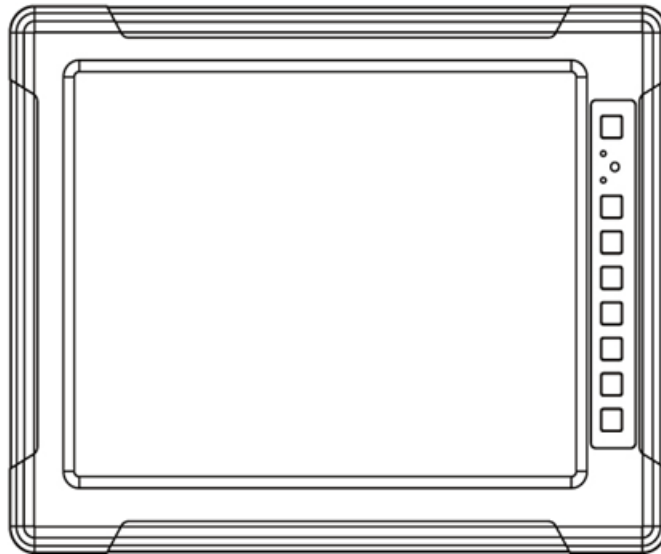


Full P67 Rugged Display R15L100-67C3HB



G-Win Series

User Manual

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Preface

Copyright Notice

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Disclaimer

We 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

Our 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 1W18Axxxxxxx means October of year 2018.

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. All cautions and warnings on the equipment should be noted.

**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 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 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.

Safety Precautions

For your safety carefully read all the safety instructions before using the device.



Caution/Attention

Do not cover the openings!
Ne pas couvrir les ouvertures!



Caution/Attention

Use the recommended mounting apparatus to avoid risk of injury.
Utiliser l'appareil de fixation recommandé pour éliminer le risque de blessure.



Warning!/ Avertissement!

Only use the connection cords that come with the product. When in doubt, please contact the manufacturer.
Utiliser seulement les cordons d'alimentation fournis avec le produit. Si vous doutez de leur provenance, contactez le fabricant.



Warning!/ Avertissement!

Always ground yourself against electrostatic damage to the device.
Toujours vérifier votre mise à la terre afin que l'équipement ne se décharge pas sur vous.

- Always disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
- For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The openings on the enclosure are for air convection and to protect the equipment from overheating.
- Never pour any liquid into an opening. This could cause fire or electrical shock.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

Important Information

Federal Communications Commission Radio Frequency Interface 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.

EC Declaration of Conformity



Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010 EN 55022: 2010 Class B
 - IEC61000-4-2: 2009
 - IEC61000-4-3: 2006+A1: 2007+A2: 2010
 - IEC61000-4-4: 2012
 - IEC61000-4-5: 2014
 - IEC61000-4-6: 2013
 - IEC61000-4-8: 2010
 - IEC61000-4-11: 2004
- EN55022: 2010/AC:2011
- 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.

About This User Manual

This User Manual provides information about using the Winmate® 15-inch G-Win Rugged Display. This User Manual applies to model number R15L100-67C3HB.

The documentation set for the 15-inch G-Win Rugged Display R15L100-67C3HB provides information for specific user needs, and includes:

- **User Manual** – contains detailed description on how to use the display, its components and features.



Note:

Some pictures in this guide are samples and can differ from actual product.

Document Revision History

| Version | Date | Note |
|---------|-------------|--------------------------|
| 1.0 | 13-Jul-2018 | Initial document release |

Chapter 1: Introduction

This chapter gives you product overview, describes features and hardware specification. You will find all accessories that come with the Display in the packing list. Mechanical dimensions and drawings included in this chapter.

1.1 Introduction

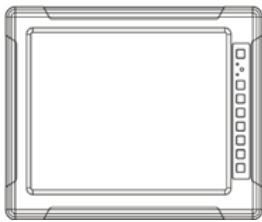
Congratulations on purchasing 15-inch G-Win Rugged Display R15L100-67C3HB. Winmate IP67 series display is designed in a very robust and waterproof (IP67/NEMA 6) aluminum housing. Withstanding even the highest demands of all-day field use, and protected against shock and vibration. The robust design fits the demands for every harsh environment applications such as logistics, transportation/ fleet management, heavy vehicles, utility and also outdoor usage.

Highlights

- High Quality 15" XGA Panel, 1024x768 resolution
- Full IP67-rated dust/ water protection
- Bonding with anti-moisture treatment
- Aluminum housing with anti-corrosion treatments
- Shock and Vibration resistance according to MIL- STD-810G
- Wide range 9~36V DC power input
- 5 Wire resistive touchscreen / anti-reflection protection glass(Optional)

1.3 Package Contents

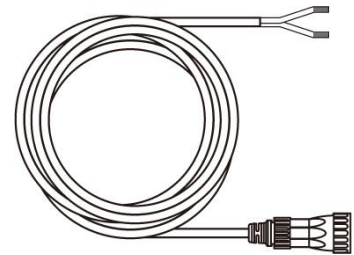
Carefully remove the box and unpack your device. Please check if all the items listed below are inside your package. Package content may vary based on your order. If any of these items are missing or damaged contact us immediately.



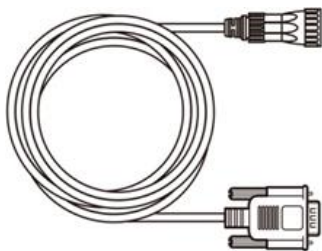
• Panel PC



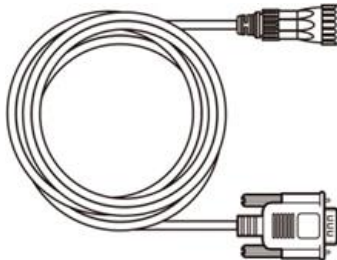
• User Manual (Hardcopy)



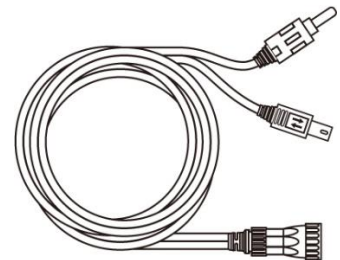
• Power Cable



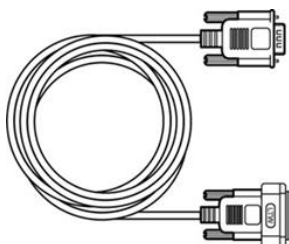
• VGA Cable



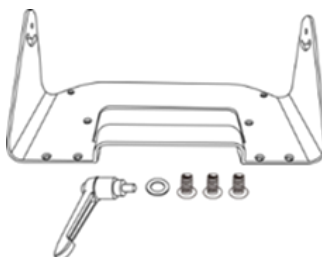
• RS232 (Touch) Cable or
USB (Touch) Cable



