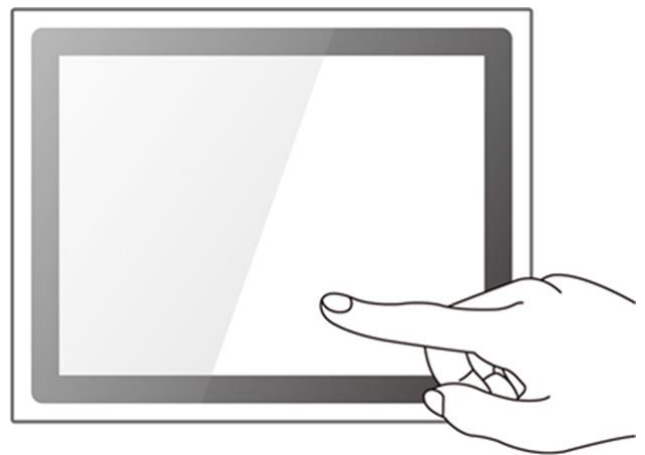


IP65 Stainless P-Cap

15/17/19/21.5" Panel PC

Intel® Core™ i5-7200U Kaby Lake



Model No.:
R15IK3S-SPC3
R17IK3S-SPA1
R19IK3S-SPM1
W22IK3S-SPA3

Quick Start Guide

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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.

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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.

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.



Alternating Current Mise à le terre !

The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.

Le symbole de Mise à Terre indique le risqué potentiel de choc électrique grave à la terre incorrecte.

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 charge, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

Chapter 1: Introduction

Congratulations on purchasing Winmate® IP65 Flat Stainless P-CAP Series Panel PC.

Wimate IP65 Flat Stainless P-CAP Series 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. P-CAP multi-touch screen supports glove mode and provides even more convenience for the operator.

Wimate IP65 Flat Stainless P-CAP Panel PC goes beyond that of the standard industrial panel computers with elegant, edge-to-edge design, rugged construction, powerful performance, and flexible mounting options.

The IP65 stainless series work well in food, beverage industry, including food processing operations and packaging, chemical manufacturing and other industrial applications.

1.1 Features

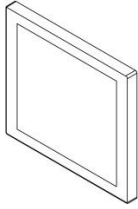
The IP65 Stainless P-Cap Panel PC features:

- Intel® Core™ i5-7200U Kaby Lake 2.5GHz (turbo to 3.1GHz)
- SUS304 stainless steel for food and chemical industries
- Full IP65 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.

Standard shipment list:



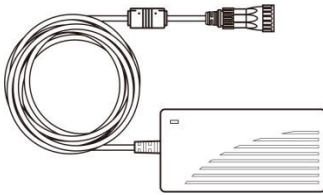
- **Panel PC**
Varies by product specifications



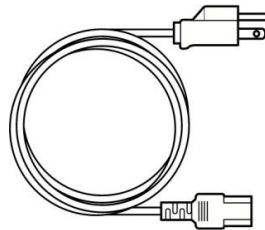
- **Quick Start Guide (Hardcopy)**
91521110100R



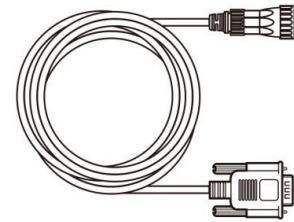
- **Driver CD & User Manual**
9171111K102L



