TechNexion
INNOVATORS OF TECHNOLOGY

EDM-WIZARD-IMX8M
Quickstart Guide

1 Safety Precautions

Thank you for purchasing a TechNexion EDM series evaluation kit based on NXP i.MX8M applications processor. This installation guide will be helpful in the installation, wiring and inspection of your TechNexion evaluation kit. 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.

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.
- 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.
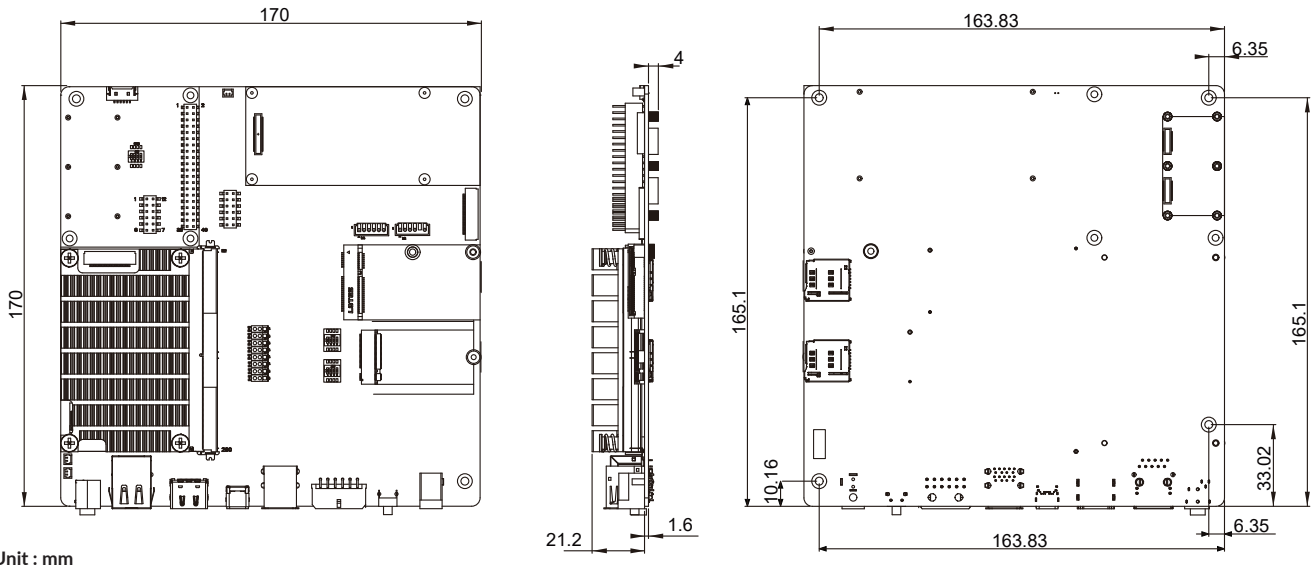
1.2 Wiring

- 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.

