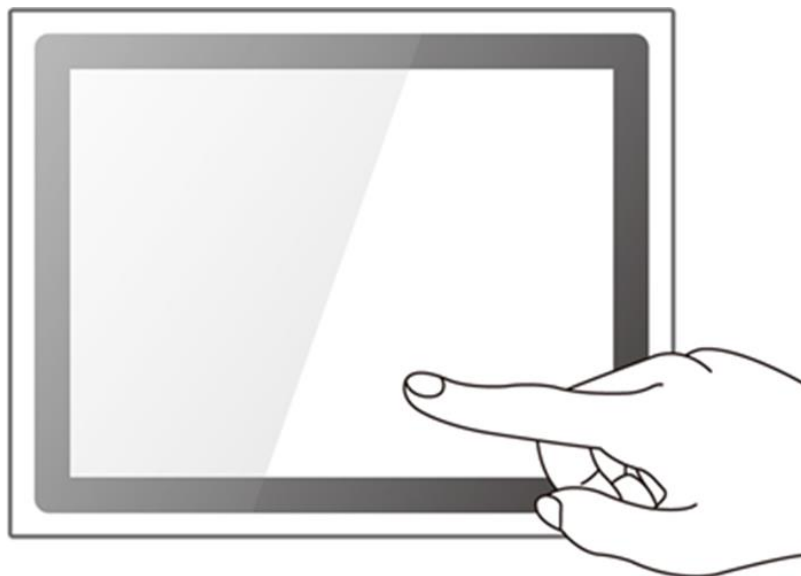




10.4~21.5" IP69K Stainless P-Cap Panel PC

Intel® Celeron® Bay Trail-M N2930, 1.83 GHz

Model No. **R10IB3S-SPT269**
R15IB3S-SPC369
R19IB3S-SPM169
W22IB3S-SPA369



Quick Start Guide

For more information on this and other Winmate products, please visit our website at:
www.winmate.com

Version 1.0

Document Part Number: 915211101030

Please read this instructions before operating the device and retain them for future reference.

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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 his 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.

Copyright Notice

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Trademark Acknowledgement

Brand and product names are trademarks or registered trademarks of their respective owners.

Disclaimer

Winmate Inc. reserve the right to make changes, without notice, to any product, including circuits and/or software described or contained in this manual in order to improve design and/or performance. We assume no responsibility or liability for the use of the described product(s) conveys no license or title under any patent, copyright, or masks work rights to these products, and make no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. We make no representation or guarantee that such application will be suitable for the specified use without further testing or modification.

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 1W17Axxxxxxx means October of year 2017.

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 connexions lorsque l'alimentation est présente. Des composants électroniques sensibles peuvent être endommagés 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 charge, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.

**NOTE:**

A note is used to emphasize helpful information

**IMPORTANT:**

An important note indicates information that is important for you to know.

**CAUTION/ ATTENTION**

A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.

Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.

**WARNING!/ AVERTISSEMENT!**

An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.

Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

1 INTRODUCTION

Congratulations on purchasing Winmate® IP69K Stainless P-Cap Panel PC.

Winmate flat stainless steel P-Cap panel PCs and display are designed for applications with high hygienic requirements. IP69K series is completely waterproof with IP69K level of protection allowing for easy cleaning and sterilization.

The IP69K stainless series work well in food, beverage industry, including food processing operations and packaging, chemical manufacturing and other industrial applications.

1.1 Features

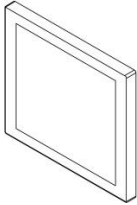


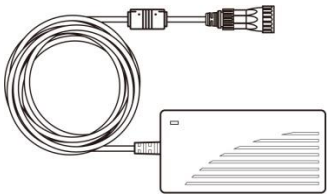
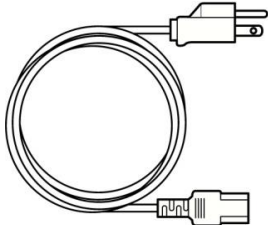
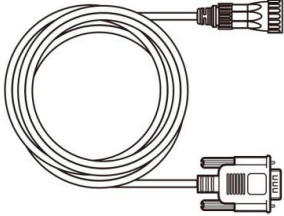
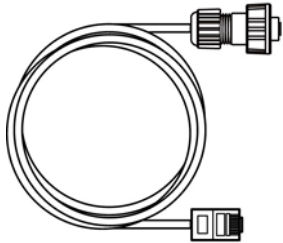
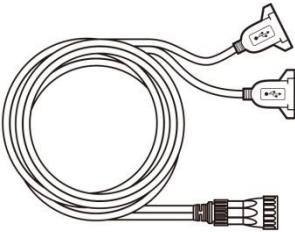
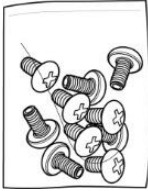
The IP69K Stainless P-Cap Panel PC features:

- Intel® Celeron® Bay Trail-M N2930, 1.83 GHz
- SUS304 stainless steel for food and chemical industries
- Full IP69K waterproof enclosure, good corrosion resistance
- A true flat, easy-to-clean front surface with edge-to-edge design
- Flat multi-touch panel pc with superior readability and P-CAP technology
- Various mounting solutions, Yoke mount and VESA mount
- Plenty of I/O s including USB 2.0, RS-232 serial port and RJ45-10/100/1000 LAN ports
- Waterproof ports with adapter cables for external connectivity
- Supports VESA mount
- Supports Rain/ Glove mode (Optional)

1.2 Package Content

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.