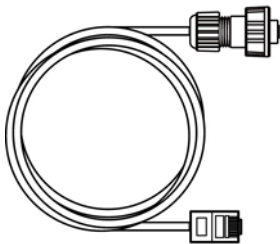
- **AC Adapter**
80W: 90PO12080003



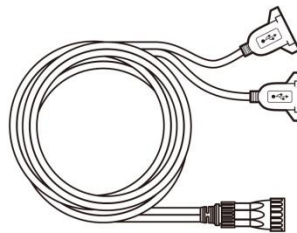
- **Power Cable***
Varies by country



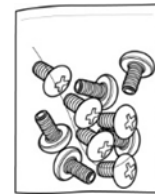
- **Serial Cable**
94G0103090Q0



- **Ethernet Cable**
94I0080080KF



- **USB Cable**
9480108080Q0



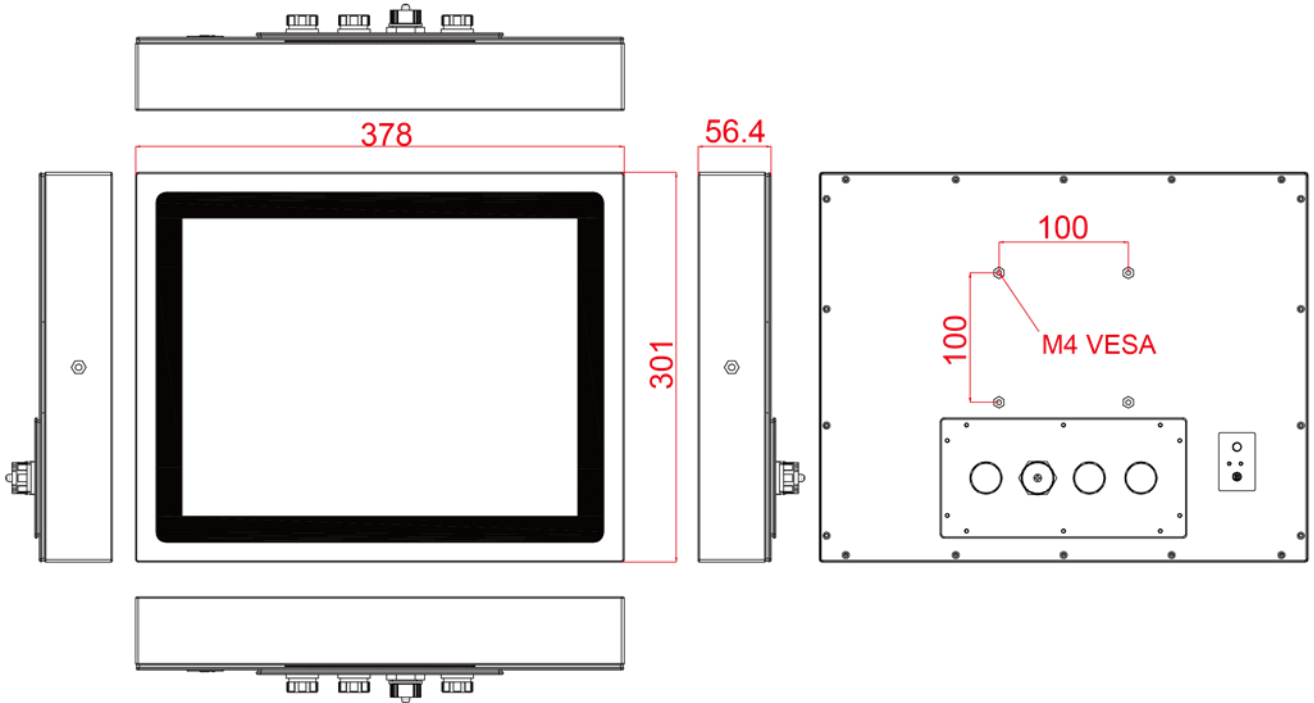
- **VESA Screws**
913511101101

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.

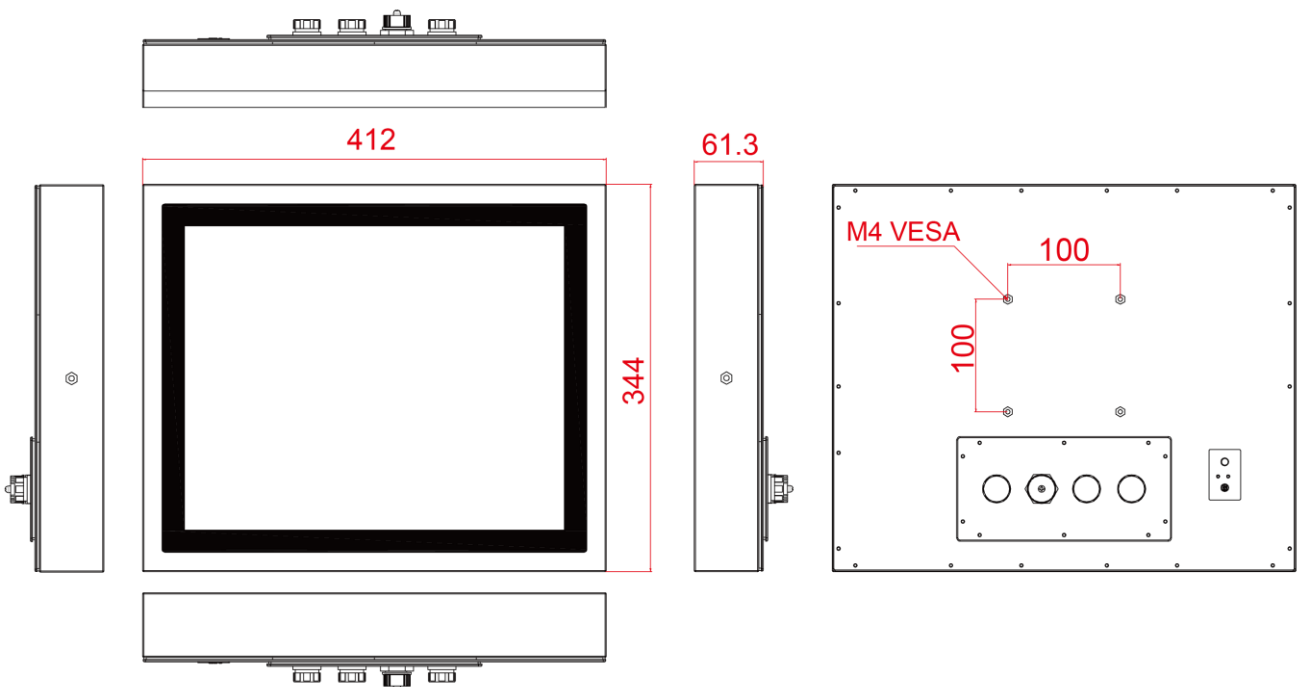
1.3.1 Dimensions 15"