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

170

4

163.83

6.35

170

165.1

165.1

10.16

33.02

21.2

1.6

163.83
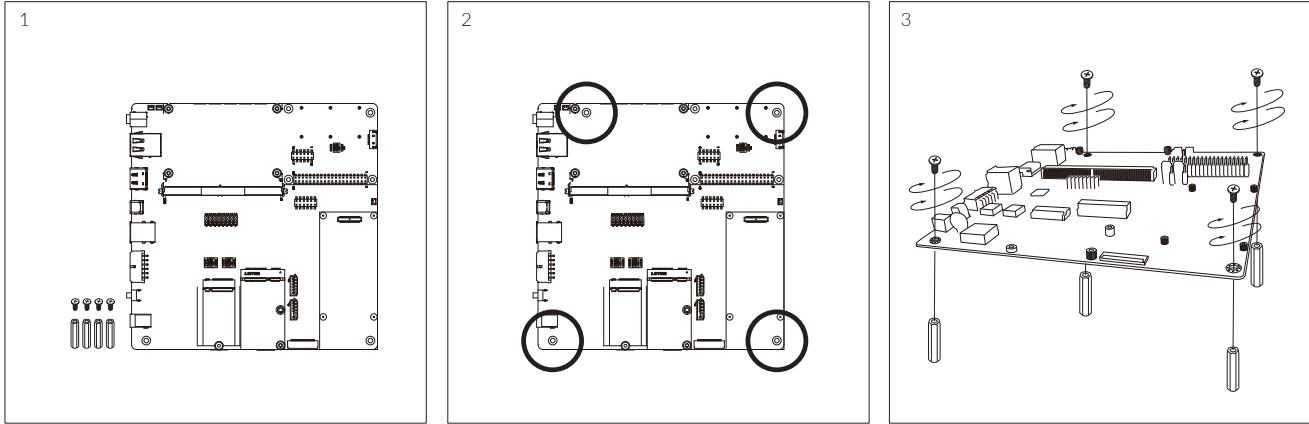
6.35

Unit : mm

3 Installation Instructions

This installation guide will help you to assemble your development kit using step-by-step instructions to make sure all parts (development board, display, camera module and Wi-Fi antenna) are working.

3.1 Connect the parts

Connect the parts in the following order. Note that some versions of the EDM-WIZARD-IMX8M evaluation kit do not include the multi-touch display, camera / HDMI capture module and/or HDMI expander card.
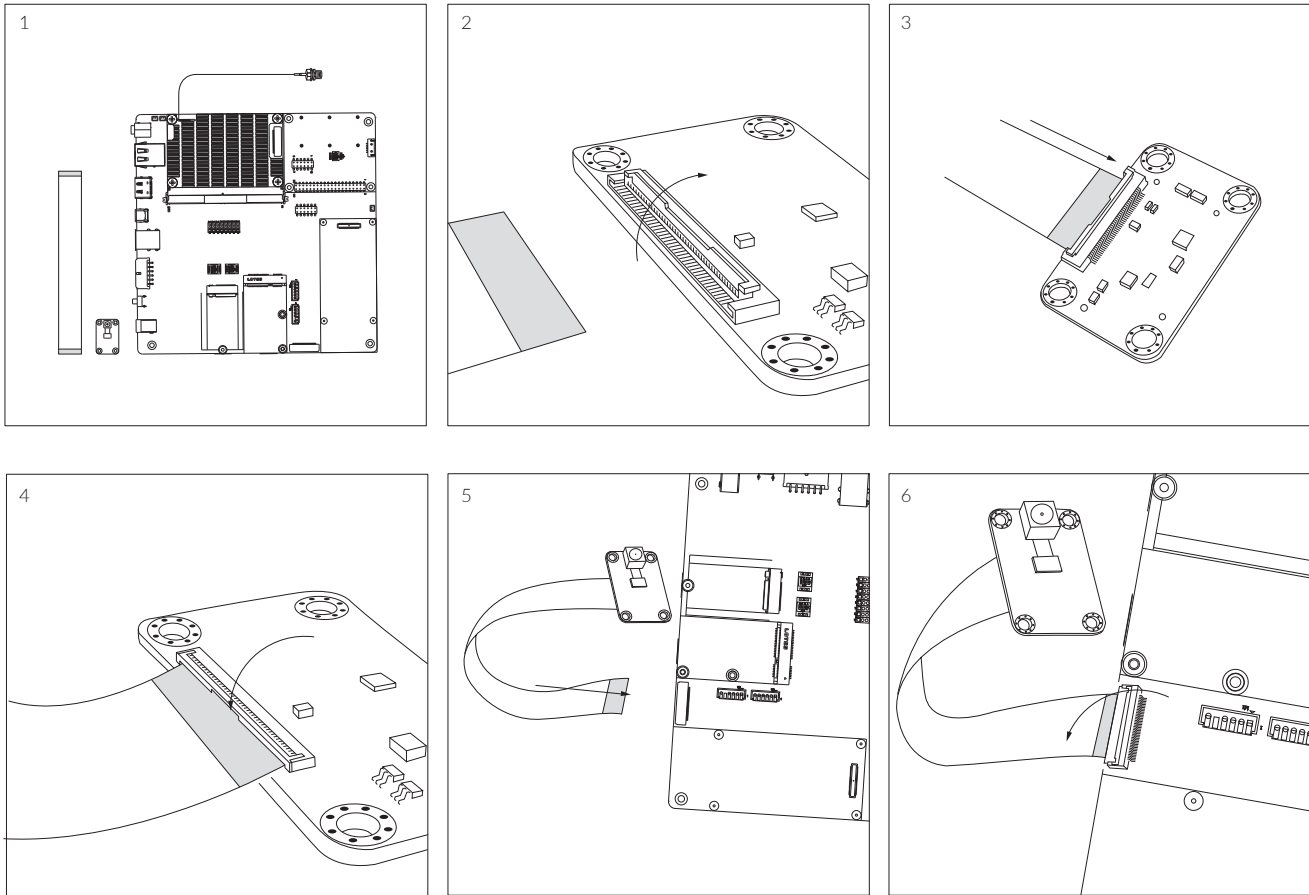Tips: Do not power your board during the installation process.

