TechNexion
INNOVATORS OF TECHNOLOGY

TEP-1010-IMX6 / TEP-1560-IMX6
Quickstart Guide

1 Safety Precautions

Thank you for purchasing a TechNexion TEP series device. This installation guide will be helpful in the installation, wiring and inspection of your TechNexion HMI. Before using the product, please read this guide to ensure correct use. You should thoroughly understand all safety precautions before proceeding with the installation, wiring, and operation. Place this instruction sheet in a safe location for future reference. The following suggestions will help you.

1.1 Storage and Installation

- Keep the device dry. Precipitation, humidity, and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, allow it to dry completely.
- Do not use or store the device in dusty or dirty areas. Its parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device. This product is designed for specific applications and needs to be installed by qualified personnel.
- Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not paint the device. Paint can clog the parts and prevent proper operation.
- Unauthorized modifications or attachments could damage the device and may violate regulations governing radio devices.
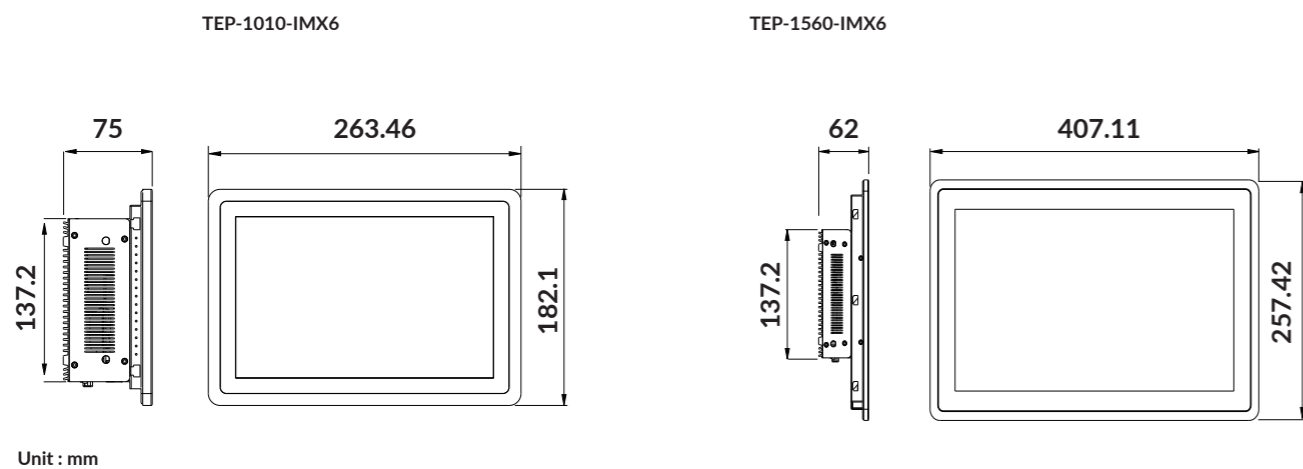
1.2 Wiring

- Make sure that the available power source matches the required input power of the device. Failure to observe this caution may result in electric shock or fire.
- Do not power the unit by DC input when you apply power over the PoE (RJ45).

1.3 Maintenance and Inspection

- Do not touch any internal or exposed parts of the device as electrical shock may result.
- Do not open the device while power is on. Otherwise electrical shock may result.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.
- Be sure the ventilation holes are not obstructed during operation. Otherwise malfunction may result due to bad ventilation or overheating.

These suggestions apply equally to your device, battery, charger, or any enhancement. If any device is not working properly, take it to the nearest authorized service facility for service.
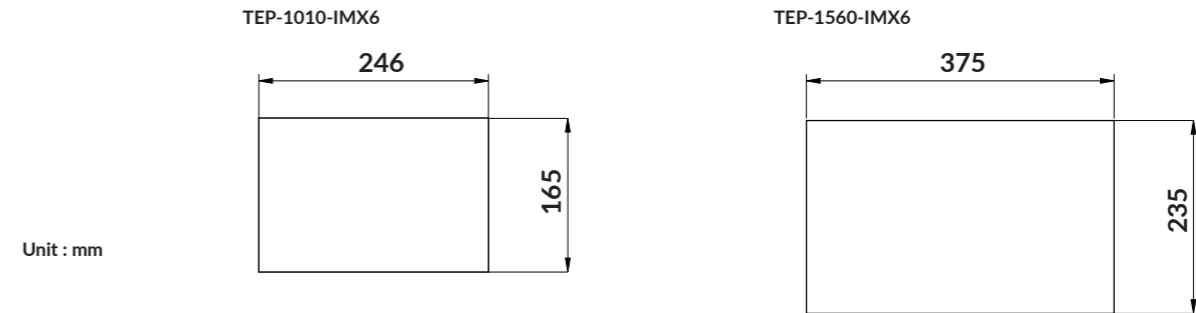
2 Dimensions