Unit: mm
Dimensions : 378 x 301 x 56.4



1.3.2 Dimensions 17"

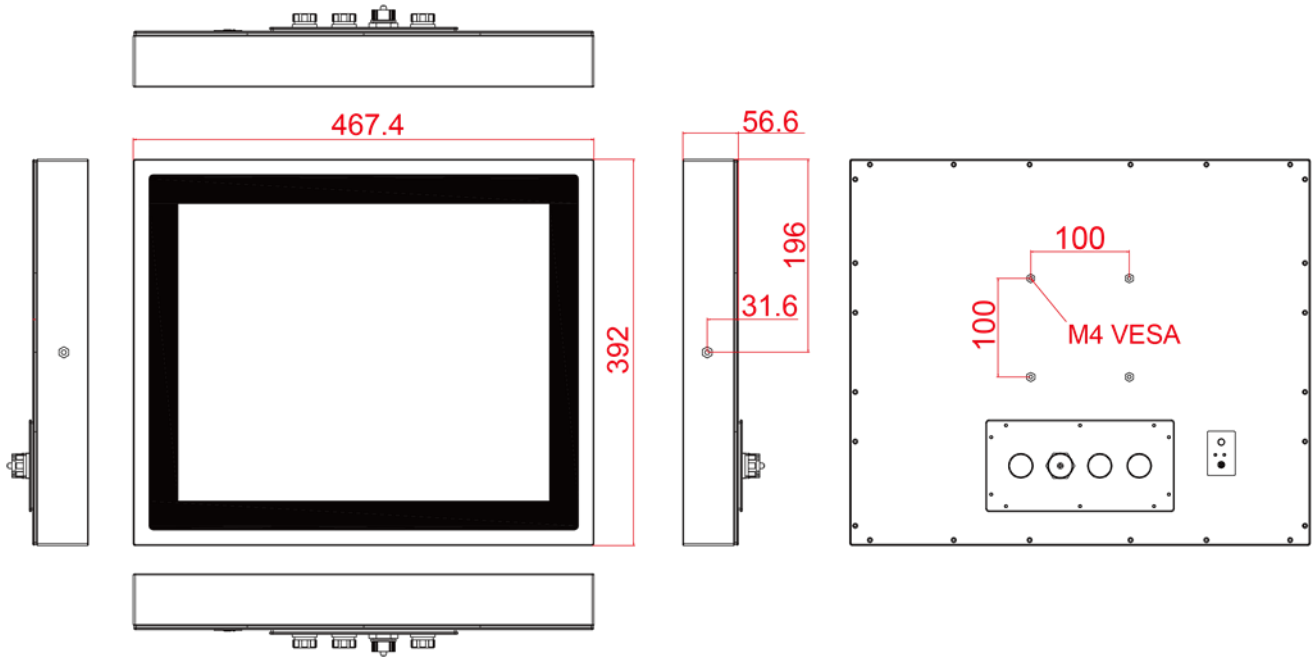
Unit: mm
Dimensions : 412 x 344 x 61.3



1.3.3 Dimensions 19"

Unit: mm

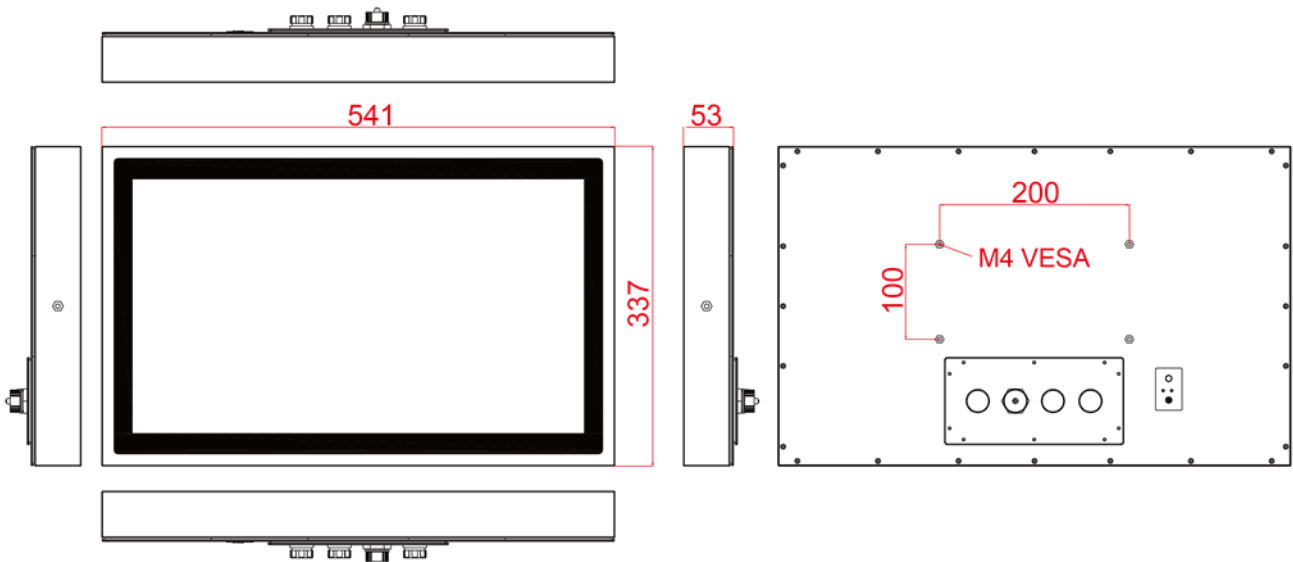
Dimensions : 467.4 x 392 x 56.6



1.3.4 Dimensions 21.5"

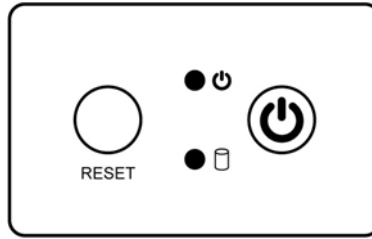
Unit: mm