• Video Cable



• DVI Cable
(Optional)

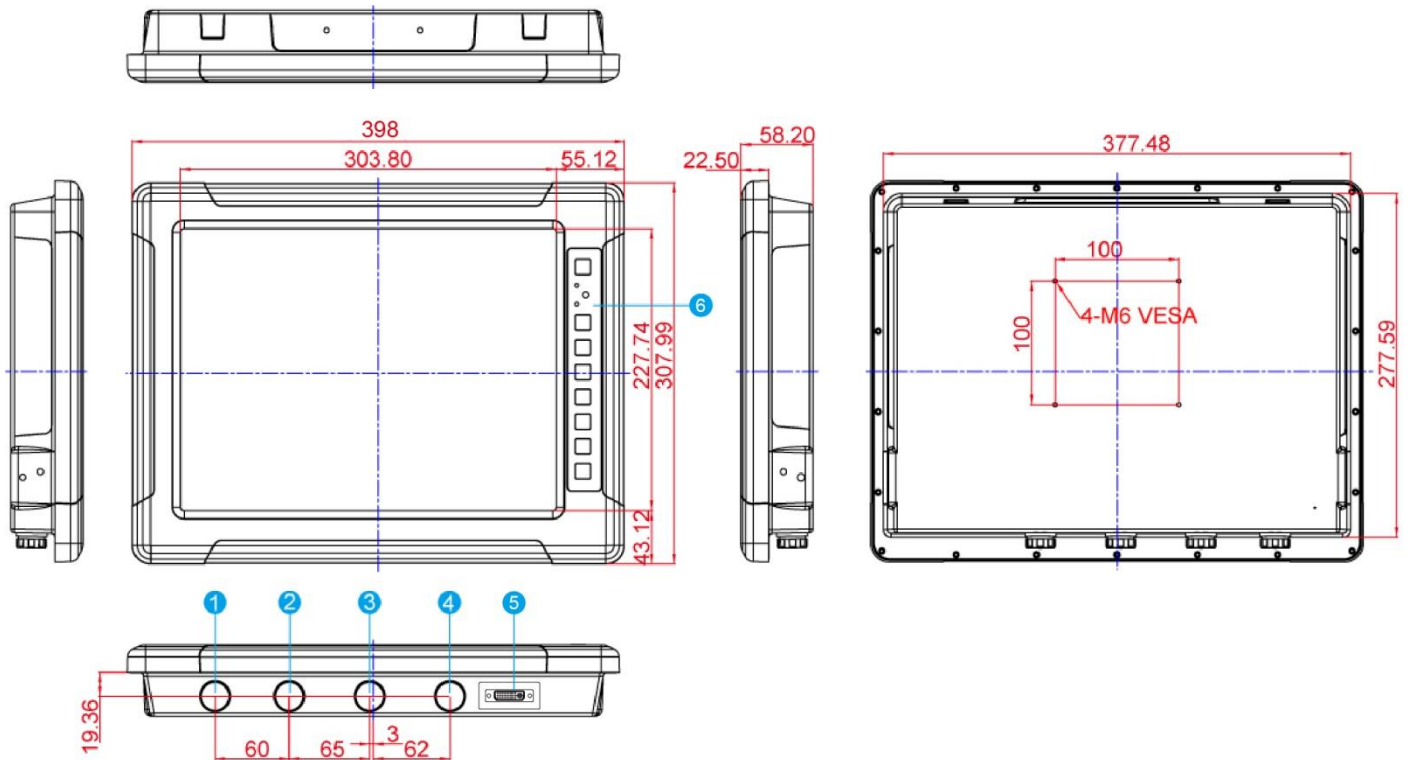


• Mounting Bracket
(Optional)

1.4 Description of Parts

This section describes appearance, connectors' layout and mechanical dimensions of display. Notice that this is a simplified drawing and some components are not marked in detail. Please contact our sales representative if you need further product information.

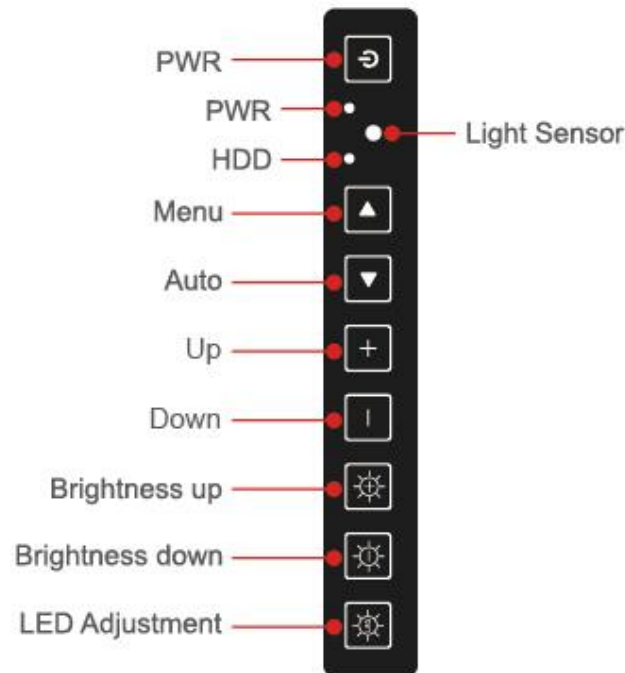
Unit: mm
 Dimensions: 398 x 308 x 58



| No | Description | No | Description |
|----|---|----|---|
| ① | Power Connector (M21, 3 pin) | ④ | RS-232 for Touch (M21, 10 pin) or USB for Touch (M21, 10 pin) |
| ② | VGA Connector (M21, 10 pin) or optional DVI (M21, 15 pin) | ⑤ | DVI Connector (M21, 15 pin) (Optional) |
| ③ | Video Connector (M21, 10 pin) (Optional) | ⑥ | OSD Control Panel |

1.5 Physical Buttons and LED Indicators

Physical buttons and LED indicators (OSD Control Panel) located on the front side of the Display.