3.2 Standoffs (optional)

Let's prepare four standoffs It only takes a few minutes.
Step 1: Prepare evaluation board and standoffs.
Step 2: Locate four standoffs holes on the evaluation board.
Step 3: Locate a screw and insert it into the hole. Screw a standoff on the underside. Attach the standoffs for the remaining three holes.
Tips: Remove EDM computing module before the standoffs installation.

3.3 Camera module / HDMI capture card (optional)

Please follow the steps below to properly install the camera module.The same steps can be applied to the installation of the HDMI capture card.
Step 1: Prepare camera module, FPC cable and evaluation board.
Step 2: Turn the camera module over to reveal a white connector near the edge of the module. Swivel the black retaining clip upward.
Step 3: Insert either end of the camera module cable into the white connector. Make sure that the blue side of the ribbon is facing up and is aligned straight with the connector. The silver pins on the FPC cable should be facing down.
Step 4: Swivel the retaining clip back down to hold the FPC cable in place.
Steps 5 and 6: Repeat these same steps with the other end of the cable and the connector on the board.
Tips: After installation remove the protective blue film from the camera lens.

3.4 Display (optional)

⚠ • If you buy your evaluation kit with 8" or 10.1" panel, please refer to the separate 8" / 10.1" panel installation guide included with the panel for more details. After you finish the panel installation, return to this guide.