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

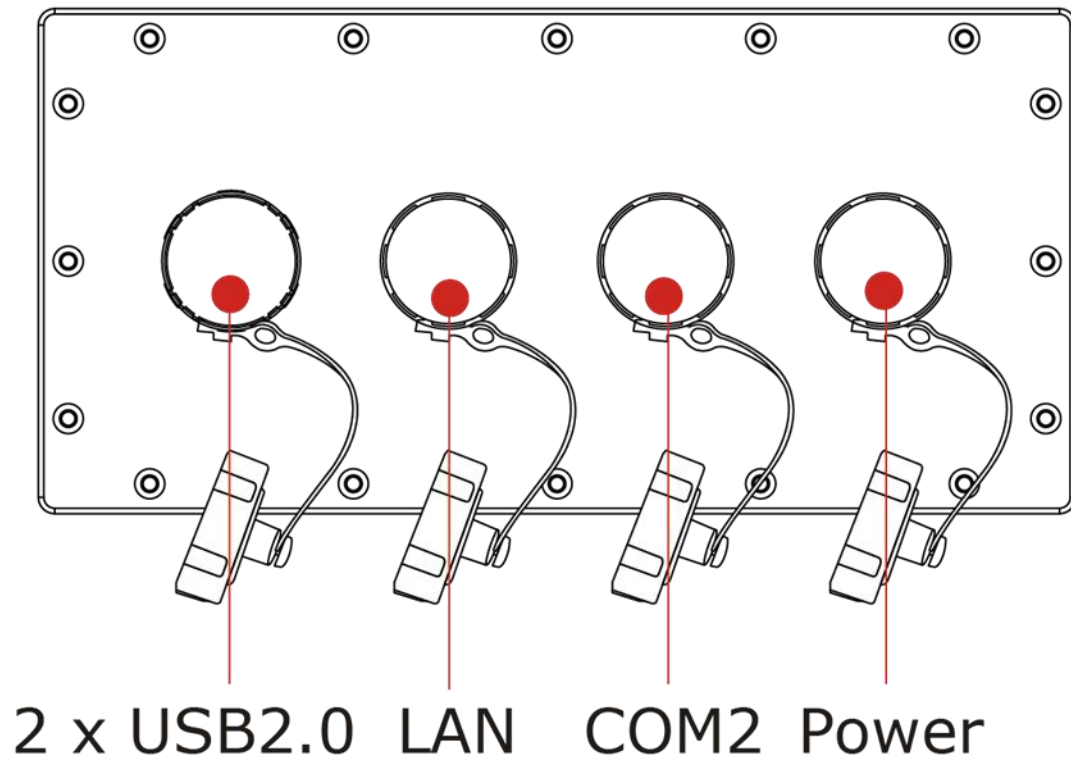
Icon	Button	Description
	Reset	Press to reset the system
	Power On/ Off	Press to power on or power off the device

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

IP65 Flat Stainless P-CAP Panel PC has IP65 type connectors with protection cap.