Factory shipment list:

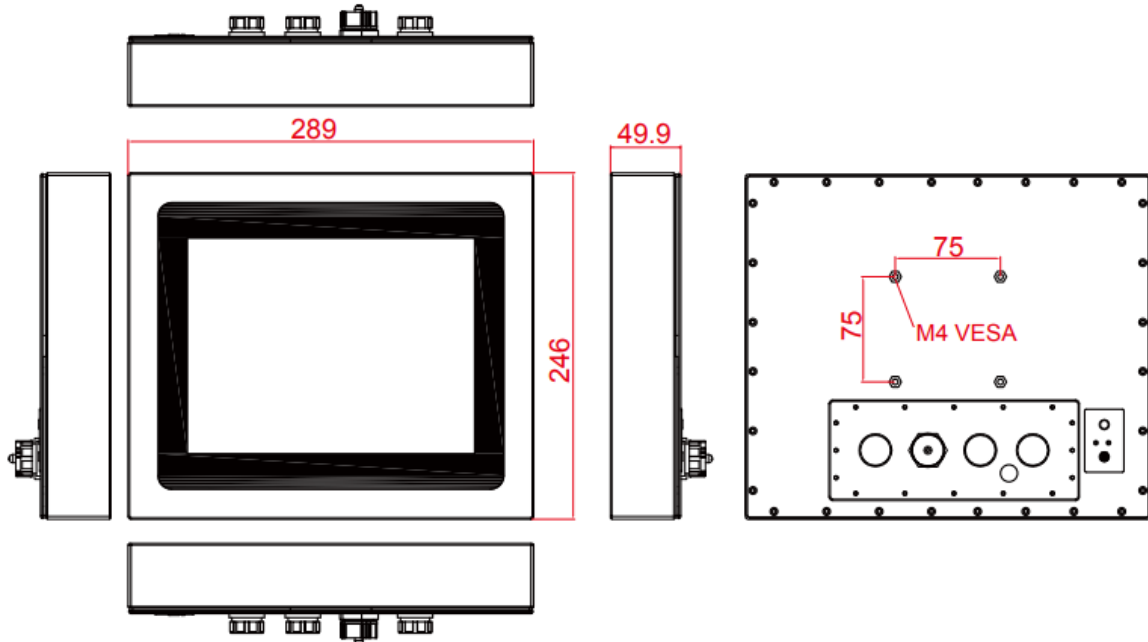
| | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| Panel PC | Quick Start Guide (Hardcopy) | Driver CD & User Manual |
| Varies by product specifications | 915211101030 | 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 |

1.3 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.

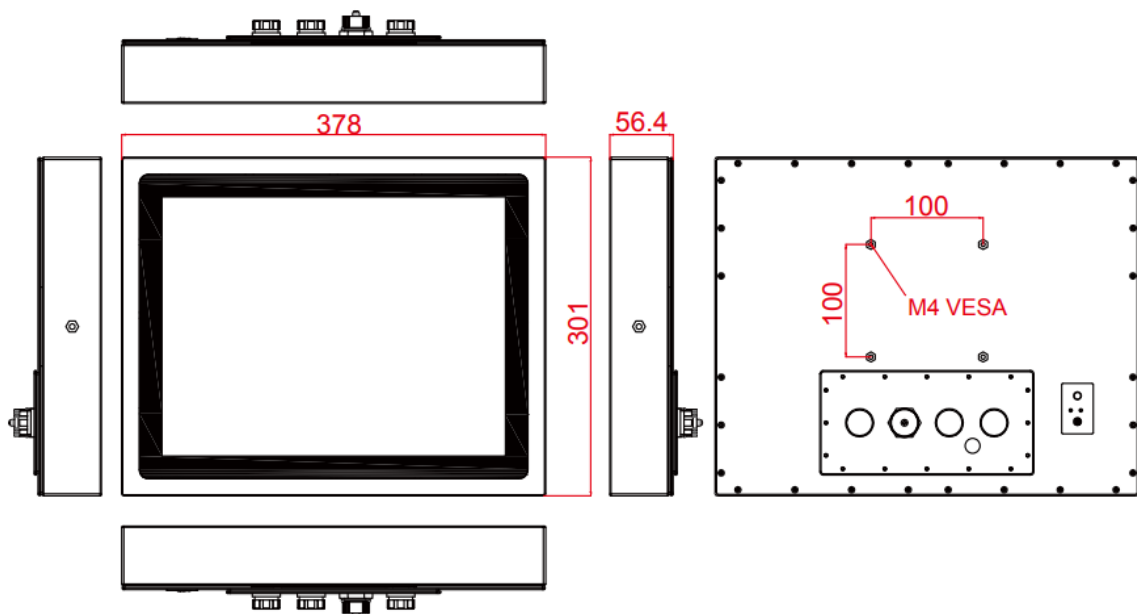
1.3.1 Dimensions 10.4"