Please follow the steps below to properly install the 5" display.
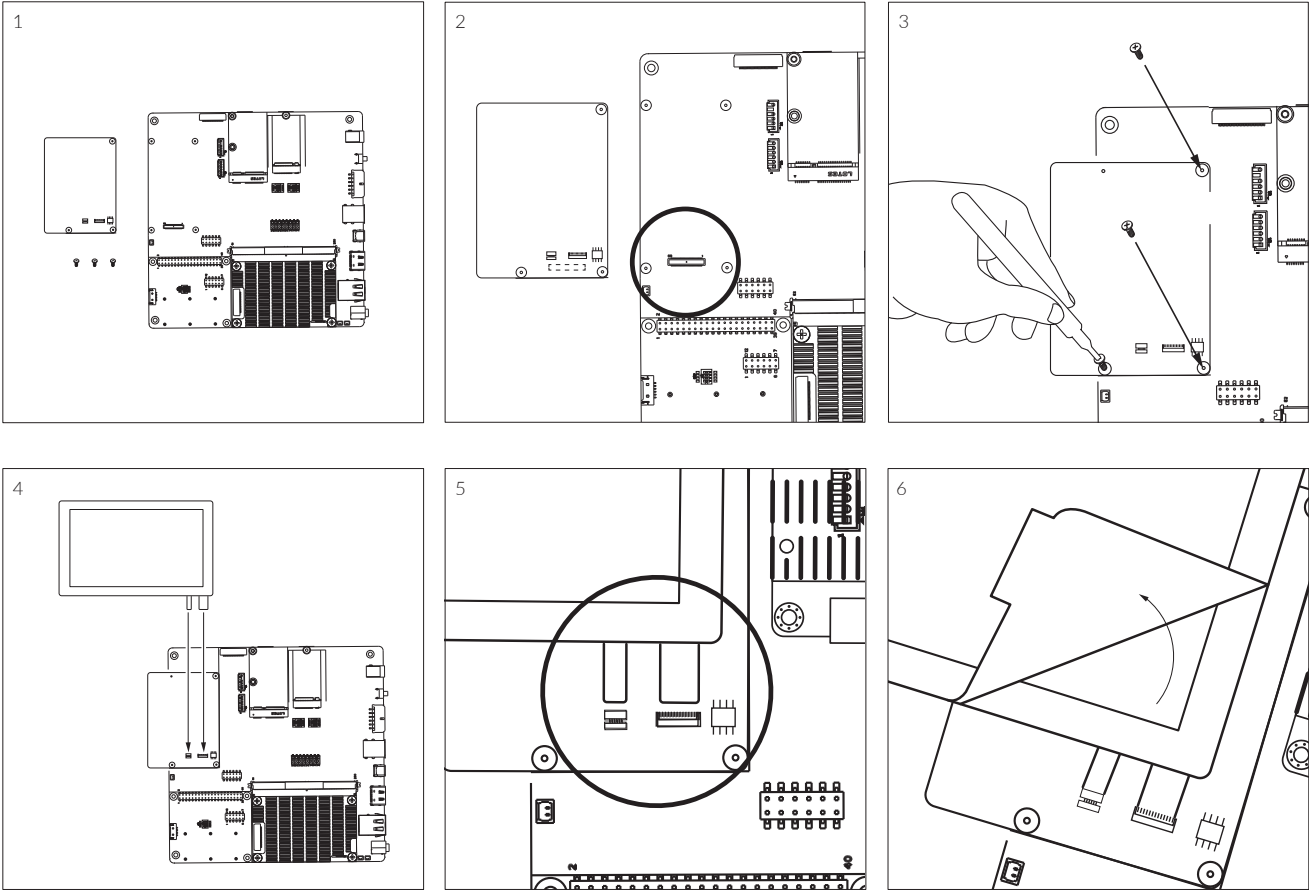Step 1: Prepare evaluation board, MIPI expander board and screws.
Step 2: Locate the MIPI expander board and align the 70-pin connectors, gently press the connector on the back of the expander board onto the connector on the evaluation board until you hear a click sound.
Step 3: Use three screws to secure the MIPI expander board to the development board.
Step 4: Locate the MIPI Display connectors on the expander board. Swivel the black retaining clips upward.
Step 5: Insert end of the TOUCH and MIPI Display FPC cables into the connectors on the board. The silver pins on the FPC cable should be facing down. Then swivel the retaining clips back down to hold the FPC cables in place.
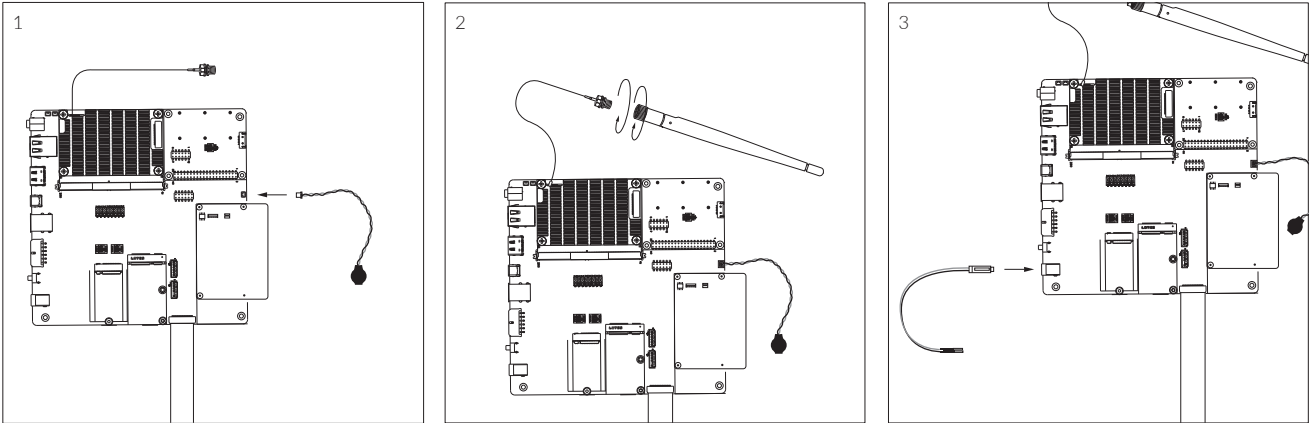Step 6: Remove the protective transparent film from the display.