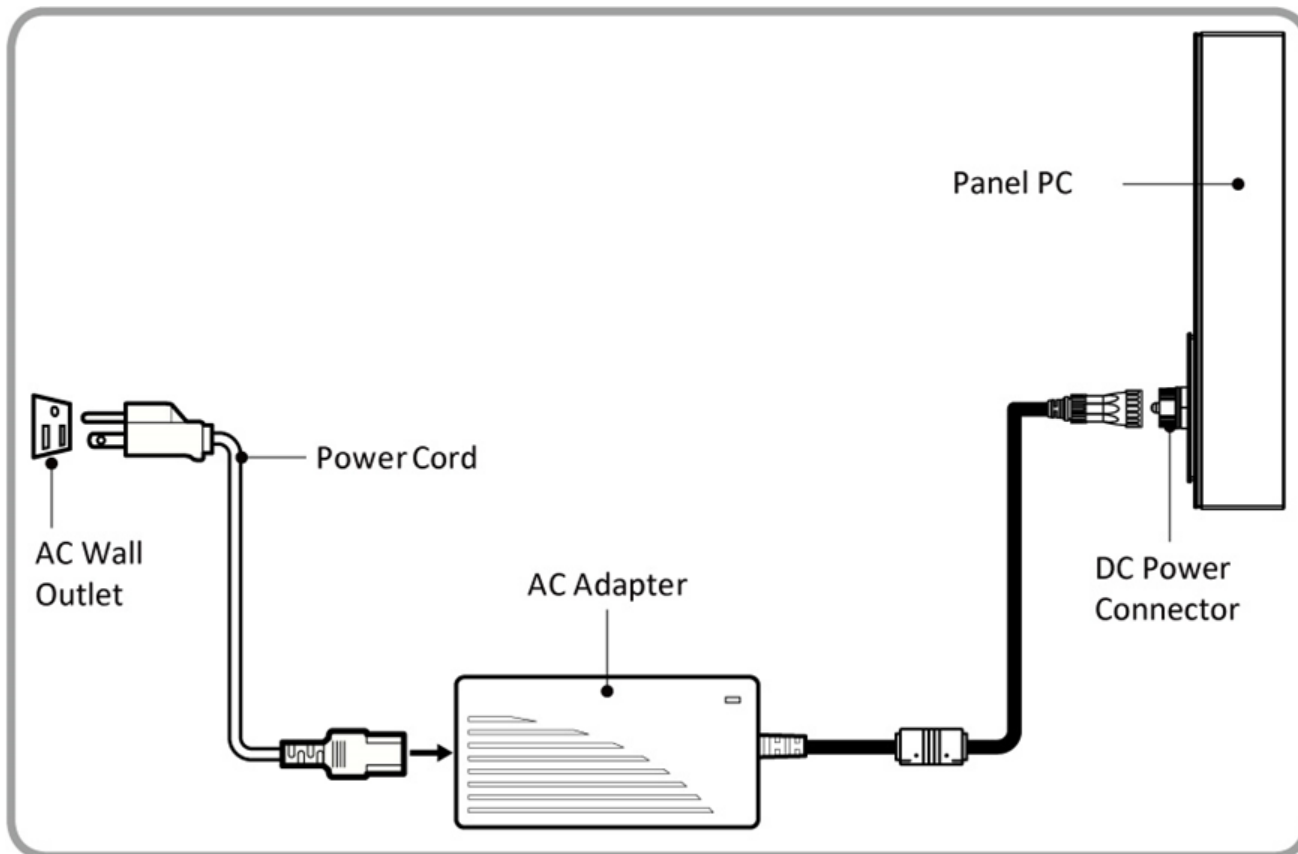


Chapter 2: Getting Started

2.1 Turning On and Off Your Device

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"	19"	21.5"
AC Adapter	12V/ 80W	12V/ 80W	12V/ 80W
Power Consumption*	52W (typ.)	56W (typ.)	66W (typ.)

**With maximum backlight and high CPU load.*

To turn off your device:



To shut down your device, do the following: Tap Start () > Shut down.

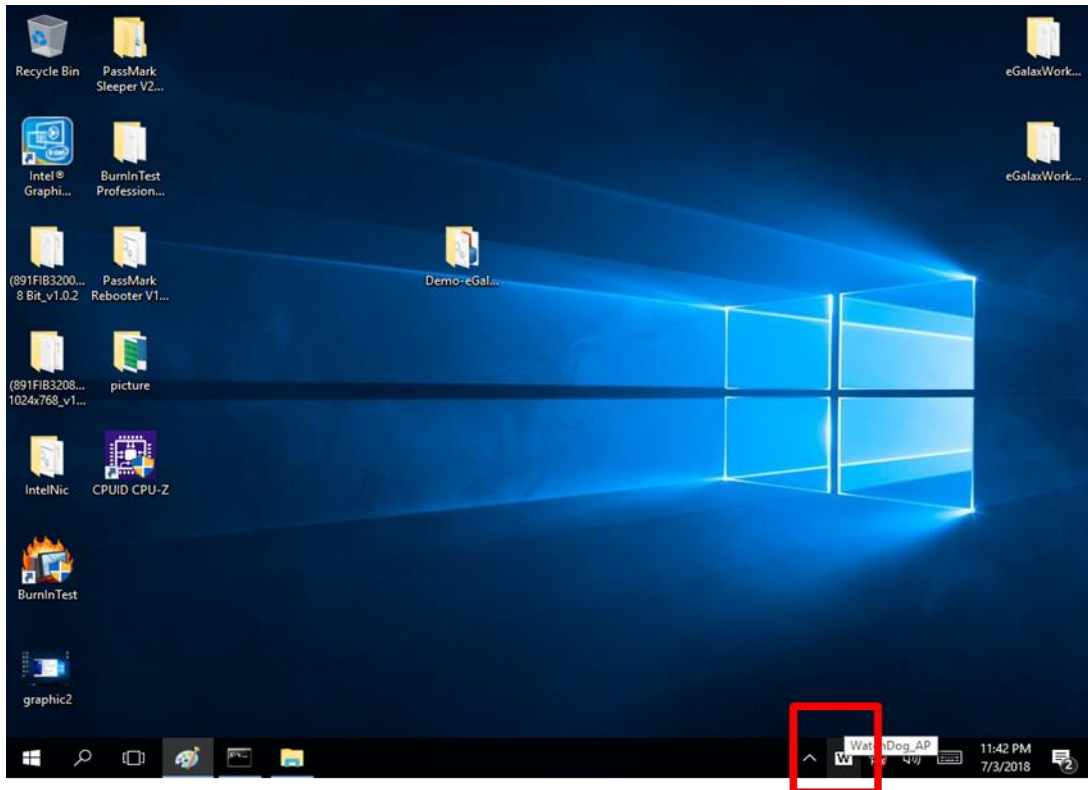
Wait for your Panel PC to completely turn off before disconnecting the power cord (if necessary).

2.2 How to Enable Watchdog

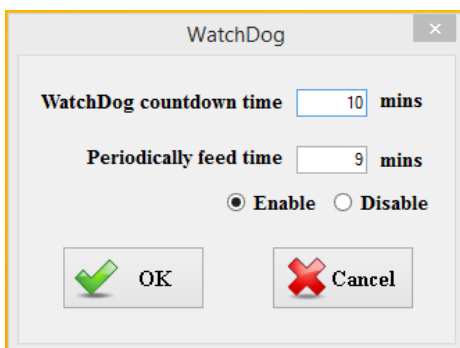
To enable Watchdog, you need to download Winmate Watchdog utility. Find more information on Watchdog in “Watchdog Guide” that you can download from Winmate Download Center or File Share. Refer to the User Manual for more details.

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.

Setting	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>

Chapter 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.
- 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.