Physical Buttons

| Icon | Button | Function |
|------|-----------------|---|
| | Power | Turn On or turn Off the Display. |
| | Menu | Opens main menu. |
| | Auto | Tap the button once to automatically adjust brightness mode. In Main Menu: Tap the button to open Next item. |
| | Up | Tap the button to move up. |
| | Down | Tap the button to move down. |
| | Brightness Up | Increase the brightness of the display screen, or allows user to navigate items of a single OSD menu. |
| | Brightness Down | Decrease the brightness of the display screen, or allows user to navigate items of a single OSD menu. |
| | LED Adjustment | Adjust the brightness of the LED. |

LED Indicators

| Indicator | Color | Definition |
|-----------|--------|--|
| PWR | Green | Power is ON and the device functions normally. |
| | Orange | Panel PC is suspended. |
| HDD | Green | HDD is active. |
| | OFF | HDD is inactive. |

Chapter 2: Hardware Installation

This chapter provides hardware installation instructions, mounting guide for all available mounting options. Pay attention to cautions and warning to avoid any damages.



2.1 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.
- Do 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.

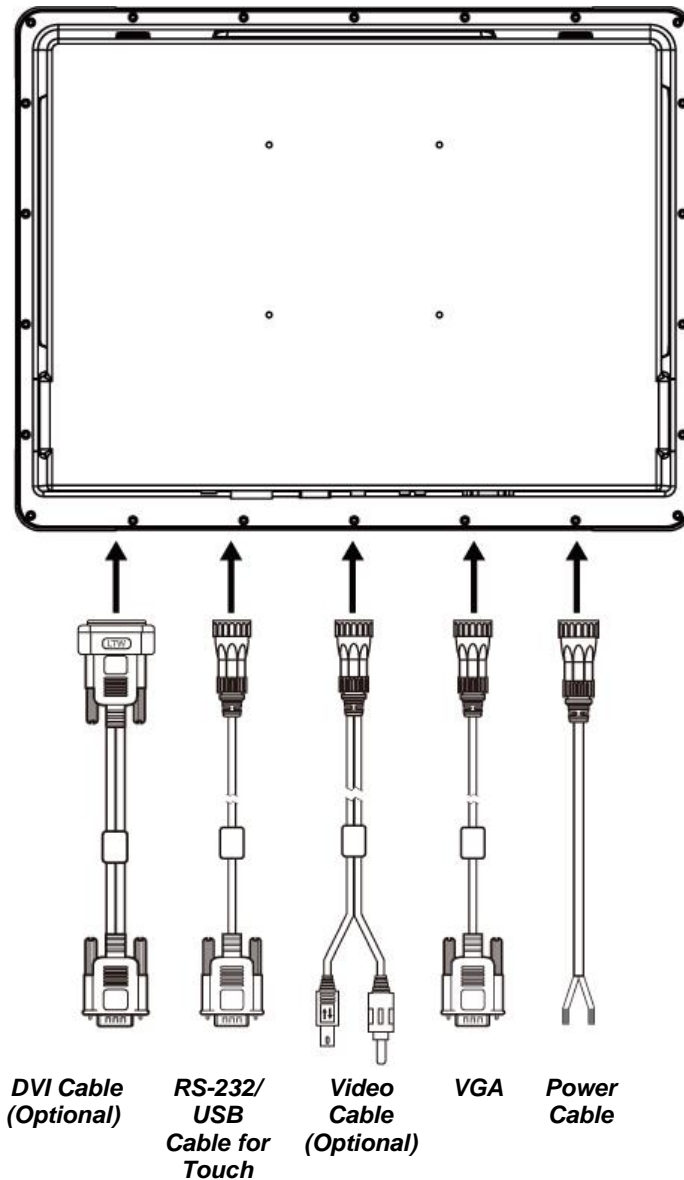
2.2 Wiring Requirements

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.

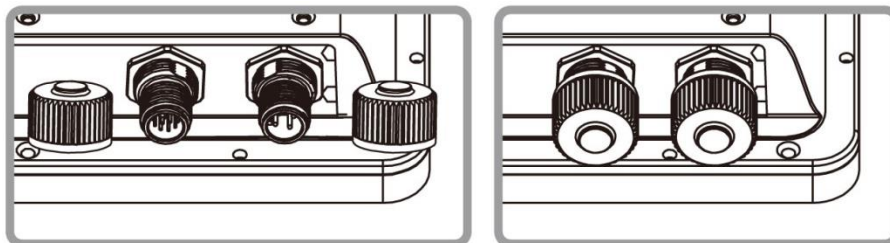
2.3 Connecting to Other Devices

This Display comes with various interfaces located on the bottom panel. All of these connectors have been shipped with protective caps. To ensure the waterproof function can work properly, make sure that the protective caps and have been securely tightened whenever the connectors are not used.



Important

Please note that when reinstalling the protective cap, it must be fully tightened to ensure the unit is properly sealed to meet the IP67 enclosure rating.



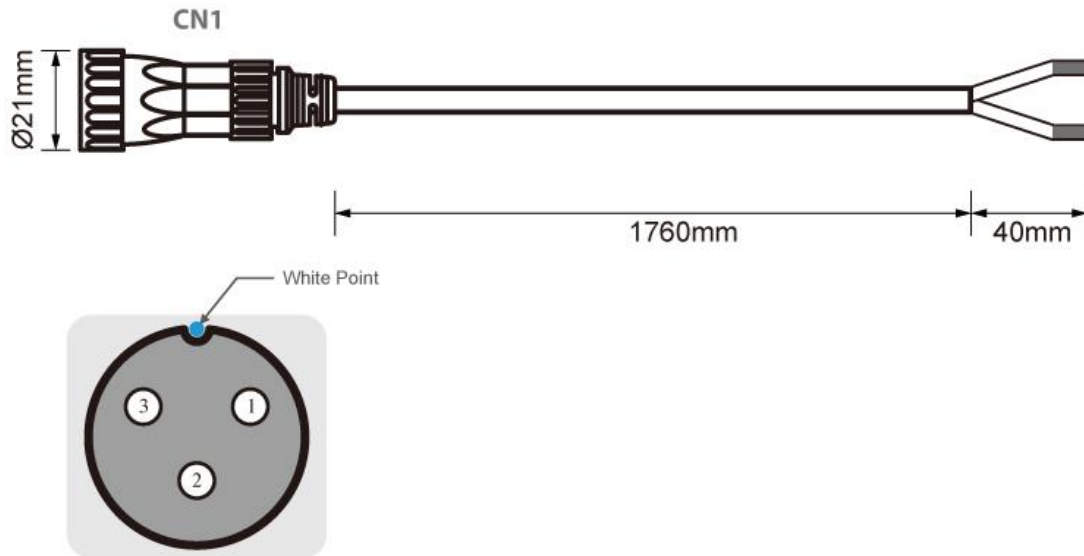
2.4 Connector Description

The display features M21 type connectors with protective caps and has full IP67 rating.

