

SPECTRA POWERTWIN M-SERIES

USER MANUAL

Version 1.1 – July 2015



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Prefaces

Revision

Revision	Description	Date
1.0	Manual Released	2015/01/06
1.1	Spectra PowerTwin 15W Models	2015/07/01

Copyright Notice

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Acknowledgement

All registered trademarks and product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective owners.

Disclaimer

This manual is intended to be used as a practical and informative guide only and is subject to change without notice. It does not represent a commitment on the part of Spectra. This product might include unintentional technical or typographical errors. Changes are periodically made to the information herein to correct such errors, and these changes are incorporated into new editions of the publication.

Declaration of Conformity



FCC

This equipment has been tested and found to comply with the limits for a Class A 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.



CE

The product(s) described in this manual complies with all application European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

Product Warranty Statement

Warranty

Spectra products are warranted by Spectra GmbH & Co. KG to be free from defect in materials and workmanship starting from the date of purchase by the original purchaser. During the warranty period, we shall, at our option, either repair or replace any product that proves to be defective under normal operation. Defects, malfunctions, or failures of the warranted product caused by damage resulting from natural disasters (such as by lightening, flood, earthquake, etc.), environmental and atmospheric disturbances, other external forces such as power line disturbances, plugging the board in under power, or incorrect cabling, and damage caused by misuse, abuse, and unauthorized alteration or repair, and the product in question is either software, or an expendable item (such as a fuse, battery, etc.), are not warranted.

RMA

Before sending your product in, you will need to fill in Spectra RMA Request Form and obtain a RMA number from us. Our staff is available at any time to provide you with the most friendly and immediate service.

RMA Instruction

- Customers must fill in Spectra Return Merchandise Authorization (RMA) Request Form and obtain a RMA number prior to returning a defective product to Spectra for service.
- Customers must collect all the information about the problems encountered and note anything abnormal and describe the problems on the "Spectra Service Form" for the RMA number apply process.
- Charges may be incurred for certain repairs. Spectra will charge for repairs to products whose warranty period has expired. Spectra will also charge for repairs to products if the damage resulted from acts of God, environmental or atmospheric disturbances, or other external forces through misuse, abuse, or unauthorized alteration or repair. If charges will be incurred for a repair, Spectra lists all charges, and will wait for customer's approval before performing the repair.
- Customers agree to insure the product or assume the risk of loss or damage during transit, to prepay shipping charges, and to use the original shipping container or equivalent.
- Customers can be send back the faulty products with or without accessories (manuals, cable, etc.) and any components from the system. If the components were suspected as part of the problems, please note clearly which components are included. Otherwise, Spectra is not responsible for the devices/parts.
- Repaired items will be shipped along with a "Repair Report" detailing the findings and actions taken.

Limitation of Liability

Spectra' liability arising out of the manufacture, sale, or supplying of the product and its use, whether based on warranty, contract, negligence, product liability, or otherwise, shall not exceed the original selling price of the product. The remedies provided herein are the customer's sole and exclusive remedies. In no event shall Spectra be liable for direct, indirect, special or consequential damages whether based on contract of any other legal theory.

Technical Support and Assistance

1. Visit our website at www.spectra.de where you can find the latest information about the product.
2. Contact our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Conventions Used in this Manual



WARNING

This indication alerts operators to an operation that, if not strictly observed, may result in severe injury.



CAUTION

This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.



NOTE

This indication provides additional information to complete a task easily.

Safety Precautions

Before installing and using this device, please note the following precautions:

1. Read these safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Disconnect this equipment from any AC outlet before cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
8. Use a power cord that has been approved for using with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

If one of the following situations arises, get the equipment checked by service personnel:

 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
14. CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

Package Contents

Before installation, please ensure all the items listed in the following table are included in the package.

Spectra PowerTwin M08		
Item	Description	Q'ty
1	Spectra PowerTwin M08	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	4
8	Power adapter & Power cord	1

Spectra PowerTwin M10		
Item	Description	Q'ty
1	Spectra PowerTwin M10	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	6
8	Power adapter & Power cord	1

Spectra PowerTwin M12		
Item	Description	Q'ty
1	Spectra PowerTwin M12	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	8
8	Power adapter & Power cord	1

Note: Notify your sales representative if any of the above items are missing or damaged.

Spectra PowerTwin M15

Item	Description	Q'ty
1	Spectra PowerTwin M15	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	8
8	Power adapter & Power cord	1

Spectra PowerTwin MW15

Item	Description	Q'ty
1	Spectra PowerTwin MW15	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	10
8	Power adapter & Power cord	1

Spectra PowerTwin M17

Item	Description	Q'ty
1	Spectra PowerTwin M17	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	10
8	Power adapter & Power cord	1

Spectra PowerTwin M19

Item	Description	Q'ty
1	Spectra PowerTwin M19	1
2	User manual & Driver/Utility DVD	1
3	USB Cable	1
4	VGA Cable	1
5	Power Terminal Block Connector (Female)	1
6	Screw Pack	1
7	Panel Mounting Kit	12
8	Power adapter & Power cord	1

Ordering Information

Model No.	Product Description
Spectra PowerTwin M08RL	8,4" Panel-Monitor, 4:3, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M10C	10,4" Panel-Monitor, 4:3, Cap-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M10RL	10,4" Panel-Monitor, 4:3, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M12C	12,1" Panel-Monitor, 4:3, Cap-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M12RL	12,1" Panel-Monitor, 4:3, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M15C	15" Panel-Monitor, 4:3, Cap-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M15RL	15" Panel-Monitor, 4:3, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin MW15C	15,6" Panel-Monitor, 16:9, Cap-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin MW15RL	15,6" Panel-Monitor, 16:9, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M17C	17" Panel-Monitor, 5:4 Cap-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M17RL	17" Panel-Monitor, 5:4, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M19C	19" Panel-Monitor, 5:4, Cap-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort
Spectra PowerTwin M19RL	19" Panel-Monitor, 5:4, R-Touch, with 1x USB, 1x COM, 1x VGA, 1x DVI-D and 1x DisplayPort

Optional Accessories

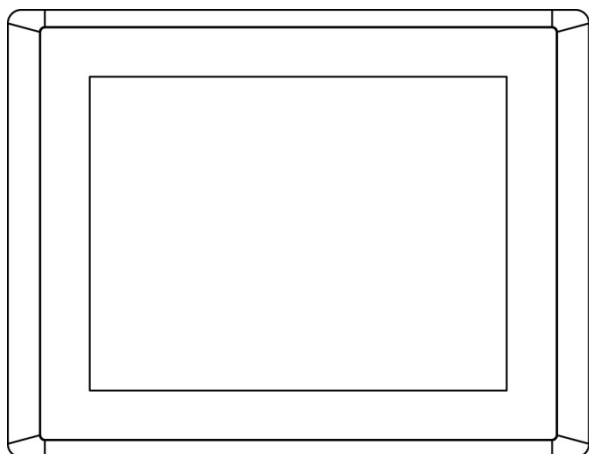
Model No.	Product Description
DVI-D Cable	DVI-D male to DVI-D male Cable 1,8 m