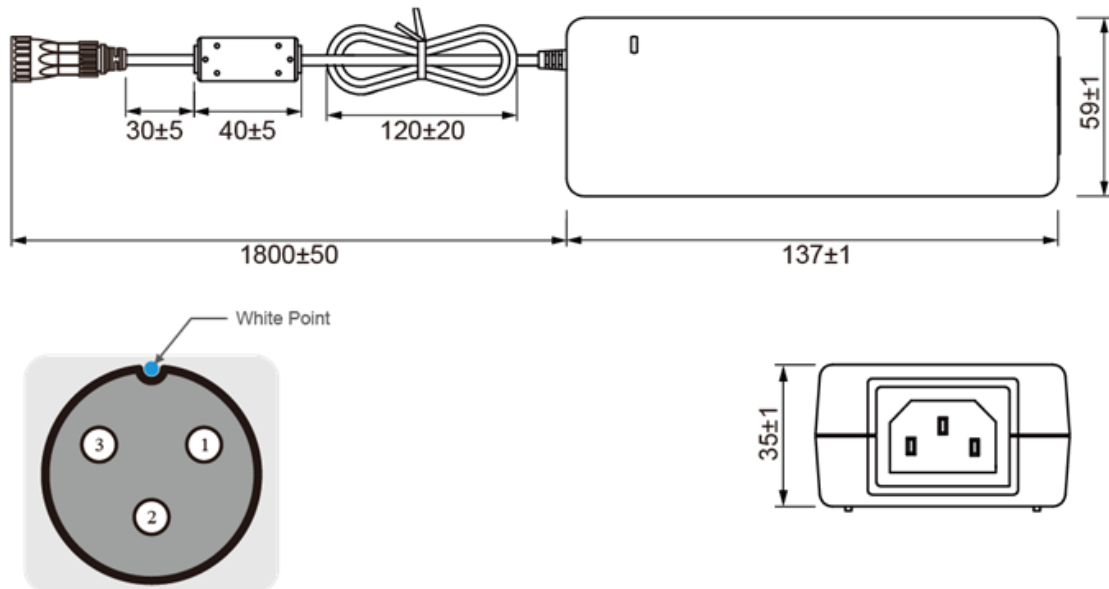
3.2 Connector Pin Assignments

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.

3.2.1 Power Cable

The IP65 Stainless P-Cap Panel PC has M25 type connectors. Use power cable to connect Panel PC to the source of power.

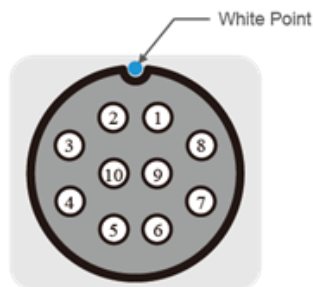
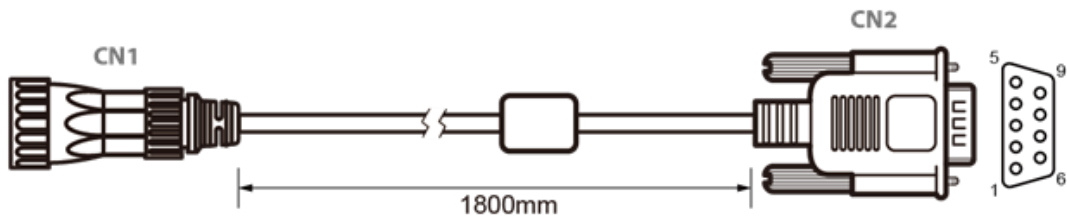
IP65 Stainless P-Cap Panel PC support 12V DC power input.



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

3.2.2 Serial Cable

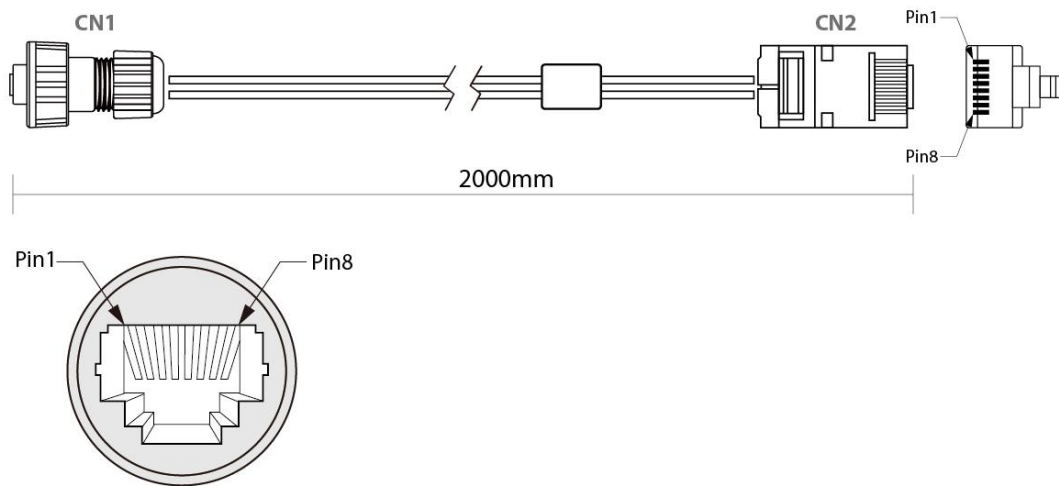
The IP65 Stainless P-Cap Panel PC has M25 type serial port connector. Use serial cable to connect serial interfaces.



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	

3.2.3 Ethernet Cable

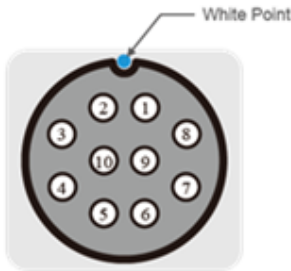
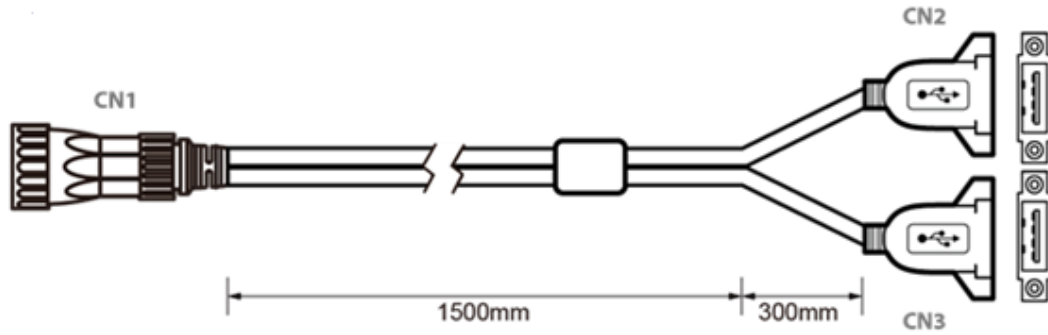
The IP65 Stainless P-Cap Panel PC has M25 type Ethernet connector. Use Ethernet cable to connect the Panel PC to the Internet.