2.4.1 Power Input Connector

Display has M21 type 3 pin male power input connector which accepts 9-36 V DC power input. Use waterproof power cable to connect the Display to the source of power.

Power Cable



| Pin No. | Symbols | Color |
|---------|---------|-------|
| CN1-1 | VCC | Red |
| CN1-3 | GND | Black |
| CN1-2 | Shield | |

Short [

| Pin No. | Symbols | Color |
|---------|---------|-------|
| Open | VCC | Red |
| Open | GND | Black |
| | Shield | |

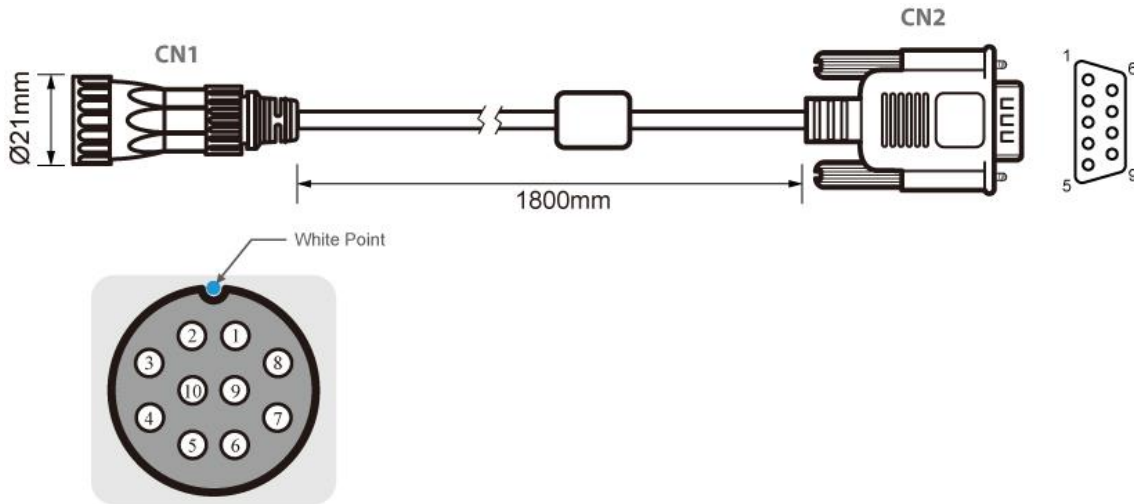
↔

↔

2.4.2 RS-232/ USB Connector for Touch

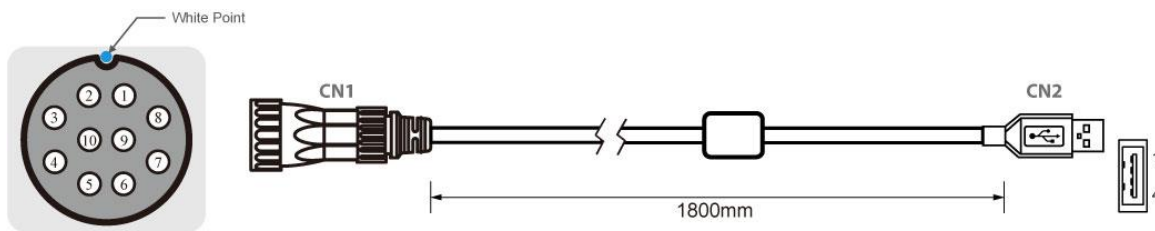
Display has M21 type 10 pin male RS-232 or USB connector for touch based on your order. Use waterproof serial/ USB cable to connect the touch.

RS-232 Cable



| 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 | | | | |

USB Cable



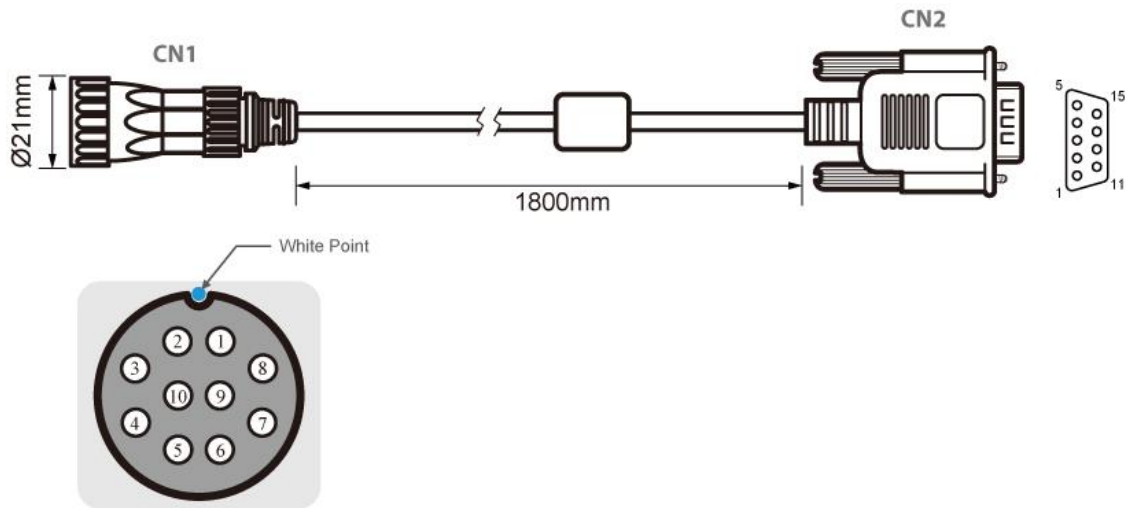
| Pin No. | Symbols | Color | Pin No. | Symbols | Color |
|---------|---------|-------|---------|---------|-------|
| CN1-1 | VCC | RED | CN2-1 | VCC | RED |
| CN1-2 | D- | WHITE | CN2-2 | D- | WHITE |
| CN1-3 | D+ | GREEN | CN2-3 | D+ | GREEN |
| CN1-4 | GND | BLACK | CN2-4 | GND | BLACK |
| CN1-5 | Shield | | CN2 | Shield | |

} Twist

2.4.3 VGA Connector

Display has M21 type 10 pin male VGA connector for touch. Use waterproof serial cable to connect the Display to external computer.