Unit: mm
Dimensions : 289 x 246 x 49.9



1.3.2 Dimensions 15"

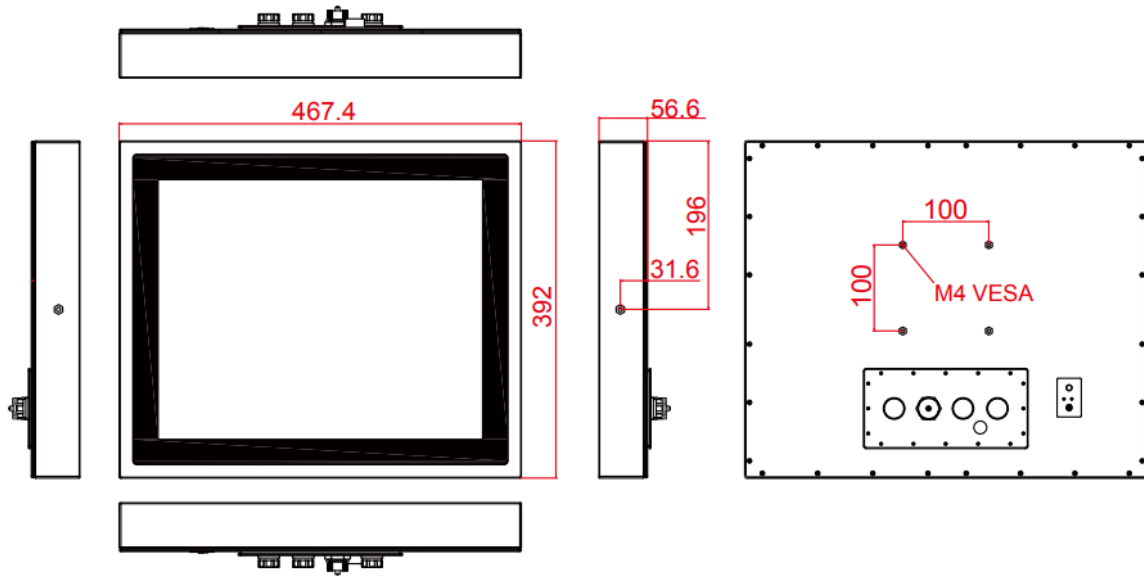
Unit: mm
Dimensions : 378 x 301 x 56.4



1.3.3 Dimensions 19"

Unit: mm

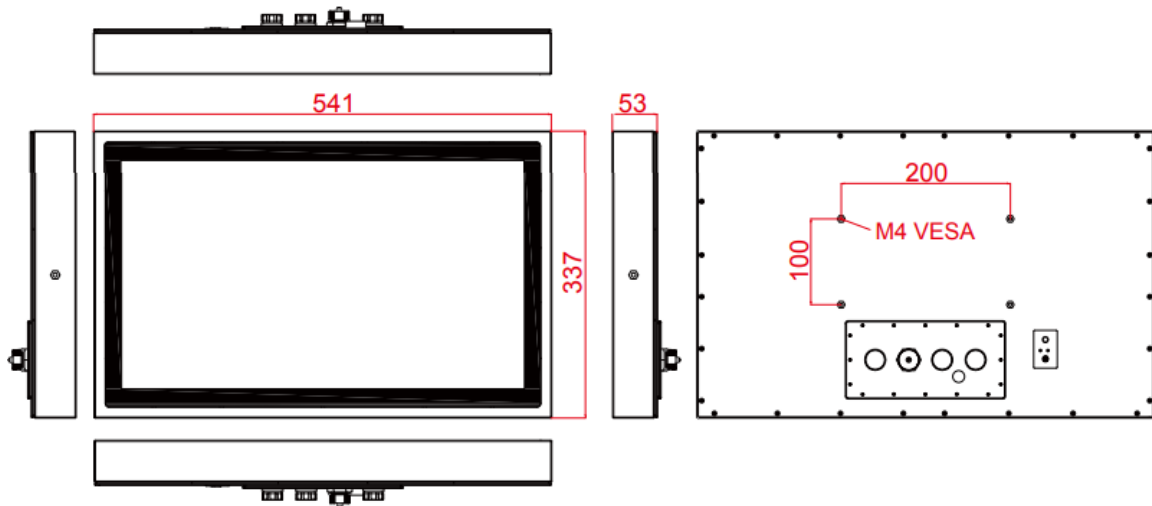
Dimensions : 467.4 x 392 x 56.6



1.3.4 Dimensions 21.5"

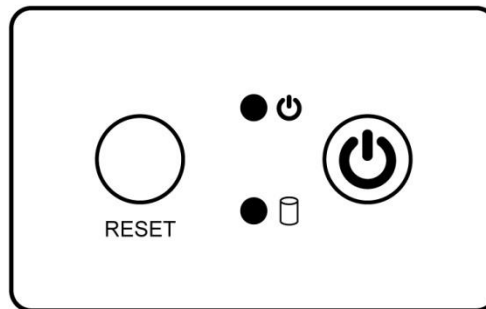
Unit: mm

Dimensions : 541 x 337 x 53

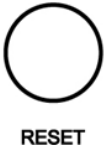



1.4 Physical Buttons and LED Indicators



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 |

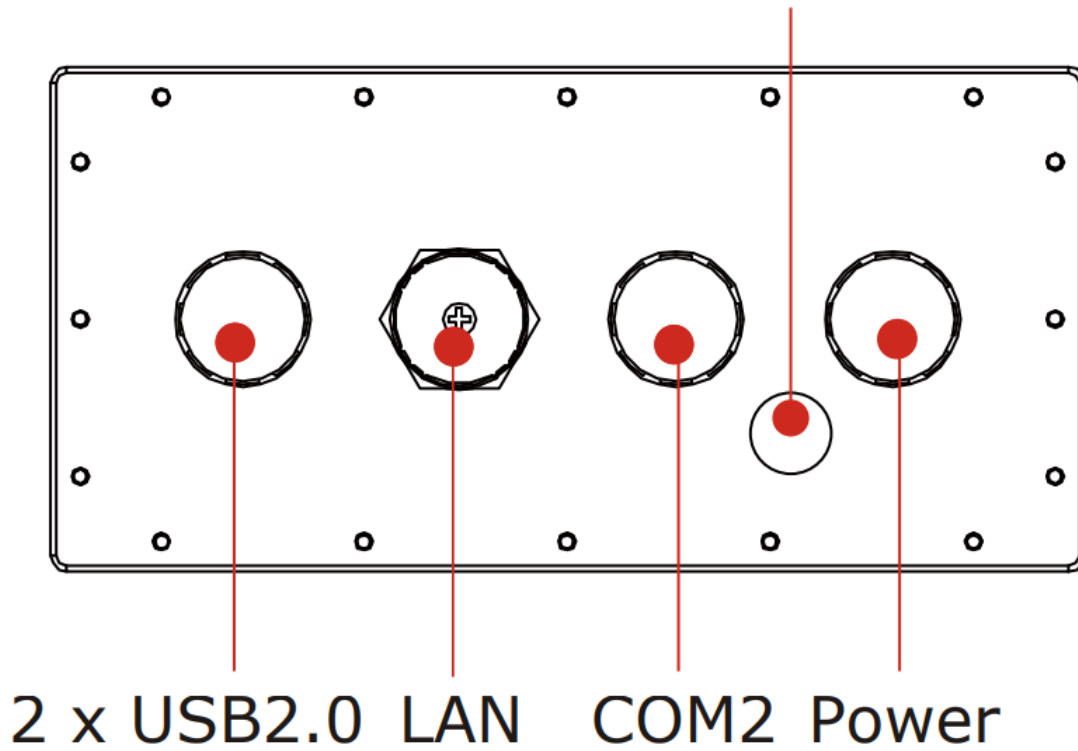
LED Indicators

| 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 |