Plug	Wire Color	Conn.		
1	Orange / White	1	Twist	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		

3.2.4 USB 2.0 Cable

The IP65 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
CN1-1	VCC	RED
CN1-2	VCC	RED
CN1-3	D-	WHITE
CN1-4	D-	WHITE
CN1-5	D+	GREEN
CN1-6	D+	GREEN
CN1-7	GND	BLACK
CN1-8	GND	BLACK
CN1-9	Braid	

Pin No.	Symbols	Color
CN2-1	VCC	RED
CN3-1	VCC	RED
CN2-2	D-	WHITE
CN3-2	D-	WHITE
CN2-3	D+	GREEN
CN3-3	D+	GREEN
CN2-4	GND	BLACK
CN3-4	GND	BLACK
Braid connect to the housing		

↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔

twisted pair twisted pair

3.3 Mounting

The IP65 Flat Stainless P-CAP Panel PC devices come with different mounting options suitable for most of the industrial and commercial applications.

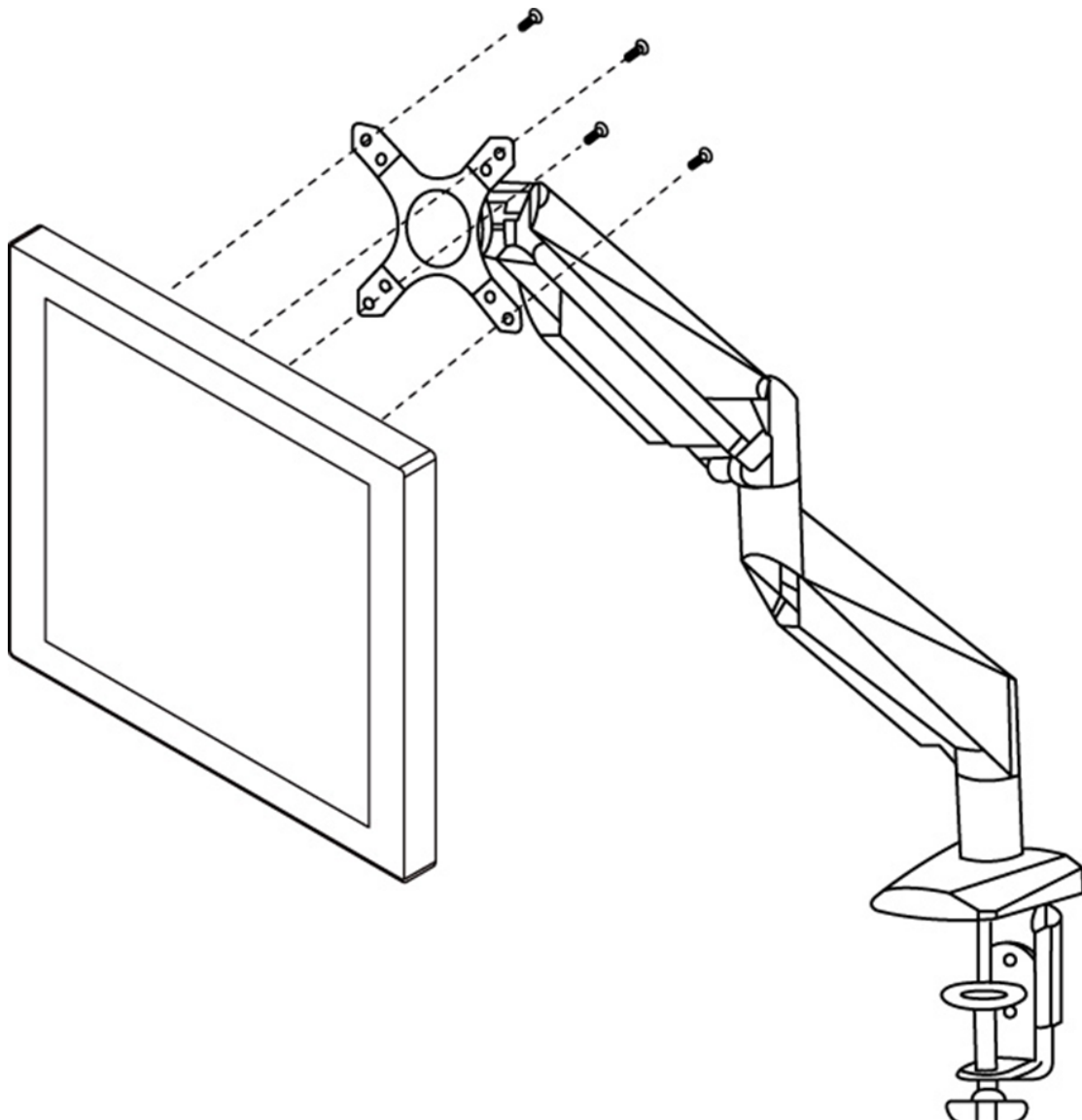
3.3.1 VESA Mounting

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
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.