Chapter 1

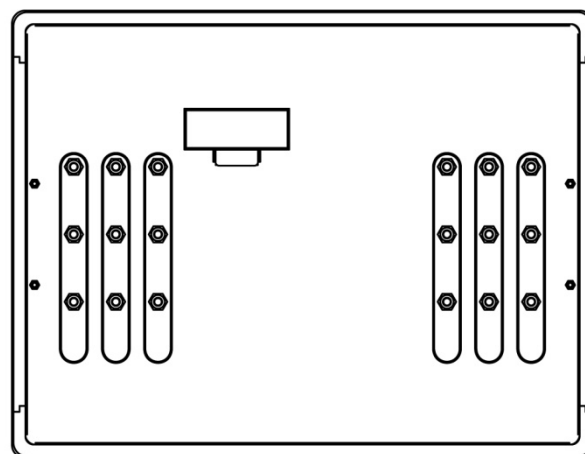
DISPLAYS SPECIFICATIONS

1.1 Overview

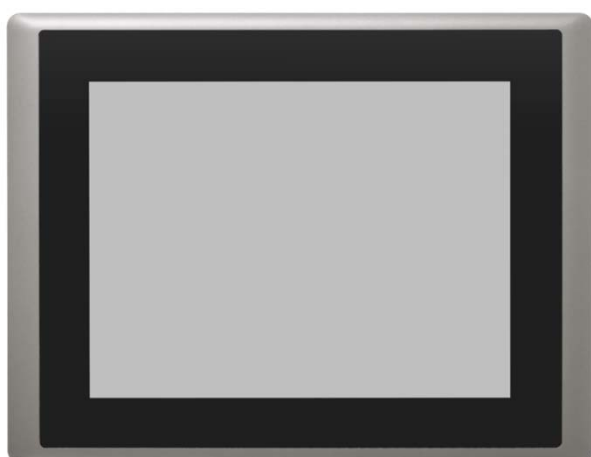
The Spectra PowerTwin Series is LCD display module with resistive 5-wire or projected capacitive touch screen. The Series features flat surface and IP65 dust/waterproof front panel. In addition, designed with aluminum die-cast front frame, it is rugged and reliable for industrial environment. With support for Convertible Display System (CDS) technology, The Spectra PowerTwin allows you to configure, upgrade and maintain your Convertible Display System easily.



Front



Rear



1.1.1 Spectra PowerTwin M08

Key Features

- 8.4" SVGA TFT 4:3 LCD with Resistive 5-wire Touch
- 30,000 hrs LED Backlight Life
- Resolution up to 800 x 600 (SVGA)
- 400 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 8.4" (4:3)
- Max. Resolution: 800 x 600
- Brightness (cd/m2): 400
- Contrast Ratio: 600 : 1
- LCD Color: 262K
- Pixel Pitch (mm): 0.213 (H) x 0.213 (V)
- Viewing Angle (H-V): 150 / 130
- Backlight MTBF: 30000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin M08RL

Environment

- Operating Temperature: Ambient with Air Flow: -10°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -30°C to 80°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 262 x 186.2 x 56.2 mm
- Weight: 1.62 kg
- Construction Front Panel: Die-cast Flat Surface

Certification

- CE
- FCC Class A

1.1.2 Spectra PowerTwin M10

Key Features

- 10.4" SVGA TFT 4:3 LCD with Resistive 5-wire / Projected Capacitive Touch
- 50,000 hrs LED Backlight Life
- Resolution up to 800 x 600 (SVGA)
- 400 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 10.4" (4:3)
- Max. Resolution: 800 x 600
- Brightness (cd/m²): 400
- Contrast Ratio: 700 : 1
- LCD Color: 16.2M
- Pixel Pitch (mm): 0.264 (H) x 0.264 (V)
- Viewing Angle (H-V): 160 / 130
- Backlight MTBF: 50000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin M10RL Only
- Projected Capacitive Touch for Spectra PowerTwin M10C Only

Environment

- Operating Temperature: Ambient with Air Flow: -10°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -30°C to 80°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 295 x 227.3 x 56.2 mm
- Weight: 2.24 kg
- Construction Front Panel: Die-cast Flat Surface

Certification

- CE
- FCC Class A

1.1.3 Spectra PowerTwin M12

Key Features

- 12.1" SVGA TFT 4:3 LCD with Resistive 5-wire / Projected Capacitive Touch
- 50,000 hrs LED Backlight Life
- Resolution up to 1024 x 768 (SVGA)
- 450 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 12.1" (4:3)
- Max. Resolution: 1024 x 768
- Brightness (cd/m2): 450
- Contrast Ratio: 800 : 1
- LCD Color: 262K
- Pixel Pitch (mm): 0.3075 (H) x 0.3075 (V)
- Viewing Angle (H-V): 160 / 140
- Backlight MTBF: 50000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin M12RL Only
- Projected Capacitive Touch for Spectra PowerTwin M12C Only

Environment

- Operating Temperature: Ambient with Air Flow: -10°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -30°C to 80°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 345 x 265.3 x 57 mm
- Weight: 3.16 Kg
- Construction Front Panel: Die-cast Flat Surface

Certification

- CE
- FCC Class A

1.1.4 Spectra PowerTwin M15

Key Features

- 15" XGA TFT 4:3 LCD with Resistive 5-wire / Projected Capacitive Touch
- 50,000 hrs LED Backlight Life
- Resolution up to 1024 x 768 (XGA)
- 350 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 15" (4:3)
- Max. Resolution: 1024 x 768
- Brightness (cd/m²): 350
- Contrast Ratio: 800 : 1
- LCD Color: 16.2M
- Pixel Pitch (mm): 0.297 (H) x 0.297 (V)
- Viewing Angle (H-V): 160 / 160
- Backlight MTBF: 50000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin M15RL Only
- Projected Capacitive Touch for Spectra PowerTwin M15C Only

Environment

- Operating Temperature: Ambient with Air Flow: -10°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -30°C to 80°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 408 x 312.4 x 59.2 mm
- Weight: 4.36 Kg
- Construction Front Panel: Die-cast Flat Surface

Certification

- CE
- FCC Class A

1.1.5 Spectra PowerTwin MW15

Key Features

- 15.6" WXGA TFT 16:9 LCD with Resistive 5-wire / Projected Capacitive Touch
- 50,000 hrs LED Backlight Life
- Resolution up to 1366 x 768 (WXGA)
- 300 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 15.6" (16:9)
- Max. Resolution: 1366 x 768
- Brightness (cd/m²): 300
- Contrast Ratio: 500 : 1
- LCD Color: 16.7M
- Pixel Pitch (mm): 0.252 (H) x 0.252 (V)
- Viewing Angle (H-V): 170 / 160
- Backlight MTBF: 50000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin MW15RL Only
- Projected Capacitive Touch for Spectra PowerTwin MW15C Only

Environment

- Operating Temperature: Ambient with Air Flow: -10°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -20°C to 60°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 420 x 254 x 66.2 mm
- Weight: TBD
- Construction Front Panel: Die-cast Flat Surface

Certification

- CE
- FCC Class A

1.1.6 Spectra PowerTwin M17

Key Features

- 17" SXGA TFT 5:4 LCD with Resistive 5-wire / Projected Capacitive Touch
- 50,000 hrs LED Backlight Life
- Resolution up to 1280 x 1024 (SXGA)
- 350 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 17" (5:4)
- Max. Resolution: 1280 x 1024
- Brightness (cd/m²): 350
- Contrast Ratio: 800 : 1
- LCD Color: 16.7M
- Pixel Pitch (mm): 0.264 (H) x 0.264 (V)
- Viewing Angle (H-V): 170 / 160
- Backlight MTBF: 50000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin M17RL Only
- Projected Capacitive Touch for Spectra PowerTwin M17C Only

Environment

- Operating Temperature: Ambient with Air Flow: -10°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -30°C to 85°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 450 x 350 x 63.2 mm
- Weight: 5.64 kg
- Construction Front Panel: Die-cast Flat Surface

Certification

- CE
- FCC Class A

1.1.7 Spectra PowerTwin M19

Key Features

- 19" SXGA TFT 5:4 LCD with Resistive 5-wire / Projected Capacitive Touch
- 50,000 hrs LED Backlight Life
- Resolution up to 1280 x 1024 (SXGA)
- 350 nits Brightness
- Designed with Aluminum Die-cast Front Frame
- IP 65 Compliant Front Panel
- Convertible Display System (CDS) Supported