TEP-1010-IMX6

75 | 263.46
137.2 | 182.1

TEP-1560-IMX6

62 | 407.11
137.2 | 257.42

Unit : mm

3 Installation Instructions

This section describes the mounting procedures for TEP series device. The material in the mounting area must provide sufficient strength for support of this HMI.
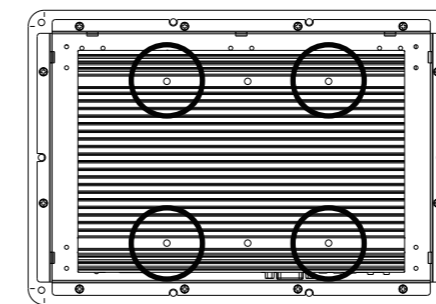
3.1 Cut-out Dimensions

TEP-1010-IMX6

246
165

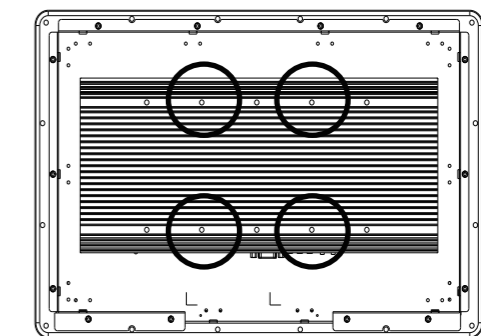**TEP-1560-IMX6**

375
235

Unit : mm

3.2 VESA Mounting

This device is compatible with VESA MIS-D Standard 100*100mm. There are 4 VESA MIS-D (M4) mounting holes on the rear side of the device. M4 screws with at least 6mm head-to-tip length are required to secure this device.
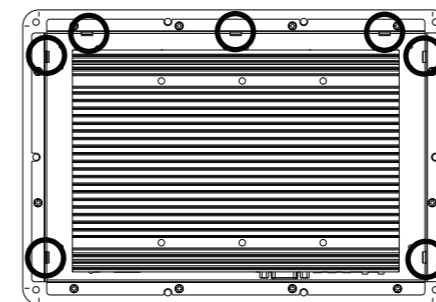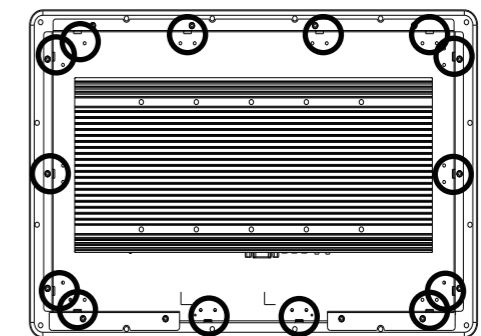
TEP-1010-IMX6   **TEP-1560-IMX6**

3.3 Rear Mounting

There are 7 (TEP-1010-IMX6) / 14 (TEP-1560-IMX6) mounting clips required for rear mounting.
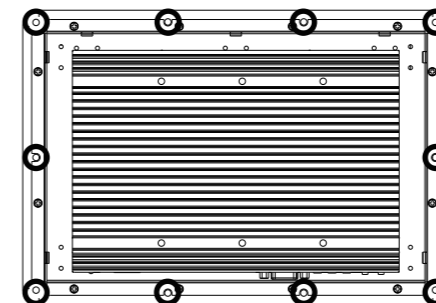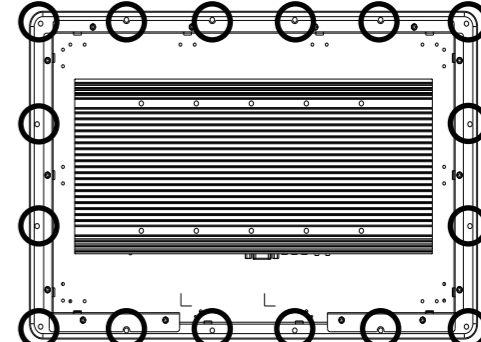
TEP-1010-IMX6   **TEP-1560-IMX6**