1.5 Connectors

IP69K Stainless P-Cap Panel PC has M25 type connectors with protection cap and air venting valve.

Air Venting Valve

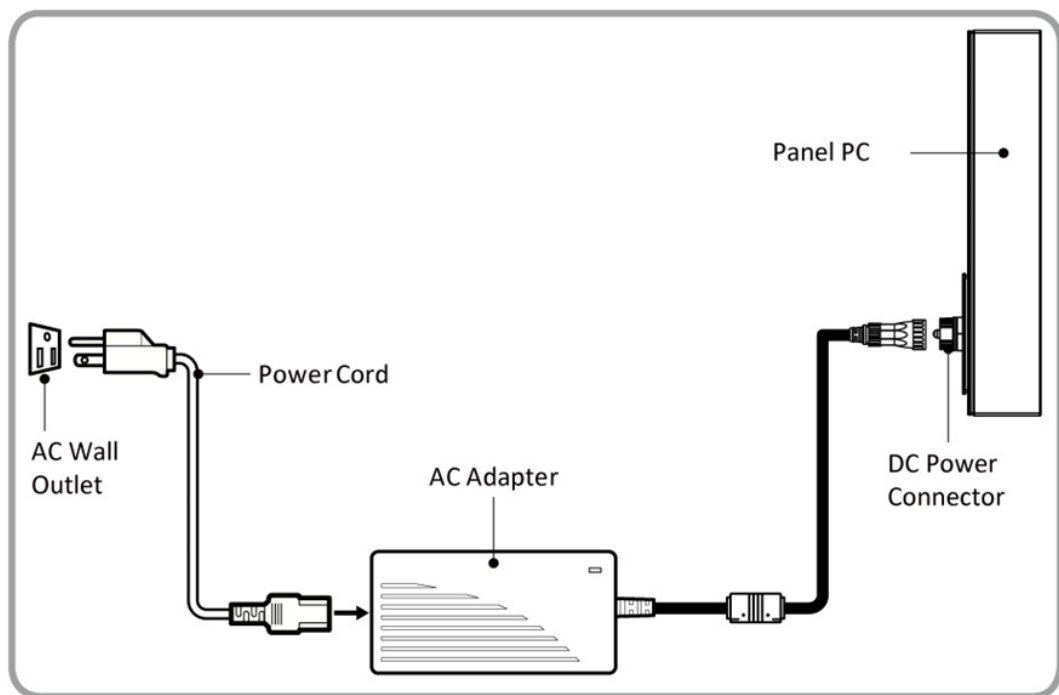


2 GETTING STARTED

2.1 Turning On

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 | 10.4" | 15" | 19" | 21.5" |
|--------------------|------------|------------|------------|------------|
| AC Adapter | 12V/ 50W | 12V/ 80W | 12V/ 80W | 12V/ 80W |
| Power Consumption* | 33W (typ.) | 38W (typ.) | 45W (typ.) | 56W (typ.) |

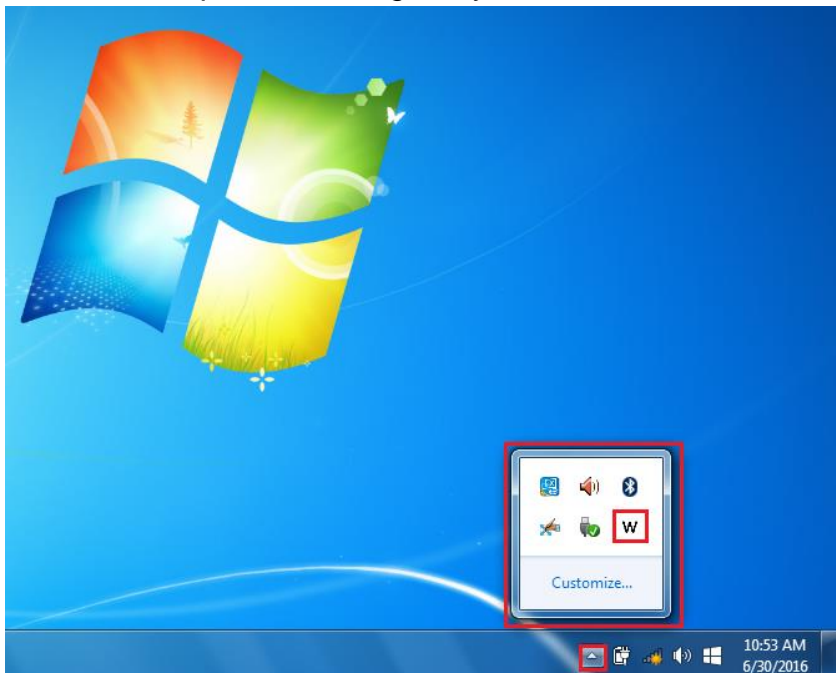
*With maximum backlight and high CPU load.