VGA Cable

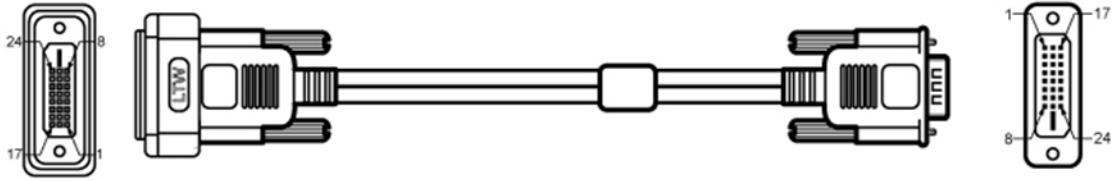


| CN1 | | | CN2 | | |
|---------|---------|-----------|-----|---------|--------|
| Pin No. | Symbols | Color Pin | No. | Symbols | Color |
| 1 | R | Red | 1 | R | Red |
| 2 | R-GND | Black | 6 | R-GND | Black |
| 3 | G | Green | 2 | G | Green |
| 4 | G-GND | Black | 7 | G-GND | Black |
| 5 | B | Blue | 3 | B | Blue |
| 6 | B-GND | Black | 8 | B-GND | Black |
| 7 | SDA | Yellow | 12 | SDA | Yellow |
| 8 | HS | Orange | 13 | HS | Orange |
| 9 | VS | White | 14 | VS | White |
| 10 | SCL | Brown | 15 | SCL | Brown |
| | | | 4 | HS-GND | |
| | | | 5 | NC | |
| | | | 9 | NC | |
| | | | 10 | NC | |
| | | | 11 | VS-GND | |

2.4.4 DVI Connector

The Display has M21 type 15 pin video connector. Use waterproof DVI cable to connect the Display to the source of video. Notice that DVI is an optional connector.

DVI Cable

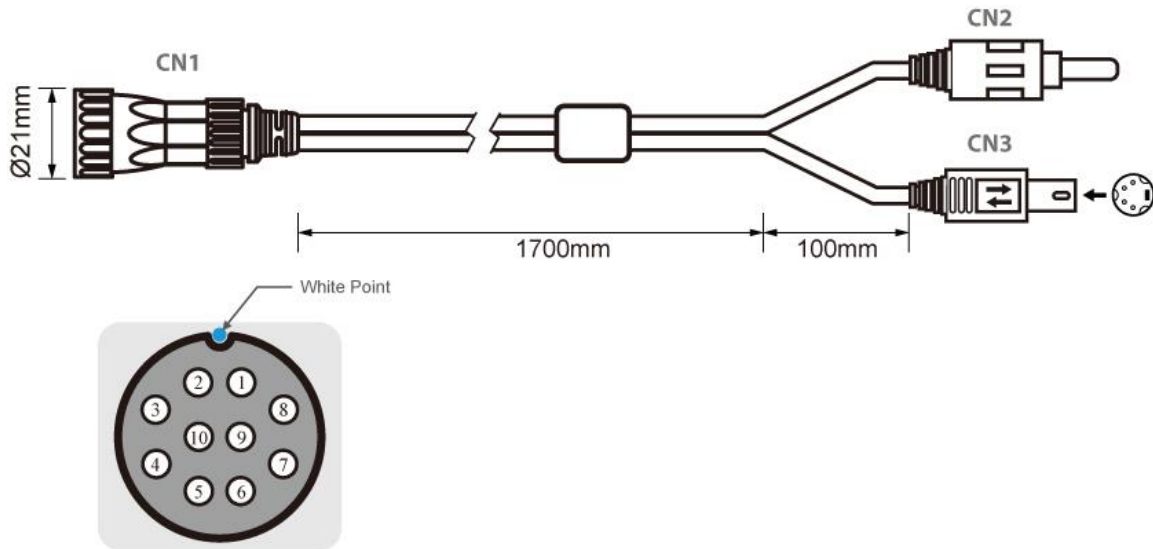


| CN1 | | | CN2 | | |
|---------|------------------------|---|---------|------------------------|-------|
| Pin No. | Symbol | ↔ | Pin No. | Symbol | |
| CN1-1 | TMDS Data2- | ↔ | CN2-1 | TMDS Data2- | twist |
| CN1-2 | TMDS Data2+ | ↔ | CN2-2 | TMDS Data2+ | |
| CN1-3 | TMDS Data2 Shield | ↔ | CN2-3 | TMDS Data2 Shield | |
| CN1-4 | NC | | CN2-4 | NC | |
| CN1-5 | NC | | CN2-5 | NC | |
| CN1-6 | DDC Clock | ↔ | CN2-6 | DDC Clock | |
| CN1-7 | DDC Data | ↔ | CN2-7 | DDC Data | |
| CN1-8 | NC | | CN2-8 | NC | |
| CN1-9 | TMDS Data 1- | ↔ | CN2-9 | TMDS Data 1- | twist |
| CN1-10 | TMDS Data 1+ | ↔ | CN2-10 | TMDS Data 1+ | |
| CN1-11 | TMDS Data 1 Shield | ↔ | CN2-11 | TMDS Data 1 Shield | |
| CN1-12 | NC | | CN2-12 | NC | |
| CN1-13 | NC | | CN2-13 | NC | |
| CN1-14 | +5V Power | ↔ | CN2-14 | +5V Power | |
| CN1-15 | Ground | ↔ | CN2-15 | Ground | |
| CN1-16 | Hot Plug Detect | ↔ | CN2-16 | Hot Plug Detect | |
| CN1-17 | TMDS Data 0- | ↔ | CN2-17 | TMDS Data 0- | twist |
| CN1-18 | TMDS Data 0+ | ↔ | CN2-18 | TMDS Data 0+ | |
| CN1-19 | TMDS Data 0 Shield | ↔ | CN2-19 | TMDS Data 0 Shield | |
| CN1-20 | NC | | CN2-20 | NC | |
| CN1-21 | NC | | CN2-21 | NC | |
| CN1-22 | TMDS Data Clock Shield | ↔ | CN2-22 | TMDS Data Clock Shield | twist |
| CN1-23 | TMDS Clock+ | ↔ | CN2-23 | TMDS Clock+ | |
| CN1-24 | TMDS Clock- | ↔ | CN2-24 | TMDS Clock- | |

2.4.5 Video Connector

The Display has M21 type 10 pin video connector. Use waterproof Video cable to connect the Display to the source of video. Notice that Video is an optional connector.