3.4 Surface Mounting

There are 10 (TEP-1010-IMX6) / 16 (TEP-1560-IMX6) mounting holes (M4) on the rear side of the device required for surface mounting. M4 screws with at least 6mm head-to-tip length are required to secure this device.
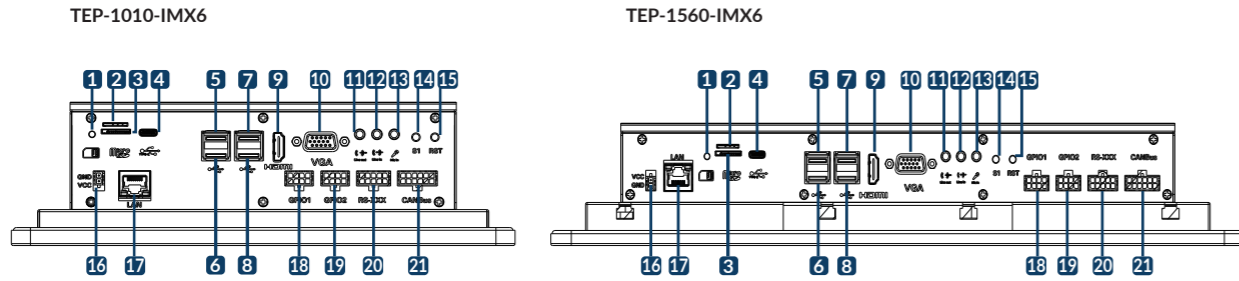
TEP-1010-IMX6   **TEP-1560-IMX6**

4 External Connectors

Bottom view:

TEP-1010-IMX6

TEP-1560-IMX6

No.	Description	No.	Description
1	LED Light indicator	12	3.5mm jack Line in
2	Micro-SIM cardslot	13	3.5mm jack Mic in
3	MicroSD cardslot	14	S1 Boot Select button
4	USB OTG (Type-C) connector	15	Reset button
5	USB Host connector	16	Power Input connector
6	USB Host connector	17	LAN RJ45 connector
7	USB Host connector	18	GPIO1 connector (optional)
8	USB Host connector	19	GPIO2 connector (optional)
9	HDMI connector	20	RS-XXX (Serial Port) connector (optional)
10	VGA (15-pin D-SUB) connector	21	CAN Bus connector (optional)
11	3.5mm jack Line out		

5 Additional I/O Connectors: GPIO1, GPIO2, RS-XXX and CAN Bus (optional)

This product is available with four optional connectors: GPIO1, GPIO2, RS-XXX and CAN Bus that can be ordered in either a galvanic isolated or non-galvanic isolated version.

5.1 Galvanic Isolated Connectors Pin Definition (TEP1010-IMX6x-Rxx-Exx-Lxxx-XG20-xxx-xxxx) (optional)

5.1.1 Galvanic Isolated Serial Port Connector (RS-XXX) (optional)

The dual 4-wire galvanic isolated serial port is set by default as follows: The primary and secondary serial ports are both set as RS-232 during manufacturing. For setting details of the TEP-1010-IMX6/TEP-1560-IMX6 serial ports in other modes, please refer to the TEP-1010-IMX6/TEP-1560-IMX6 HARDWARE MANUAL.

RS-XXX:

Port	Pin #	RS-232 + RS-232	RS-232 + RS-422	RS-232 + RS-485	Device
	1	GND	GND	GND	
	2	SERIAL1A_TXD	SERIAL1A_TXD	SERIAL1A_TXD	ttymxc0
	3	SERIAL1A_RXD	SERIAL1A_RXD	SERIAL1A_RXD	ttymxc0
	4	SERIAL1A_RTS	SERIAL1A_RTS	SERIAL1A_RTS	ttymxc0
	5	SERIAL1A_CTS	SERIAL1A_CTS	SERIAL1A_CTS	ttymxc0
	6	GND	GND	GND	
	7	SERIAL1B_TXD	SERIAL1B_TXD+	SERIAL1B+	ttymxc1
	8	SERIAL1B_RXD	SERIAL1B_RXD	NC	ttymxc1
	9	SERIAL1B_RTS	SERIAL1B_RXD+	NC	ttymxc1
	10	SERIAL1B_CTS	SERIAL1B_TXD-	SERIAL1B-	ttymxc1

Header: Molex 43045-1000 (10-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-1000 (10-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

5.1.2 Galvanic Isolated CAN Bus Connector (CANBus) (optional)

For detailed settings information of the TEP-1010-IMX6/TEP-1560-IMX6 CAN Bus connector, please refer to the TEP-1010-IMX6/TEP-1560-IMX6 HARDWARE MANUAL.

CANBus:

Port	Pin #	Signal	Interface
	1	GND_CAN	
	2	CAN1A_TERM_N	can1
	3	CAN1A_P	can1
	4	CAN1A_N	can1
	5	CAN1A_TERM_P	can1
	6	NC	
	7	GND_CAN	
	8	CAN1B_TERM_N	can2
	9	CAN1B_P	can2
	10	CAN1B_N	can2
	11	CAN1B_TERM_P	can2
	12	NC	

Header: Molex 43045-1200 (12-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-1200 (12-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

5.1.3 Galvanic Isolated Digital I/O Connectors (GPIO1 / GPIO2) (optional)

For detailed settings information of the TEP-1010-IMX6/TEP-1560-IMX6 GPIO ports, please refer to the TEP-1010-IMX6/TEP-1560-IMX6 HARDWARE MANUAL.