Hardware Specification

Display

- LCD Size: 19" (5:4)
- Max. Resolution: 1280 x 1024
- Brightness (cd/m²): 350
- Contrast Ratio: 1000 : 1
- LCD Color: 16.7M
- Pixel Pitch (mm): 0.294 (H) x 0.294 (V)
- Viewing Angle (H-V): 170 / 160
- Backlight MTBF: 50000 hrs (LED Backlight)

Touch

- Resistive 5-wire Touch for Spectra PowerTwin M19RL Only
- Projected Capacitive Touch for Spectra PowerTwin M19C Only

Environment

- Operating Temperature: Ambient with Air Flow: -5°C to 50°C (with Industrial Grade Peripherals)
- Storage Temperature: -20°C to 60°C
- Relative humidity: 10%~95% (non-condensing)
- IP Level: IP 65 Compliant Front Panel

Physical

- Dimension (W x D x H): 510 x 389.3 x 63.2 mm
- Weight: TBD
- Construction Front Panel: Die-cast Flat Surface

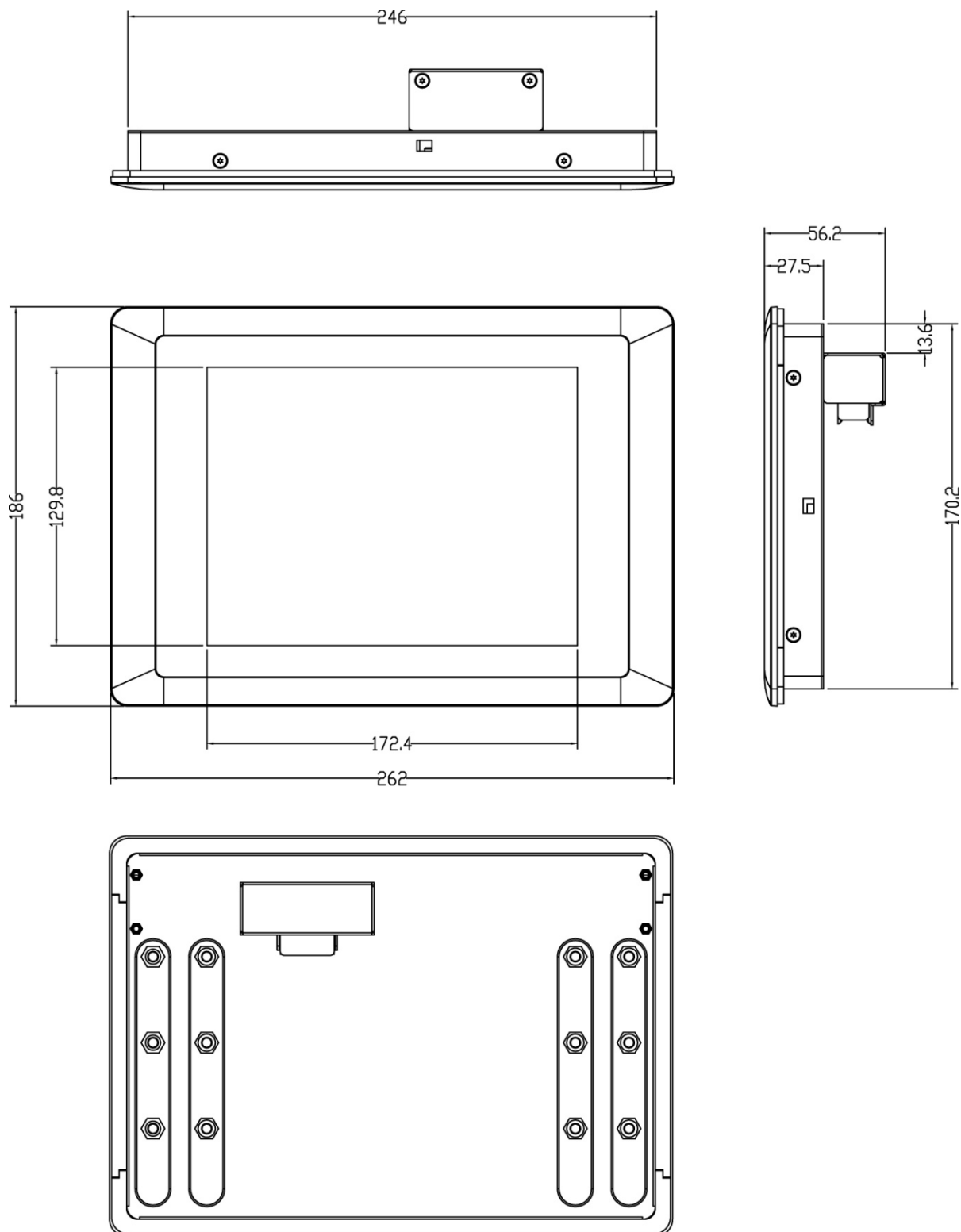