Video Cable



| CN1 | | | | CN2 | | |
|---------|---------|-------|---|---------|---------|-------|
| Pin No. | Symbols | Color | | Pin No. | Symbols | Color |
| CN1-1 | CVBS | Green | ↔ | CN2-1 | CVBS | Green |
| CN1-2 | GND | Braid | ↔ | CN2-2 | GND | Braid |
| | | | | CN3 | | |
| CN1-3 | GND | Black | ↔ | CN3-1 | GND | Black |
| CN1-4 | Y | Blue | ↔ | CN3-2 | Y | Blue |
| CN1-5 | C | White | ↔ | CN3-3 | C | White |
| CN1-6 | GND | Black | ↔ | CN3-4 | GND | Black |

Chapter 3: Mounting

This chapter describes how to mount the device.

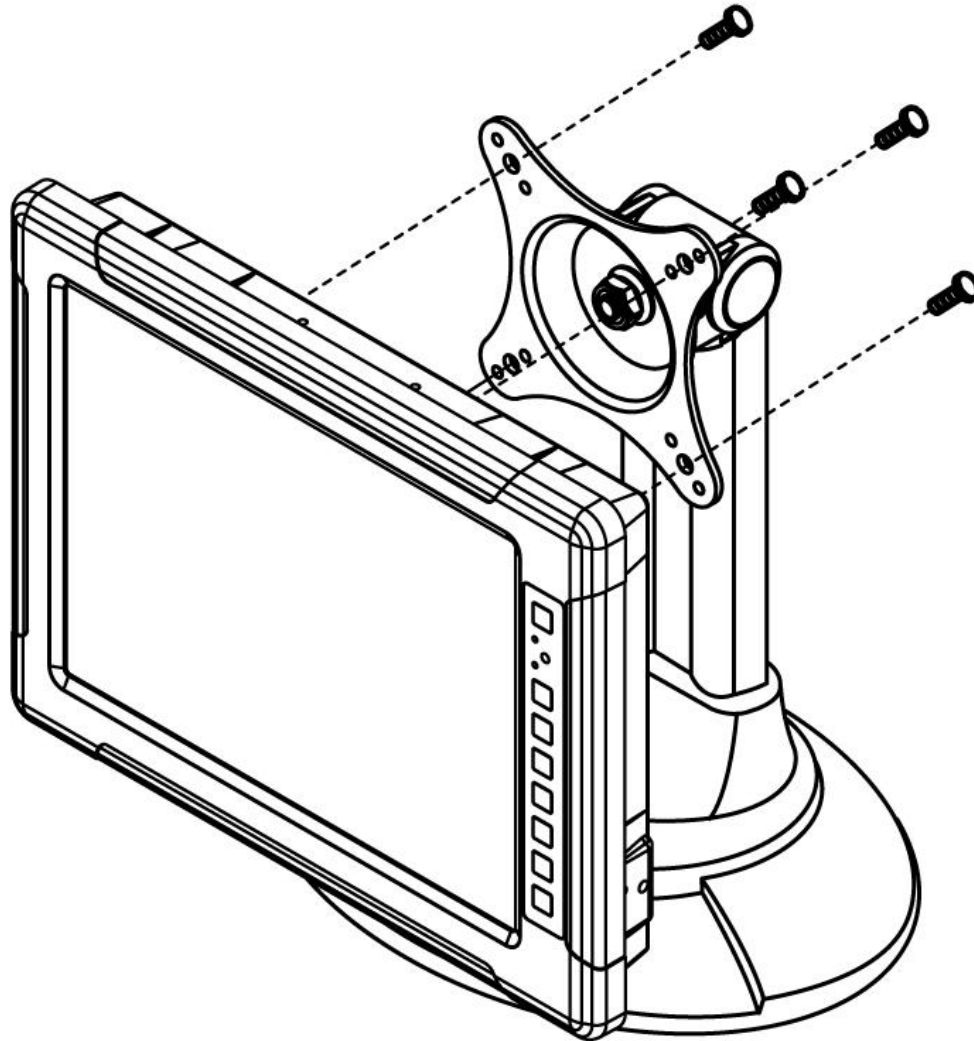


3.1 VESA Mount

This device supports VESA Mount (100 x 100 mm).

Mounting Instruction:

Use Philips M6 screws to fix the desk stand to VESA holes on the back cover of the device.



**The picture is for demonstration purposes only. VESA Mount accessories are not supplied by Winmate.*

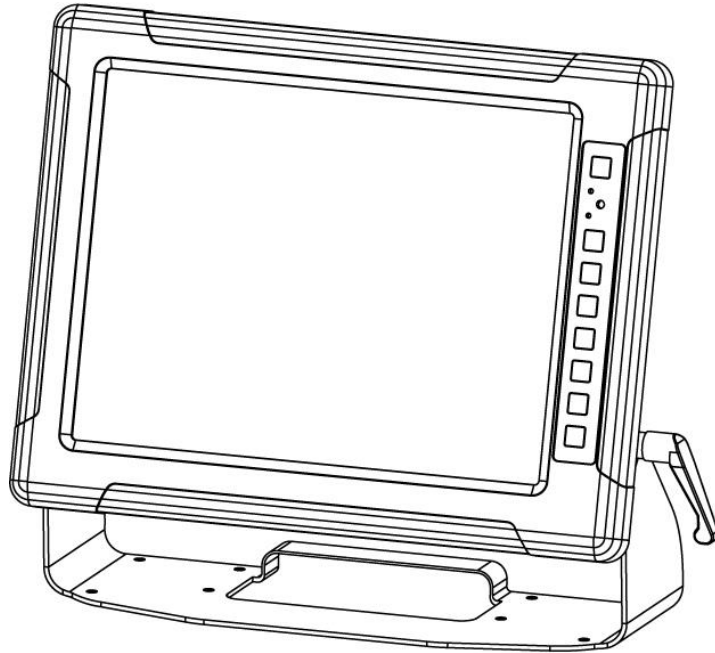
3.2 Dash/ Yoke Mount

You can purchase mounting bracket from Winmate as an optional accessory.