2.2 How to Enable Watchdog

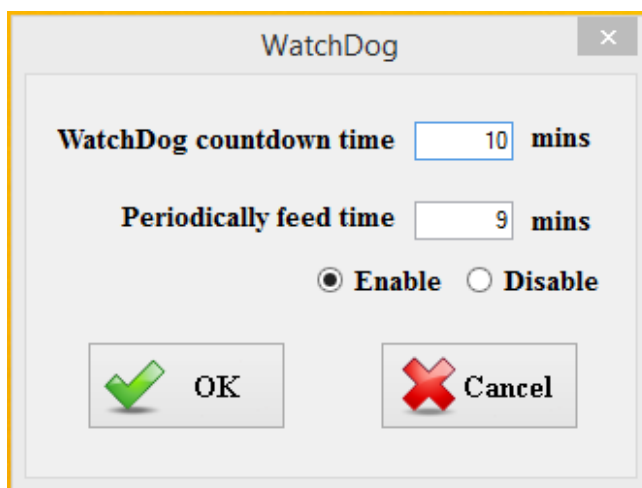
To enable Watchdog, you need to download Winmate Watchdog utility. Find more information on Watchdog in “Watchdog Guide” that you can download from Winmate Download Center or File Share. Refer to the User Manual for more details.

To enable watchdog in Watchdog AP follow the instructions below:

1. On the right bottom side of the desktop screen, click  **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.

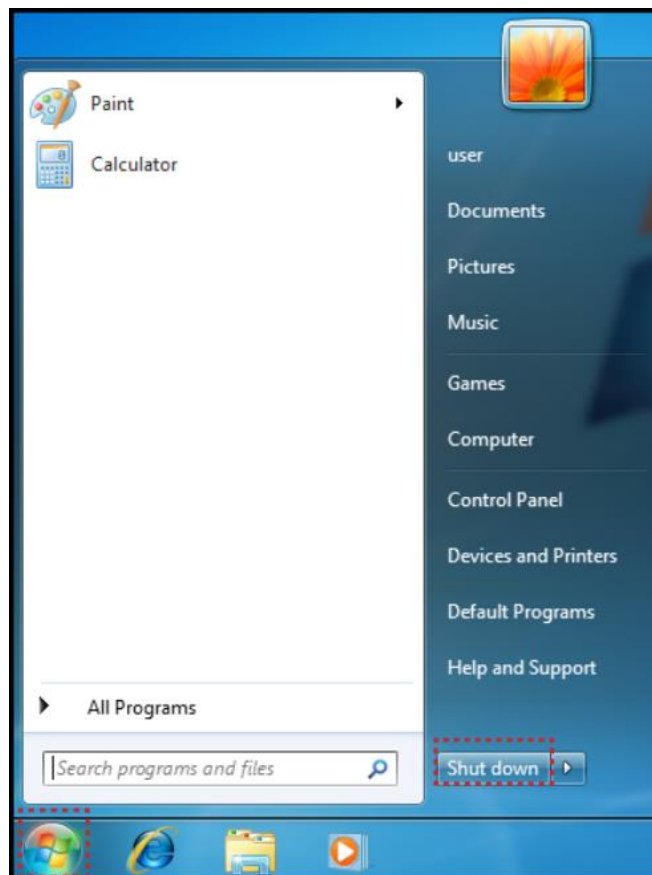
Every 9 min watchdog timer will be reset to 10 min.

| 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> |

2.3 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).

3 INSTALLATION

3.1 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.