Certification

- CE
- FCC Class A

1.2 Mechanical Dimensions

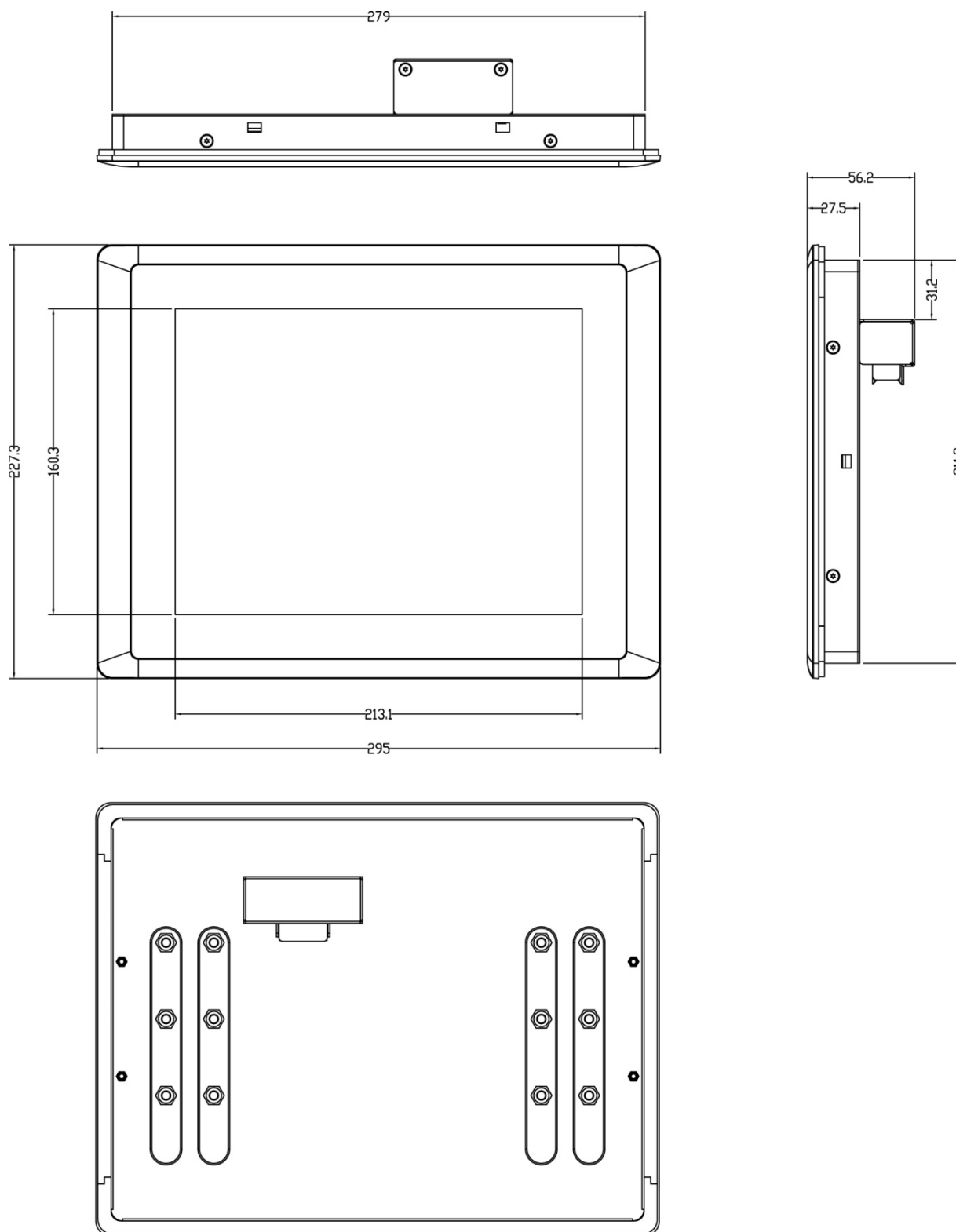
Spectra PowerTwin M08

Unit: mm



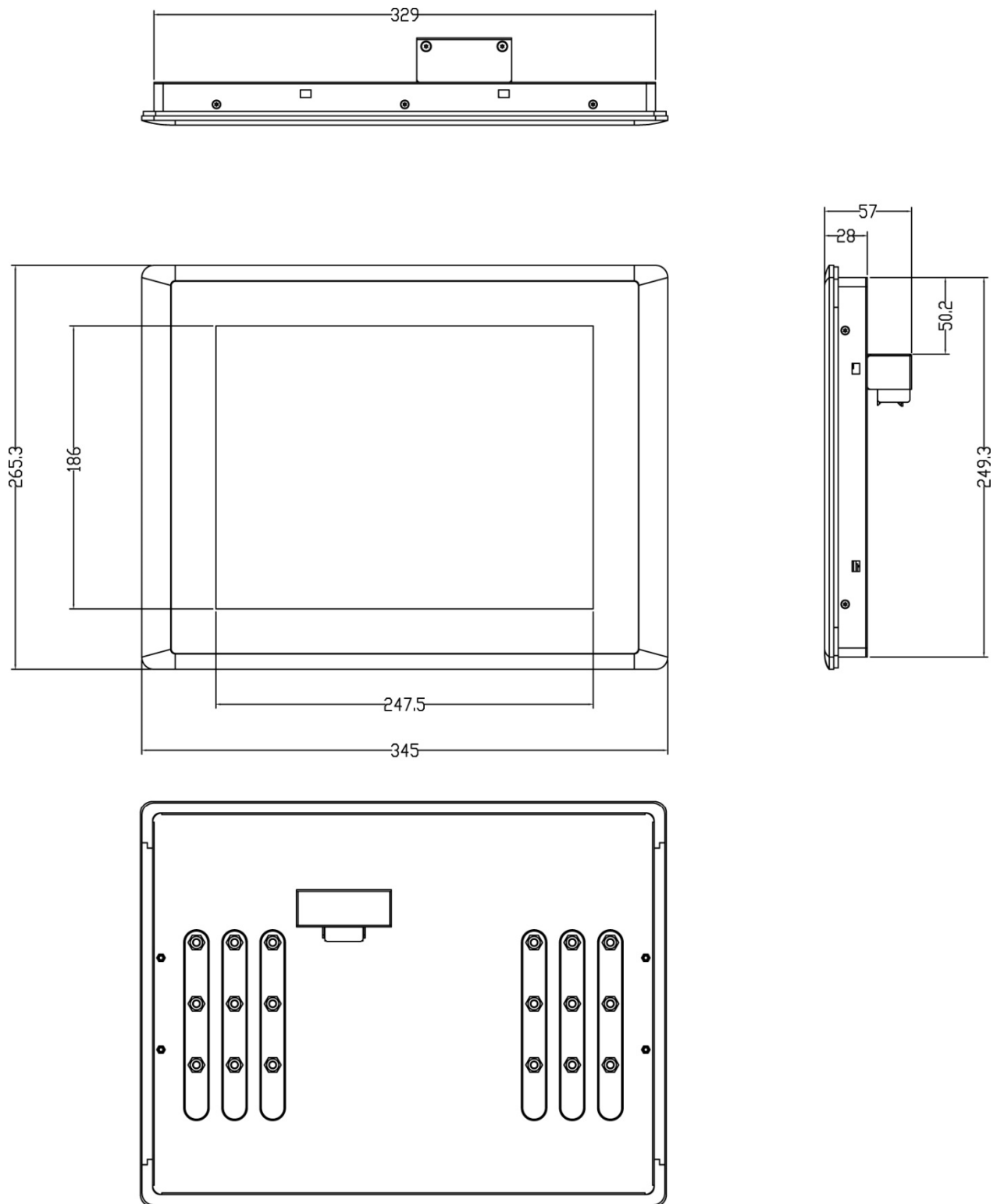
Spectra PowerTwin M10

Unit: mm



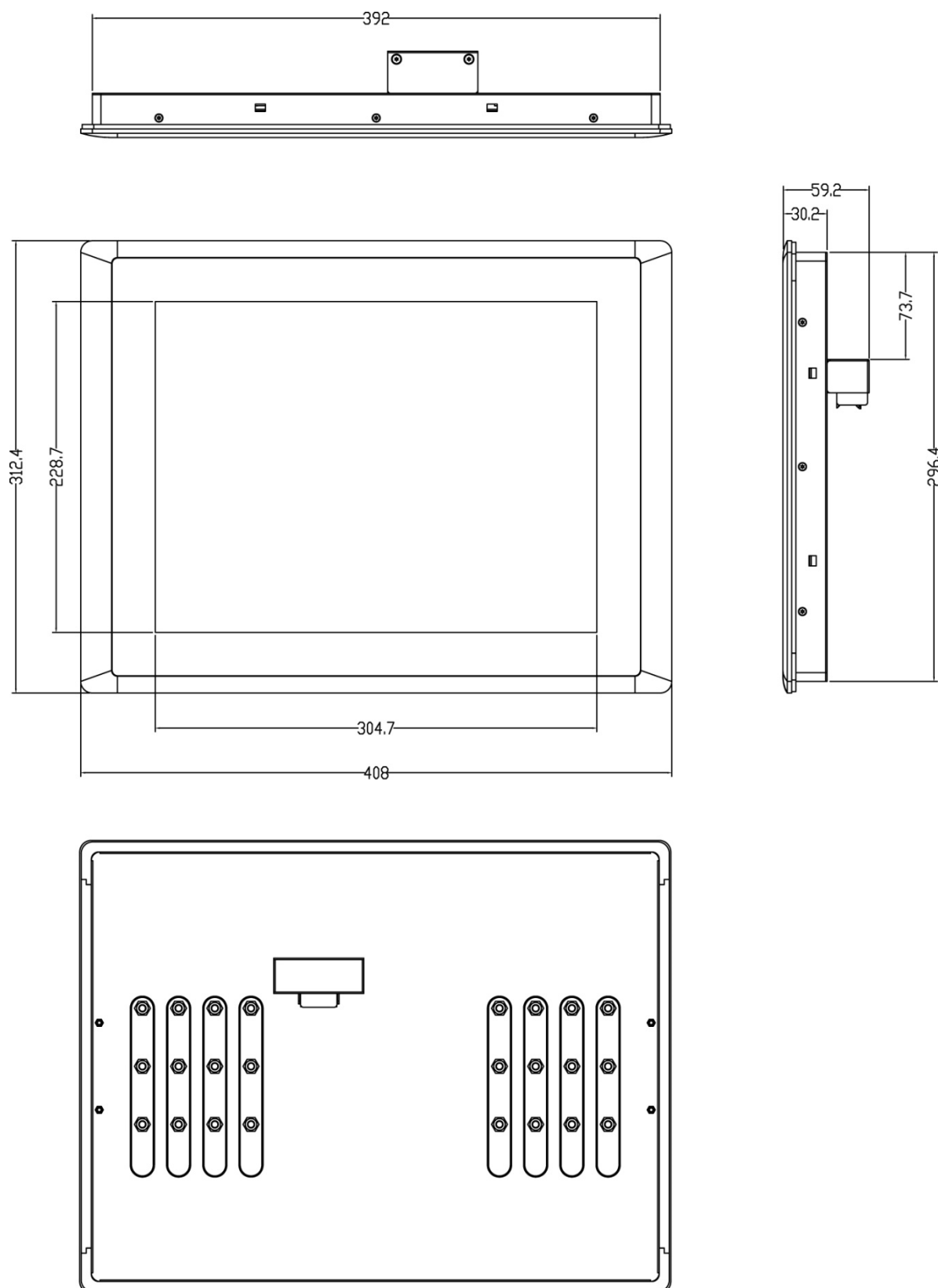
Spectra PowerTwin M12

Unit: mm



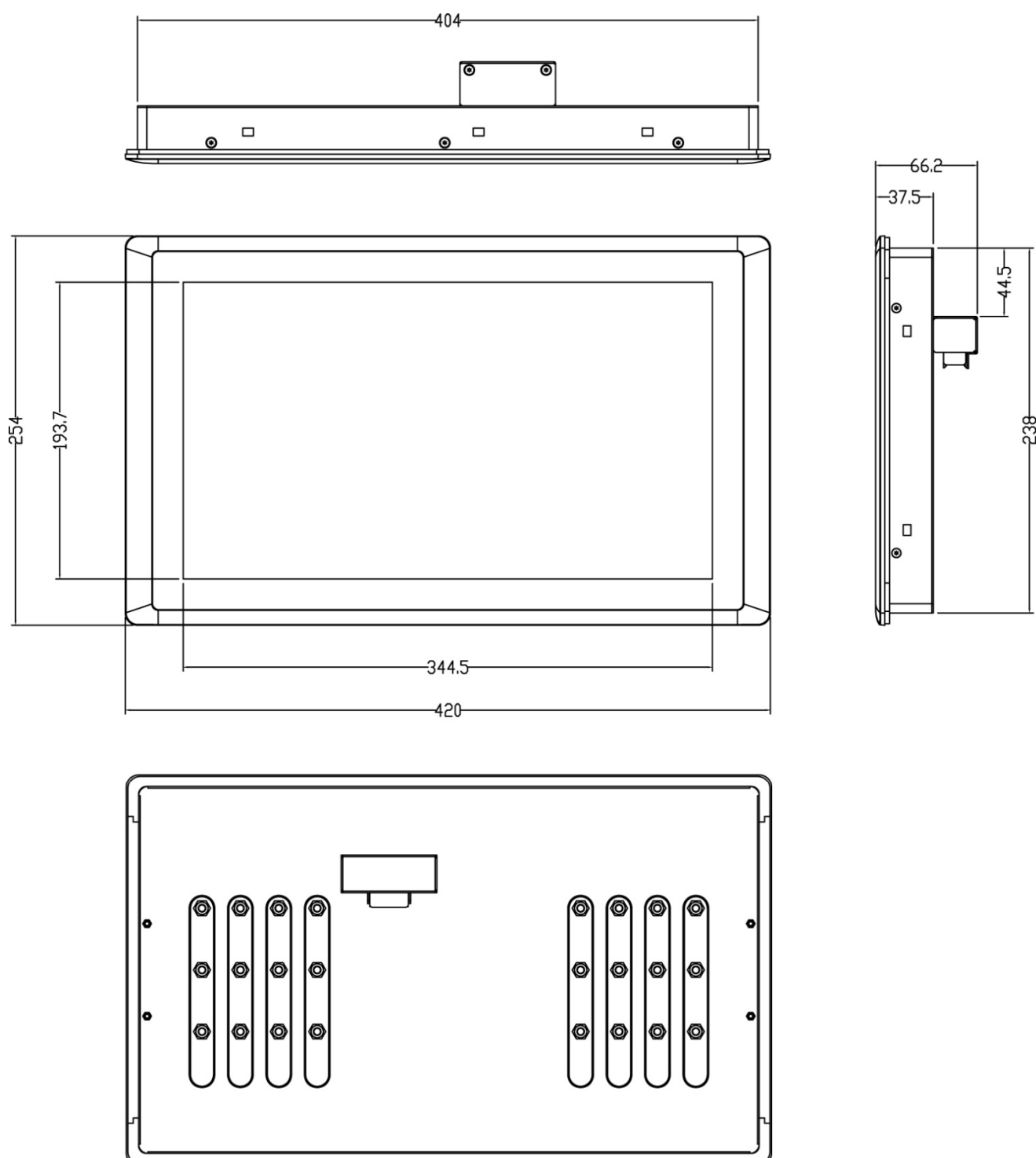
Spectra PowerTwin M15

Unit: mm



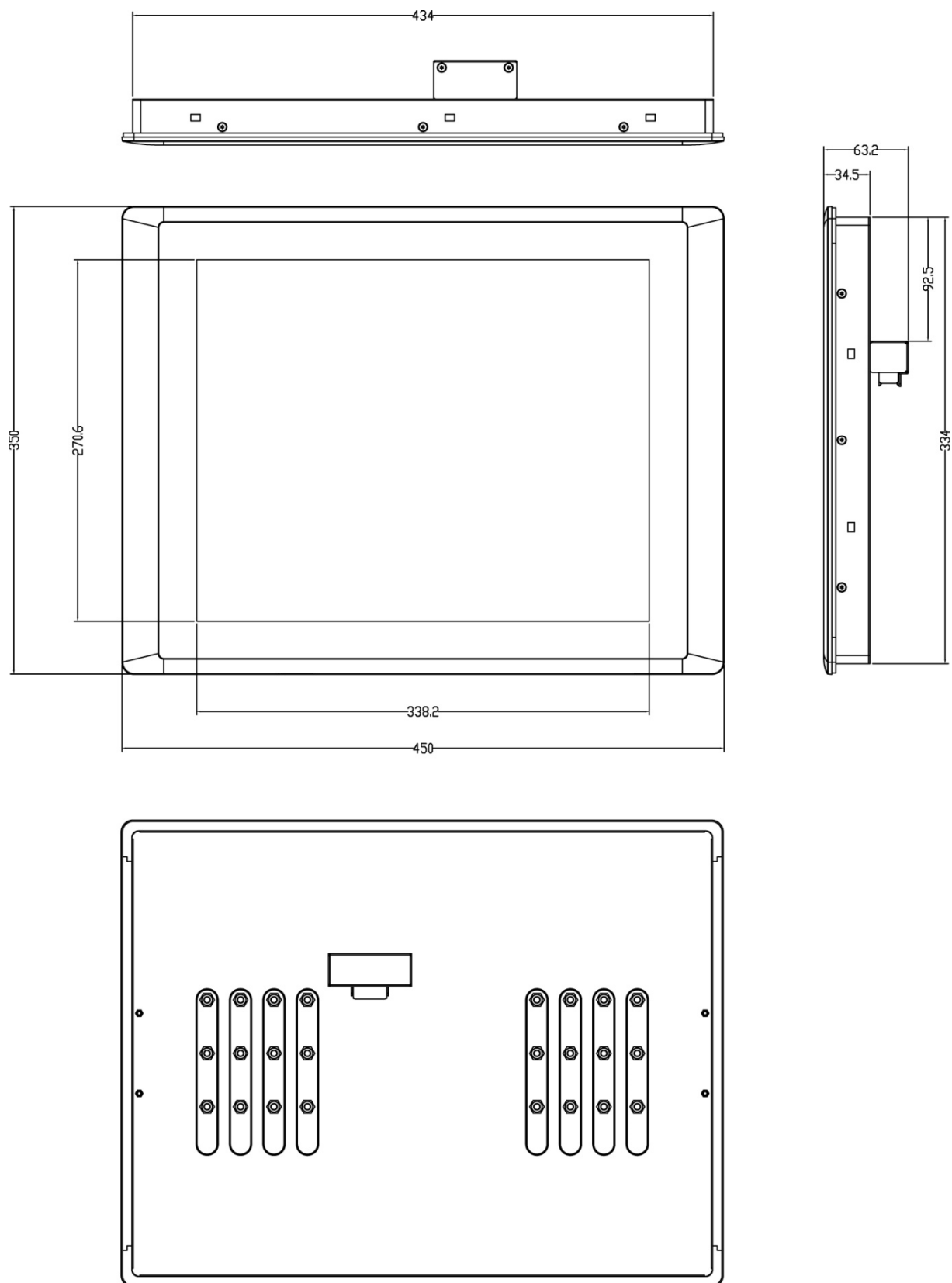
Spectra PowerTwin MW15

Unit: mm



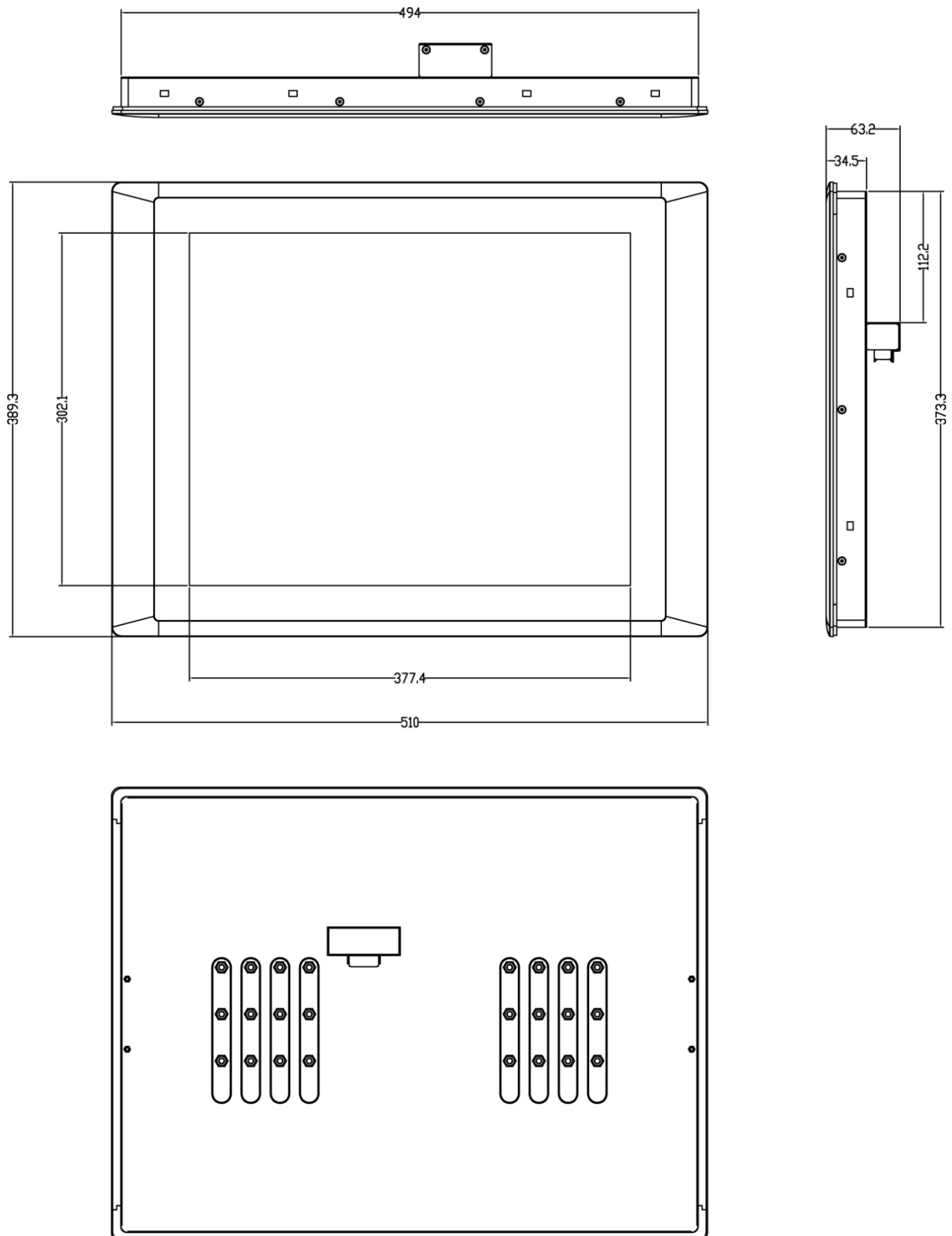
Spectra PowerTwin M17

Unit: mm



Spectra PowerTwin M19

Unit: mm



Chapter 2

MODULE SPECIFICATIONS

2.1 Overview

PowerTwin-M-R11 is a monitor module which supports Convertible Display Systems (CDS) technology; it is compatible with Spectra PowerTwin Display Modules for different display sizes and touchscreens.