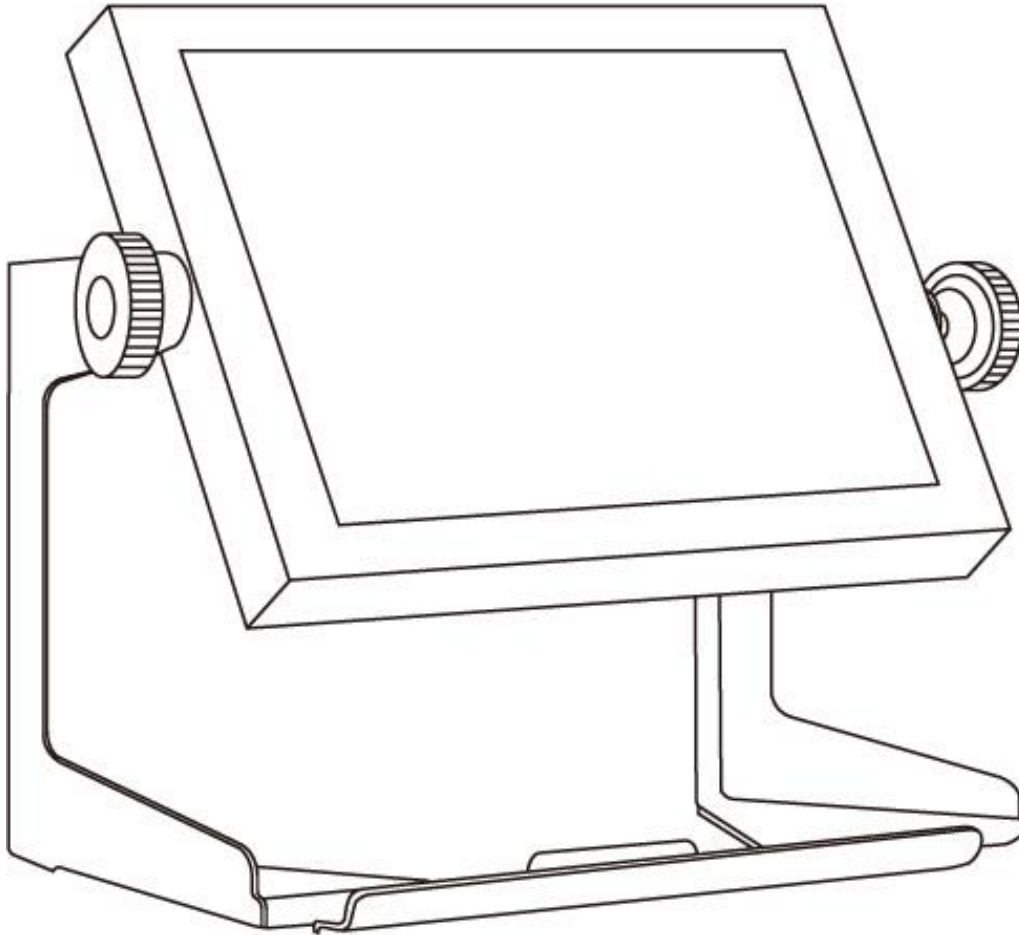


3.3.2 Yoke Mounting

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.



Appendix

Appendix A: Hardware Specifications

	Model Name			
	R15IK3S-SPC3	R17IK3S-SPA1	R19IK3S-SPM1	W22IK3S-SPA3
Display				
Size	15"	17"	19"	21.5"
Resolution	1024 x 768	1280 x 1024	1280 x 1024	1920 x 1080
Brightness	250 cd/m^2 (typ.)	350 cd/m^2 (typ.)	250 cd/m^2 (typ.)	250 cd/m^2 (typ.)
Contrast Ratio	700 : 1 (typ.)	1000 : 1 (typ.)	1000 : 1 (typ.)	3000 : 1 (typ.)
Viewing Angle	-80~80(H); 70~70(V)	-85~85(H); 80~80(V)	-85~85(H); 80~80(V)	-89~89(H); -89~89(V)
Max Colors	16.2M	16.7M	16.7M	16.7M
System				
Processor	Intel® Core™ i5-7200U Kaby Lake 2.5GHz (turbo to 3.1GHz)			
BIOS	Insyde BIOS			
System Chipset	Intel® SoC Integrated			
System Memory	4GB DDR4-2133 SO-DIMM (Max 16 GB)			
Storage	64GB M.2 B Key SATA III SSD (Options up to 256GB)			
Graphic Chipset	Intel® HD Graphics 620			
Audio	Realtek ALC283 HD Audio Codec			
Ethernet	1000 Base-Tx Gigabit Ethernet Compatible			
OS	Windows 10 IoT Enterprise			
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 12VDC			
Mechanical Specification				
Cooling System	Fanless			
Mounting	Yoke Mount, VESA Mount			
Environmental Consideration				
Operating Temp.	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	52W (typ.)	56W (typ.)	56W (typ.)	66W (typ.)
Standards and Certification				
Certification	CE, FCC, RoHs			

*Maximum backlight & high CPU load

Appendix B: Cleaning the Monitor

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 C: Winmate Software Development Kit

Winmate provides the following SDK and Utilities for the IP65 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 www.winmate.com > Support > Download Center > Full IP65/IP69K Stainless PPC > Kaby Lake

Winmate Inc.
9F, No.111-6, Shing-De Rd., San-Chung District,
New Taipei City 24158, Taiwan, R.O.C
www.winmate.com