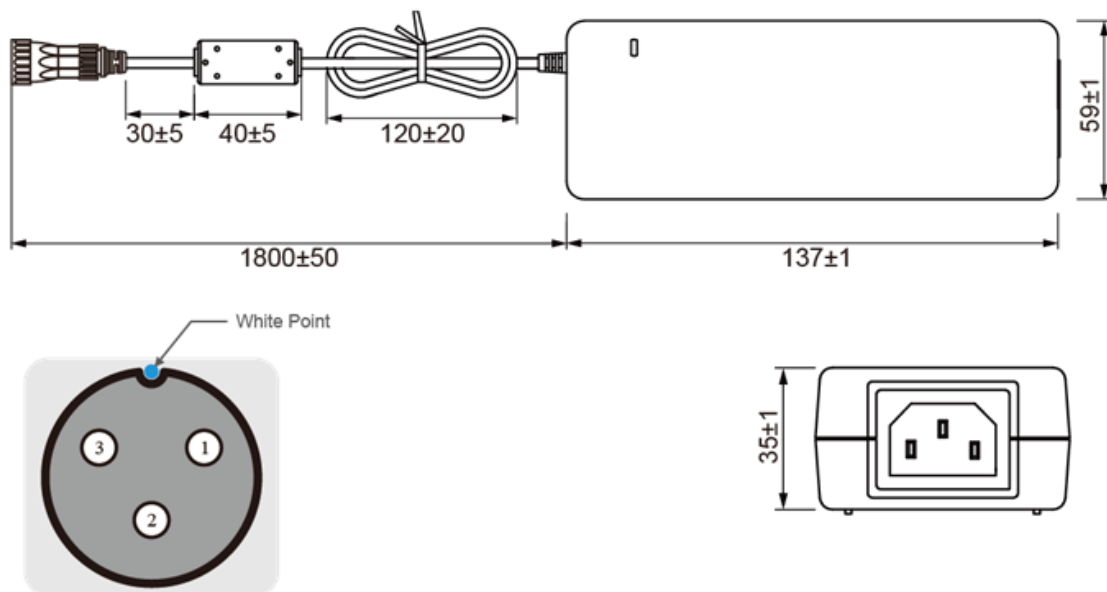
3.2 Connector Pin Assignments

This Panel PC is equipped with four M25 type connectors which are waterproof. Use only the cables that are included in the package. The pin assignments of the cables are as follows.

Power Cable

The IP69K Stainless P-Cap Panel PC has M25 type connectors. Use power cable to connect Panel PC to the source of power.

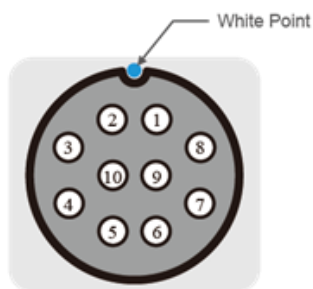
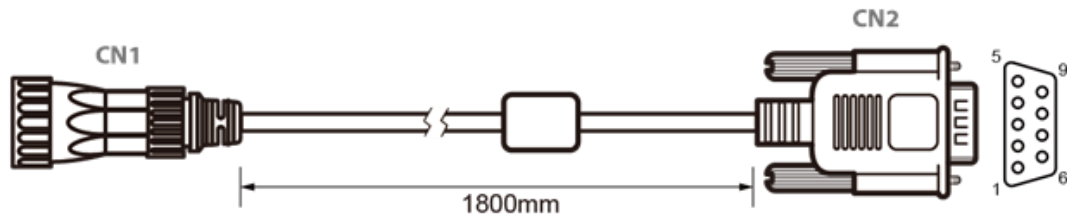
IP69K Stainless P-Cap Panel PC support 12V DC power input.



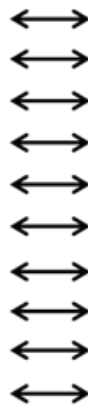
| Pin No. | Symbols | Color |
|---------|---------|-------|
| CN1-3 | GND | Black |
| CN1-2 | shield | |
| CN1-1 | VCC | White |

3.3 Serial Cable

The IP69K Stainless P-Cap Panel PC has M25 type serial port connector. Use serial cable to connect serial interfaces.



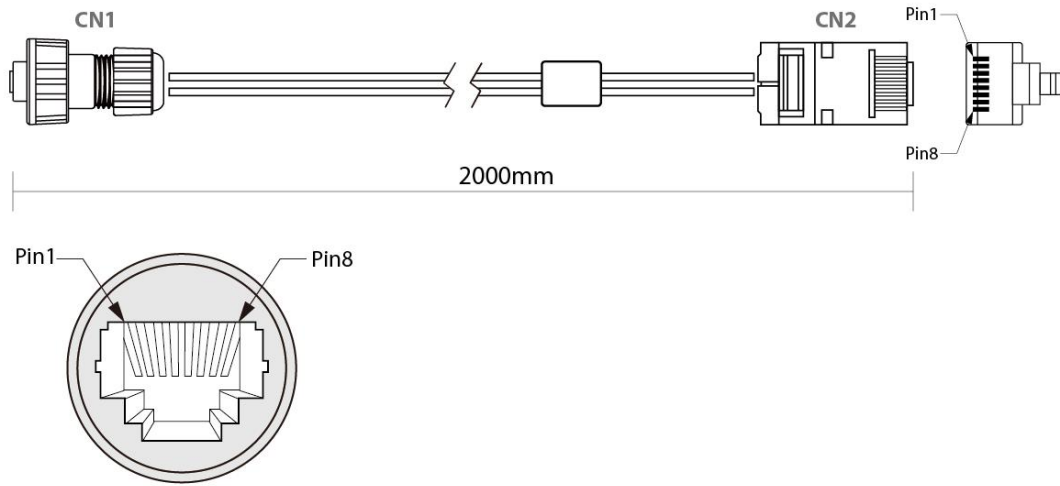
| Pin No. | Symbols | Color |
|---------|----------|--------|
| CN1-1 | DCD-CON2 | Green |
| CN1-2 | DSR-CON2 | Brown |
| CN1-3 | RXD-CON2 | Red |
| CN1-4 | RTS-CON2 | Orange |
| CN1-5 | TXD-CON2 | Blue |
| CN1-6 | CTS-CON2 | White |
| CN1-7 | DTR-CON2 | Purple |
| CN1-8 | RI-CON2 | Yellow |
| CN1-9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