GPIO1/GPIO2:

Port	Pin #	GPIO1 Signal	GPIO1 Description	GPIO2 Signal	GPIO2 Description	Voltage
	1	GPIO1A	DIG_IN1	GPIO2A	DIG_IN1	Max. 6V
	2	GPIO1B	DIG_IN2	GPIO2B	DIG_IN2	Max. 6V
	3	GND_DIO	Ground for digital I/O	GND_DIO	Ground for digital I/O	
	4	GND	Common Ground	GND	Common Ground	
	5	GPIO1C	DIG_OUT5	GPIO2C	DIG_OUT5	Max. 16V
	6	GPIO1D	DIG_OUT6	GPIO2D	DIG_OUT6	Max. 16V
	7	VCC_DIO	Supply output for digital I/O	VCC_DIO	Supply output for digital I/O	Max. 16V
	8	VCC	Supply Output	VCC	Supply Output	12V

Header: Molex 43045-0800 (8-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-0800 (8-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

5.2 Non-Galvanic Isolated Connectors Pin Definition (TEP1010-IMX6x-Rxx-Exx-Lxxx-XS20-xxx-xxxx) (optional)

5.2.1 Non-Galvanic Isolated Serial Port Connector (RS-XXX) (optional)

The dual 4-wire non-galvanic isolated serial port can be configured as follows: The primary and secondary serial port can only be used as a standard RS-232

RS-XXX:

Port	Pin #	RS-232 + RS-232	Device
	1	GND	
	2	SERIAL1A_TXD	ttymxc0
	3	SERIAL1A_RXD	ttymxc0
	4	SERIAL1A_RTS	ttymxc0
	5	SERIAL1A_CTS	ttymxc0
	6	GND	
	7	SERIAL1B_TXD	ttymxc1
	8	SERIAL1B_RXD	ttymxc1
	9	SERIAL1B_RTS	ttymxc1
	10	SERIAL1B_CTS	ttymxc1

Header: Molex 43045-1000 (10-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-1000 (10-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

5.2.2 Non-Galvanic Isolated CAN Bus Connector (CANBus) (optional)

For detailed settings information of the TEP-1010-IMX6/TEP-1560-IMX6 CAN Bus connector, please refer to the TEP-1010-IMX6/TEP-1560-IMX6 HARDWARE MANUAL.

CANBus:

Port	Pin #	Signal	Interface
	1	GND_CAN	
	2	CAN1A_TERM_N	can1
	3	CAN1A_P	can1
	4	CAN1A_N	can1
	5	CAN1A_TERM_P	can1
	6	NC	
	7	GND_CAN	
	8	CAN1B_TERM_N	can2
	9	CAN1B_P	can2
	10	CAN1B_N	can2
	11	CAN1B_TERM_P	can2
	12	NC	

Header: Molex 43045-1200 (12-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-1200 (12-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

5.2.3 Non-Galvanic Isolated Digital I/O Connectors (GPIO1 / GPIO2) (optional)

For detailed settings information of the TEP-1010-IMX6/TEP-1560-IMX6 GPIO ports, please refer to the TEP-1010-IMX6/TEP-1560-IMX6 HARDWARE MANUAL.

GPIO1/GPIO2:

Port	Pin #	GPIO1 Signal	GPIO1 Description	GPIO2 Signal	GPIO2 Description	Voltage
	1	GPIO1A	DIG_IN1/OUT1	GPIO2A	DIG_IN1/OUT1	3.3V
	2	GPIO1B	DIG_IN2/OUT2	GPIO2B	DIG_IN2/OUT2	3.3V
	3	NC		NC		
	4	GND	Common Ground	GND	Common Ground	
	5	GPIO1C	DIG_IN5/OUT5	GPIO2C	DIG_IN5/OUT5	3.3V
	6	GPIO1D	DIG_IN5/OUT6	GPIO2D	DIG_IN5/OUT6	3.3V
	7	NC		NC		
	8	VCC	Supply Output	VCC	Supply Output	12V

Header: Molex 43045-0800 (8-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-0800 (8-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

6 Software Installation

The unit is preloaded with software that can download and install a selection of OS images over hardwired network. Simply connect a network to the unit through the Ethernet LAN RJ45 connector and power it up, then follow the steps on the screen to load the software. Local proxies will interfere with this process. For more information, go to our Knowledge Base at: https://www.technexion.com/support/knowledge-base/