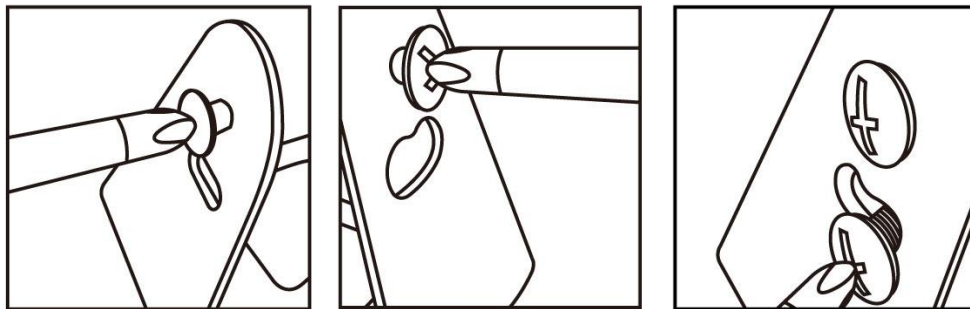
Part Number: 99KK15A00001

Mounting instruction:

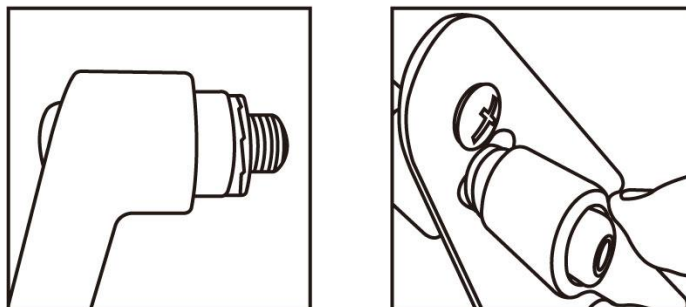
1. Place the Panel PC on the bracket stand, aiming screw hole for each other.



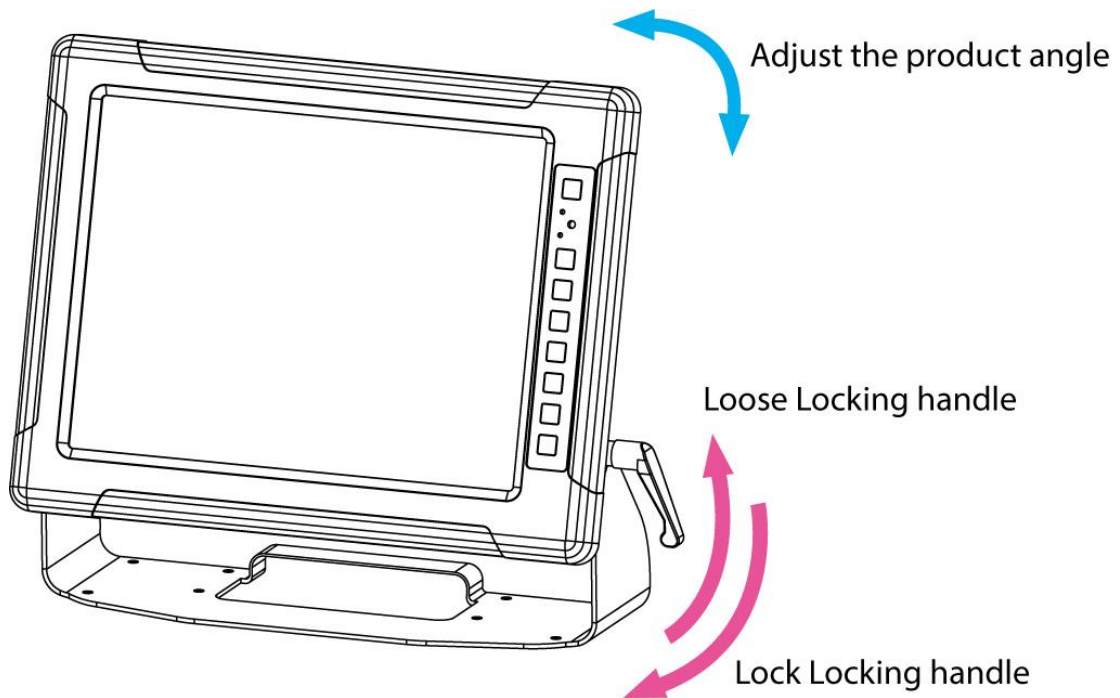
2. Secure three M5x10 screws to fix the device upon the bracket stand.



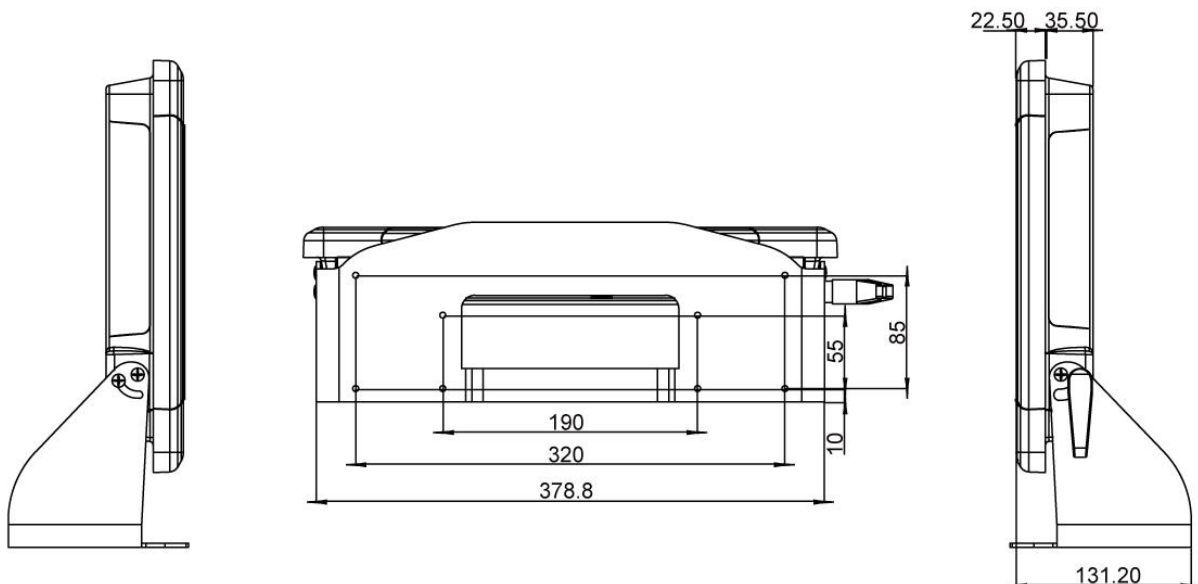
3. Secure tightly locking handle to the Panel PC.