PowerTwin-M-R11 offers both digital and analog signal input via three types of display interface: VGA, DVI-D and DisplayPort. In addition, it has OSD function for adjusting the viewing options of display and supports 1x USB and 1x COM ports for connecting with touch screen. Moreover, PowerTwin-M-R11 supports wide range power DC input from 9 to 48VDC and offers panel mount, wall mount and VESA mount. It can be powered and deployed for various applications.



Front



Side (Left)



Rear



Side (Right)

2.1.1 Key Features

- 1x VGA, 1x DVI-D, 1x DisplayPort Input Interface
- 1x USB, 1x COM, 1x Audio Input
- OSD Control Pad: LCD On/Off, Auto, Menu, Up and Down
- Multi-language OSD Function
- Wide Range Power Input 9~48VDC
- Support Panel / Wall / VESA Mounting
- Convertible Display System (CDS) Supported
- Built-in Two 5W Internal Speakers

2.2 Hardware Specification

System

- 1 x VGA Input
- 1 x DVI-D Input
- 1 x DisplayPort Input
- 1 x Audio Input
- 1 x USB 2.0 Input
- 1 x COM Port Input (Resistive Touch Only) (USB & COM port are reserved for the connection to enable touch usage only)

Environment

- Operating Temperature: Ambient with Air Flow: -5°C to 60°C (with Industrial Grade Peripherals)
- Storage Temperature: -20°C to 75°C
- Relative humidity: 10%~95% (non-condensing)

Physical

- Dimension (WxDxH, mm): 204.5 X 149 X 38.5 mm
- Weight: 1.12 kg
- Construction: Extruded aluminum with Heavy Duty Metal
- Mounting: Panel / Wall / VESA Mounting

Other Features

- Audio: AMP 5W + 5W (Internal Speaker)
- OSD Function: LCD On/Off, Auto, Menu, Up and Down
- Multi-language OSD Function