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

3.4 Ethernet Cable

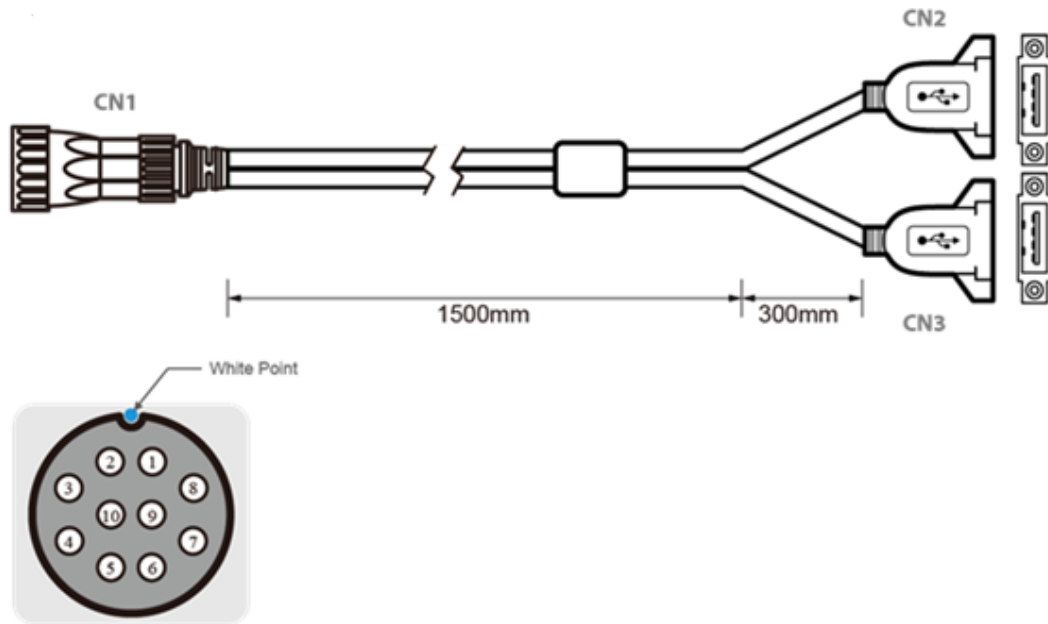
The IP69K Stainless P-Cap Panel PC has M25 type Ethernet connector. Use Ethernet cable to connect the Panel PC to the Internet.



| 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 | |

3.5 USB 2.0 Cable

The IP69K Stainless P-Cap Panel PC has M25 type USB 2.0 connector. Use USB 2.0 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

3.6 Mounting

The IP69K Flat Stainless P-CAP Panel PC devices come with different mounting options suitable for most of the industrial and commercial applications.

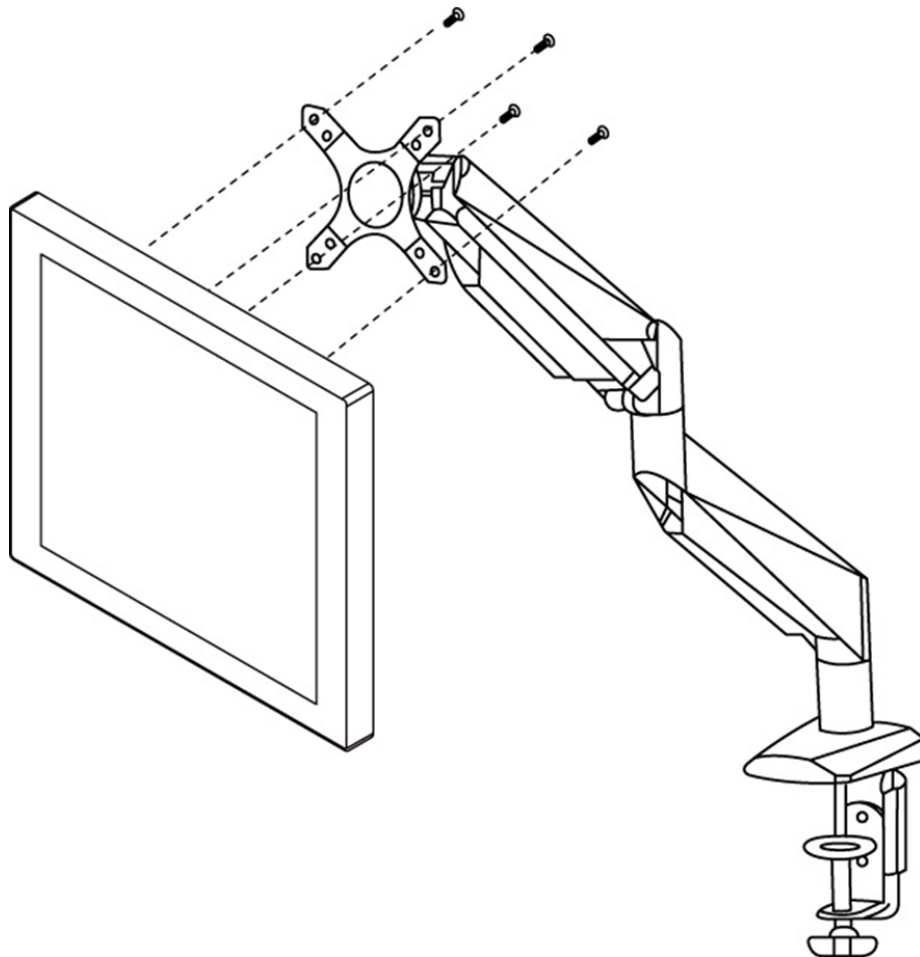
3.6.1 VESA Mounting

The 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 |
|-----------------|-----------------------|---------------------|
| 10.4", 15", 19" | 100 x 100 mm | VESA M4x5 mm |
| 21.5" | 100 x 200 mm | VESA M4x5 mm |

Mounting Instruction:

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

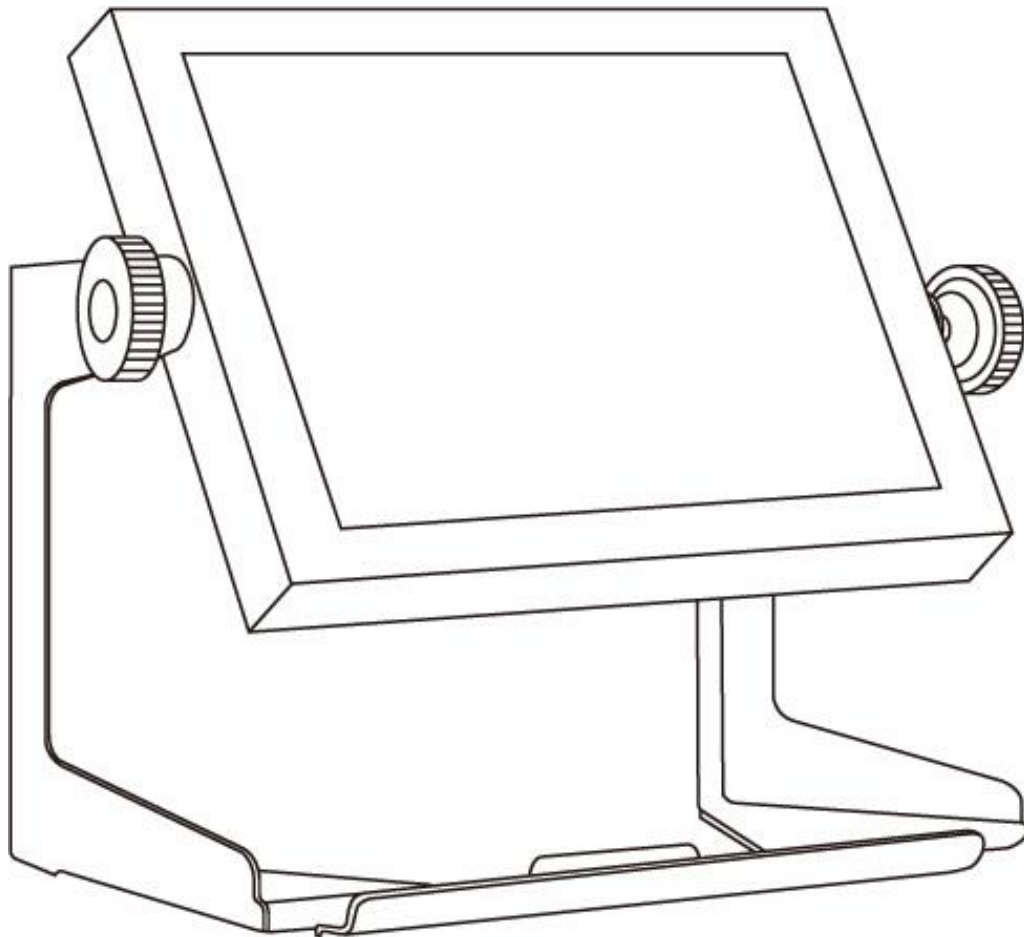


3.6.2 Yoke Mounting

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.



4 SPECIFICATIONS

Hardware Specifications

| | Model Name | | | |
|-----------------|-----------------------------------------------------------------|---------------------|---------------------|---------------------|
| | R10IB3S-SPT269 | R15IB3S-SPC369 | R19IB3S-SPM169 | W22IB3S-SPA369 |
| Display | | | | |
| Size | 10.4" | 15" | 19" | 21.5" |
| Resolution | 1024 x 768 | 1024 x 768 | 1280 x 1024 | 1920 x 1080 |
| Brightness | 350 cd/m^2 (typ.) | 250 cd/m^2 (typ.) | 250 cd/m^2 (typ.) | 250 cd/m^2 (typ.) |
| Contrast Ratio | 1000 : 1 (typ.) | 700 : 1 (typ.) | 1000 : 1 (typ.) | 3000 : 1 (typ.) |
| Viewing Angle | -88~88(H);-88~88(V) | -80~80(H);-70~70(V) | -85~85(H);-80~80(V) | -89~89(H);-89~89(V) |
| Max Colors | 16.2M | 16.2M | 16.7M | 16.7M |
| Touch | P-Cap(Default), Glass (Optional) | | | |
| 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 | | | |
| Graphic Chipset | Integrated HD Graphics | | | |
| 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 IP69K | | |
| Power Specifications | | | |
| Power Input | 12V DC IN (Lockable Power Jack) | | |
| Power Consumption | 33W (typ.) | 38W (typ.) | 45W (typ.) 56W (typ.) |
| Standards and Certification | | | |
| Certification | CE, FCC, RoHs | | |

Order Information

| SBC | | Panel PC | |
|---------|-------------------------|----------|------------------------------------------------------------------------------------------------------------------------------|
| RAM | SODIMM DDR3L Max 8GB | OS | Windows 10 IoT Enterprise Windows Embedded 8.1 Industry Pro Windows Embedded 8 Standard Windows Embedded 7 Standard |
| Storage | Mini PCIe SSD | Touch | Glass |

APPENDIX

Appendix A: Cleaning the Monitor

**NOTE:**

The IP69K Stainless Panel PCs withstand regular intense cleaning and could hold up against steam and high-pressure water. The devices are able to sustain water temperatures up to 80°C and a water jets.

Before cleaning:

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

When cleaning:

- Use water up to 80°C to clean the housing.
- 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 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 Flat Stainless P-Cap 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.

Winmate Download Center

Go to <http://www.winmate.com/> > Support > Download Center > IP65/IP69 Stainless PPC > IP69 Flat P-Cap Series – Bay Trail

Or follow the link:

<http://www.winmate.com.tw/DownCenter/DownLoadCenter.asp?DownType=4302>



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