x 1024	1280 x 1024	1920 x 1080	1920 x 1080
Brightness	300 cd/m^2 (typ.)	350 cd/m^2 (typ.)	250 cd/m^2 (typ.)	250 cd/m^2 (typ.)	250 cd/m^2 (typ.)
Contrast Ratio	2000 : 1 (typ.)	1000 : 1 (typ.)	1000 : 1 (typ.)	3000 : 1 (typ.)	3000 : 1 (typ.)
Viewing Angle	-88~88(H); -88~88(V)	-85~85(H); -80~80(V)	-85~85(H); -80~80(V)	-89~89(H); -89~89(V)	-89~89(H); -89~89(V)
Max Colors	16.2M	16.7M	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	Realtek HD Audio Codec				
Ethernet	Intel® I210 GbE LAN				
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	12V DC				
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	Fanless				

	Model Name				
	R15IB3S-65C3	R17IB3S-65M1	R19IB3S-65M1	W22IB3S-65A3	W24IB3S-65A2
System					
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.)	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.

Appendix B: Winmate Software Development Kit

Winmate provides the following SDK and Utilities for the IP65 Stainless Resistive Panel PC.

Item	File Type	Description
1	SDK	Watchdog SDK
2	Utility	Watchdog Utility

To find the Drivers and SDK, please refer to the Driver CD that comes in the package or contact us. Also, you can download drivers from Winmate Download Center or Winmate File Share.

Winmate Download Center

Go to http://www.winmate.com.tw/ **>** Support **>** Download Center **>** Full IP65 Stainless PPC > IP65 Resistive PPC – Bay Trail

Or follow the link: http://www.winmate.com/DownCenter/DownLoadCenter.asp?DownType=4303

Winmate File Share

Go to http://www.winmate.com.tw/ **>** Support **>** Partner Portal **>** Public Documents **>** Panel PC > Stainless Series > IP65 Stainless Resistive PPC > IB32 (Bay Trail)

Or follow the link: https://winmate.box.com/v/IP65-Stainless-Resistive-IB32

Note