4. Loosen the hand-screw adjustment tool, then you can adjust product angle on the stand. Then screw the product tightly again to secure the stand position.



Desk Stand Dimensions:



Chapter 4: Operating the Device

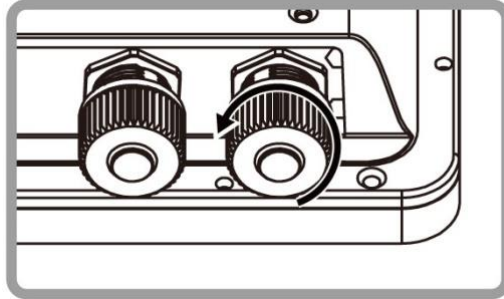
This chapter tells you how to operate the display.



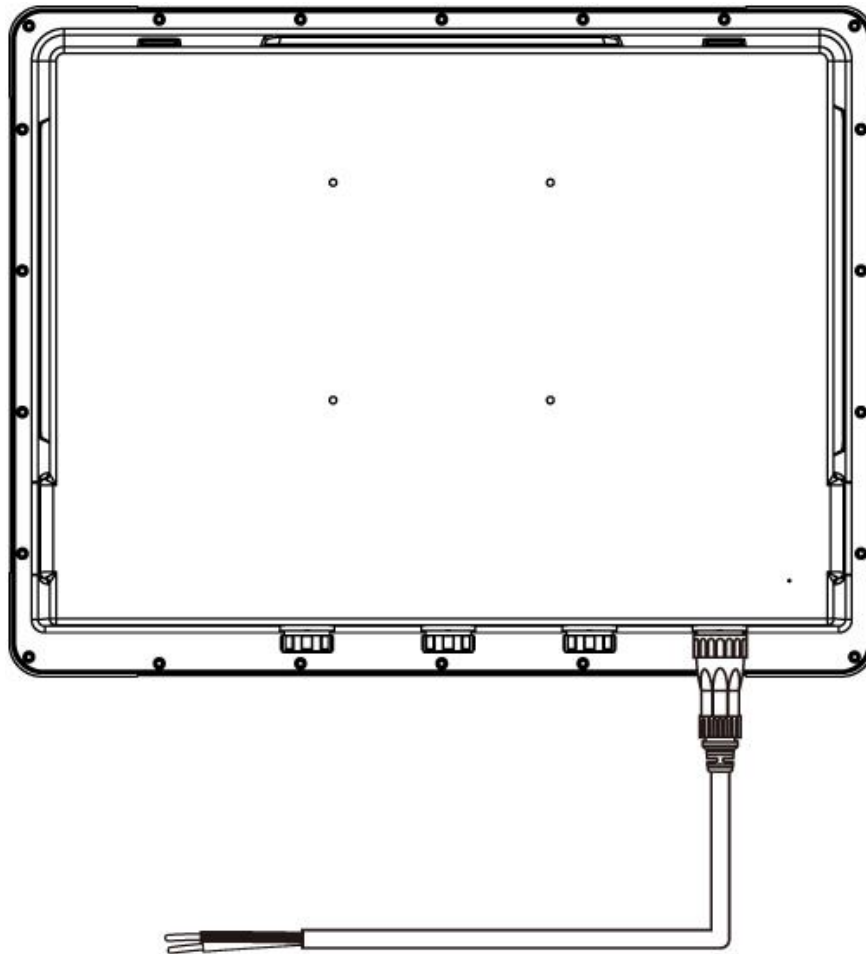
4.1 Turning On/ Off the Display


To turn on the display:

1. Remove the protective cap of the power connector.



2. Connect power cable to the connector of your device. Make sure the cable fits to the connector, then tighten the O-ring (by turning clockwise) to secure the connection.



3. Connect the other side of power cable to the source of power.
4. Press Power button  located on the front.

To turn off the display:

1. Disconnect the power cord from the display to completely turn off the device.

Appendix

This section contains additional information about the Display.



Product Specifications

| | | Model Name |
|-------------------------------------|-------------------------|--|
| | | R15L100-67C3HB |
| Display | Size | 15" |
| | Resolution | 1024 x 768 |
| | Brightness | 1000 nits |
| | Contrast Ratio | 700:1 |
| | Viewing Angle | -88~88 (H) ; -88~88 (V) |
| | Active Area | 304.1 (H) x 228.1 (V) |
| | Max Colors | 16.2M (8 bit) |
| | Touch | Optional: 5 Wire Resistive Touch |
| Input / Output Connectors | Power | 1 x Power (M21, 3 pin) |
| | VGA | 1 x VGA (M21, 10 pin) |
| | RS-232 or USB for Touch | 1 x RS-232 (M21, 10 pin) or USB (M21, 10 pin) |
| | DVI | 1 x DVI (M21, 15 pin) |
| | Video | Optional: 1 x Video (M21, 10 pin) |
| Power Management | Power Input | 9~36V DC in with lockable connector |
| | Power Consumption | 35W (typ.) |
| Mechanical Specifications | Dimensions | 398 x 308 x 58 mm |
| | Mounting | VESA Mount (100x100mm), Desk Mount with adjustable mounting bracket (with locking handle -5 deg. to 90 deg.) |
| | Cooling System | Fanless design |
| Environmental Considerations | Operating Temp. | -20 ~55°C |
| | Operating Humidity | 10 ~ 95%, non-condensing |
| | IP Rating | IP67 |
| | Shock | Operating: 40g for 11ms |
| | Vibration | Operating: 1.62/ 2.02/ 2.20g rms for XYZ/ 5-500Hz |
| Certificate | Safety | CE, FCC, compliance with EN50155 |