Power

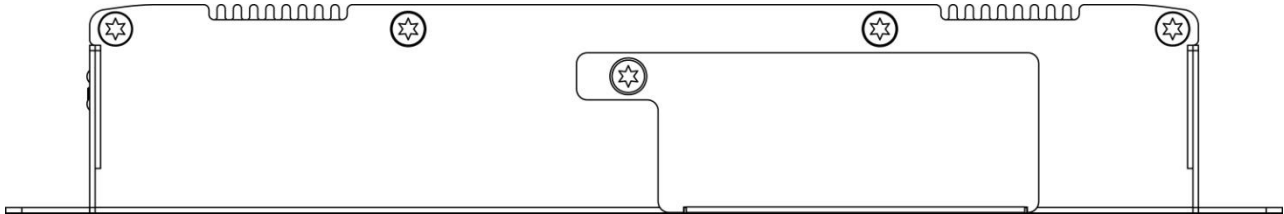
- 1 x 3-pin Terminal Block Connector with Power Input 9~48VDC
- 1 x Optional AC/DC 12V/5A, 60W Power Adapter

Certification

- CE
- FCC Class A

2.3 System I/O

2.3.1 Front



2.3.2 Rear

DC IN

Used to plug a DC power input with terminal block

VGA

Use the rear panel standard 15-pin female VGA connector to connect the monitor to the system graphics interface.

DVI-D

This 24-pin port is for PC (Personal Computer) DVI-D digital signal connection.

DisplayPort

The DisplayPort connector connects to a display device with DisplayPort interface.

Audio-in

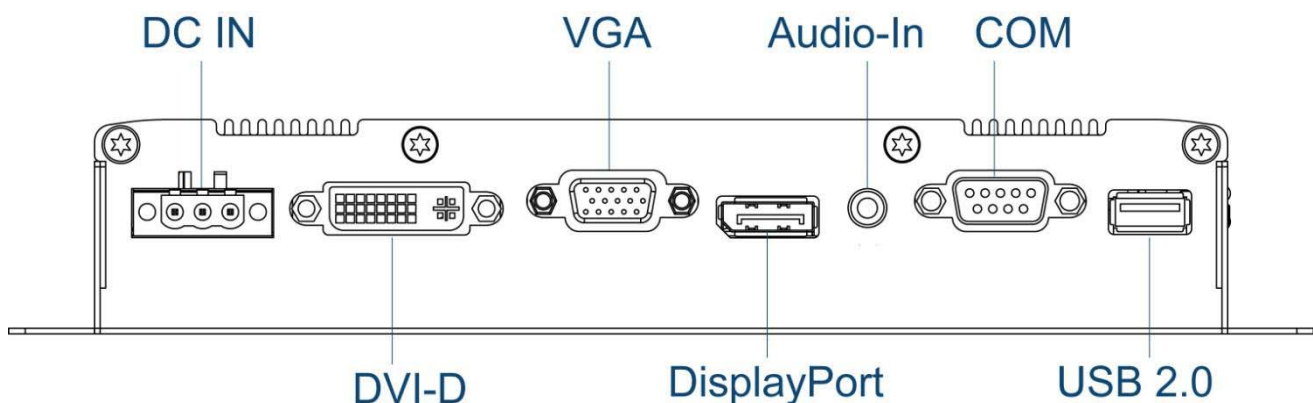
This port connects PC audio source by the bundled audio cable.

USB for Touch Panel Connector

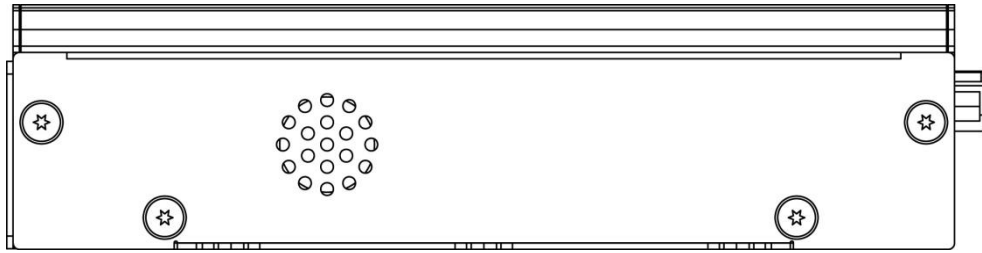
Use the rear panel standard USB touch panel connector to connect the monitor to the system interface.

COM port for Touch Panel Connector (Resistive Touch Only)

Use the rear panel standard RS-232 DB-9 female touch panel connector to connect the monitor to the system interface.



2.3.3 Side (Left)



2.3.4 Side (Right)

OSD (On Screen Display) Function:

LCD On/Off

Press to turn-on or turn-off the display.

Auto

Press to auto adjust the optimal frequency of horizontal and vertical.

Menu

Press this button to turn on/off the OSD main menu.

Press this button to activate selected items.

Up

To increase the value of selected item.

Down

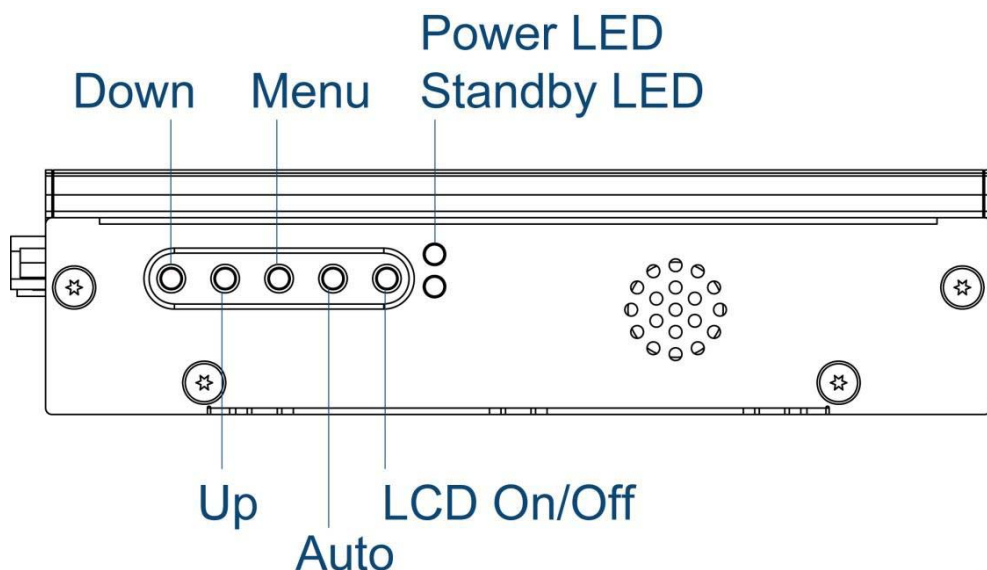
To decrease the value of selected item.

Power LED

Indicates the power status of the monitor.

Stand by LED

Indicates the stand by mode of the monitor.



2.3.5 TOP

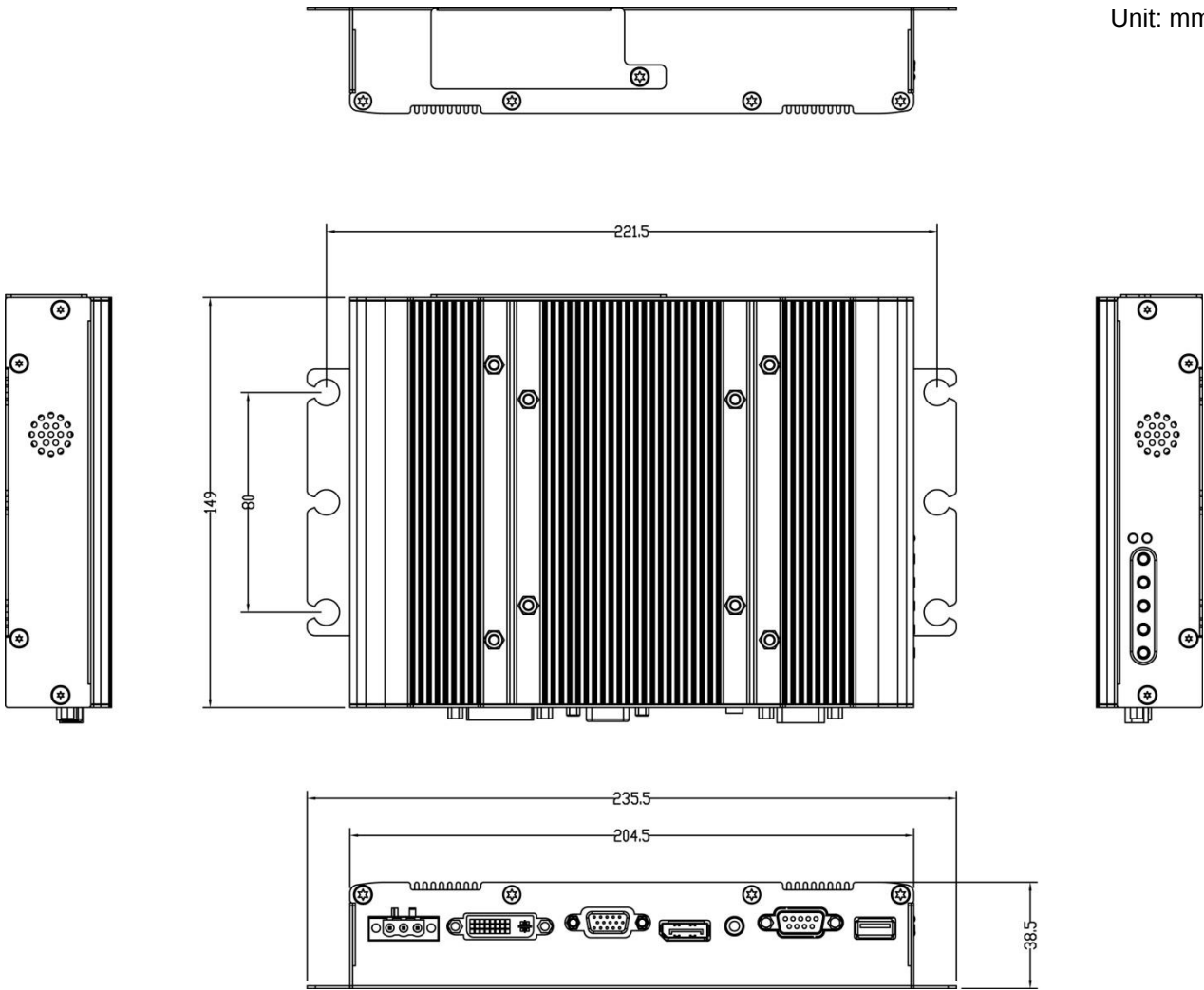
VESA Mounting Hole

These are mounting holes for VESA mount (75x75mm and 100x100mm)



2.4 Mechanical Dimensions

Unit: mm



Chapter 3

OSD OPERATION

3.1 Function Description of OSD

OSD Menu	Description
 Luminance	• Brightness • Contrast • Gamma • SuperResolution
 Picture	• Phase • Clock • H. Position • V. Position
 Color	• Color Temperature • Red • Green • Blue
 OSD Settings	• Horizontal • Vertical • Transparency • OSD Time Out
 Setup	• Language • Mute • Input • Reset

Chapter 4

SYSTEM SETUP

4.1 Connecting the PowerTwin module to the display

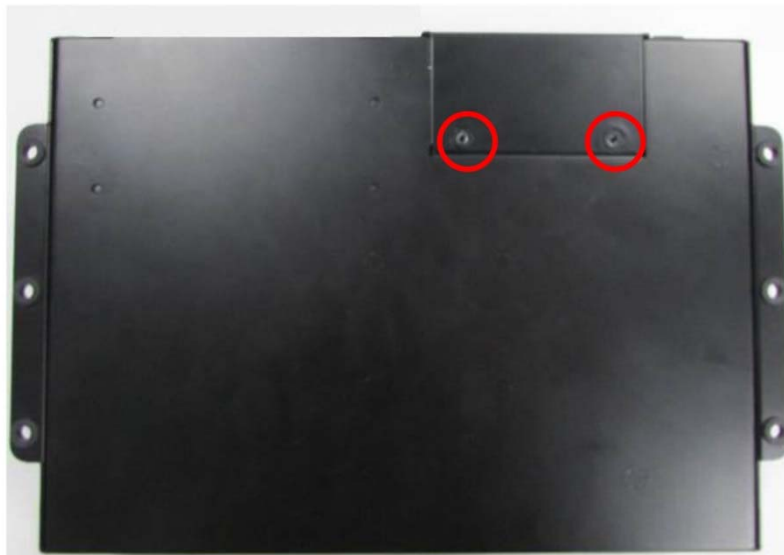
**WARNING**

In order to prevent electric shock or system damage, before removing the chassis cover, must turn off power and disconnect the unit from power source.

1. Locate the module connector slot and loosen the 1 screw.



2. Turn over the unit to have the bottom side face up, loosen the 2 screws of the module connector bracket.



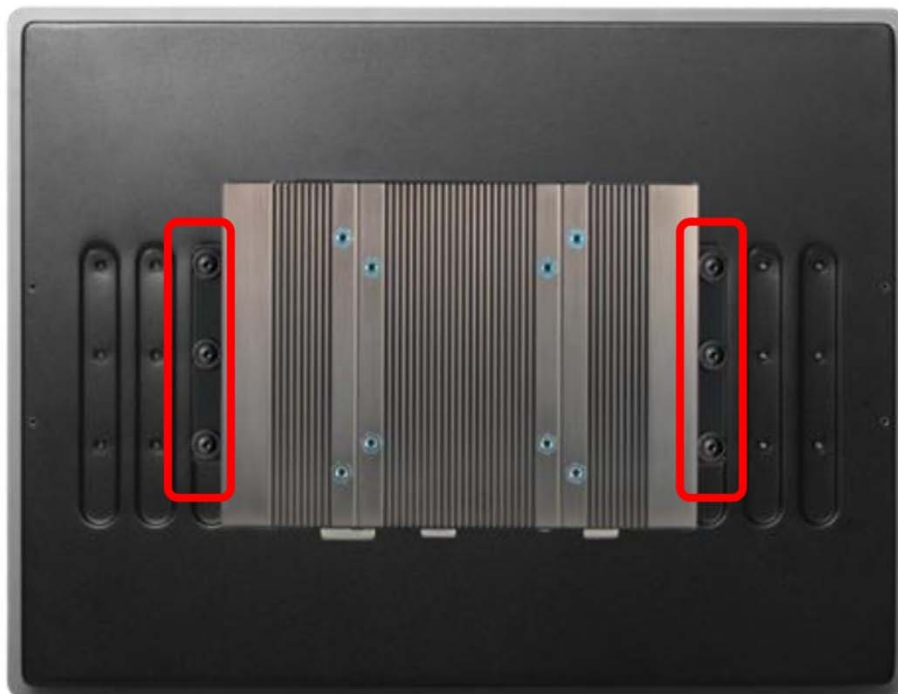
The photos shows the male connector (on display module) and female connector (on PC module)



3. Connect the modules.



4. Fasten the 6 screws to fix the PC module on the display module. .



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