3.5 Final steps

Now your kit is almost assembled.
Step 1: Connect the RTC backup battery.
Step 2: Attach the extender cable to the Wi-Fi antenna.
Step 3: Connect the 2-pin Micro-Fit 3.0 cable to power up the evaluation kit.

4 Pin Definition

4.1 Power Connector (DCIN1 +12v)

This product features one 2-pin Micro-Fit 3.0 power connector: DCIN1 +12v.

DCIN1 +12v:

Header	Pin #	Signal	Description
	1	GND	Ground
	2	VCC	DC Voltage input (12V DC)

Header on EDM-WIZARD-IMX8M: Molex 43045-0212 (2-pin Micro-Fit 3.0).
Cable receptacle: Molex 43025-0200 (2-pin Micro-Fit 3.0) plug with crimp contact Molex 43030-0007.

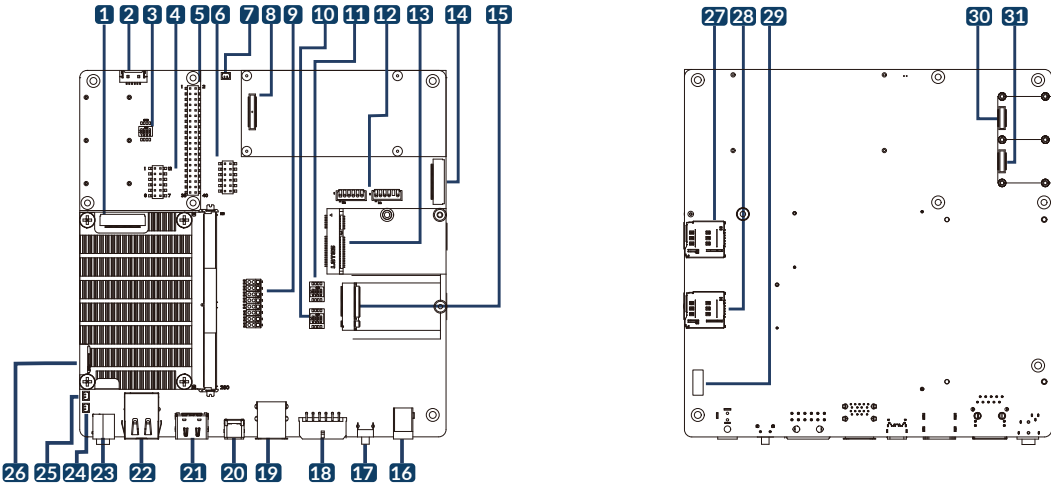### 4.2 SWITCH1-8 Default Boot Mode Switches

The EDM-WIZARD-IMX8M features internal Default Boot Mode switches.

SWITCH1-6:

Switch #	eMMC (default)	microSD
SWITCH1	2-3	1-2
SWITCH2	2-3	1-2
SWITCH3	1-2	1-2
SWITCH4	2-3	1-2
SWITCH5	2-3	1-2
SWITCH6	2-3	1-2

SWITCH7-8:

Switch #	Internal Boot (default)	Serial Downloader	Boot from Fuses
SWITCH7	2-3	1-2	2-3
SWITCH8	2-3	1-2	1-2

5 External Connectors

Front view: Rear view:

No.	Description	No.	Description	No.	Description
1	MIPI Camera 1 connector	11	SW3 switch	21	HDMI connector
2	NFC connector	12	Debug console	22	LAN RJ45 connector
3	SW2 switch	13	mini-PCIe connector	23	3.5mm jack audio out
4	VOICEHAT 12-pin connector	14	MIPI Camera connector	24	L-Speaker connector
5	40-pin Expansion header	15	M.2 KEY-B connector	25	R-Speaker connector
6	I2S Bus setting jumper	16	Power Input connector	26	Wi-Fi antenna MHF4 connector
7	RTC Battery connector	17	Reset button	27	Micro-SIM1 card slot
8	MIPI Display connector	18	CAN Bus connector*	28	Micro-SIM2 card slot
9	Boot select jumper	19	USB Host connectors (2x)	29	Power Fuse
10	SW1 switch	20	USB OTG (Type-C) connector	30	CLIX0 40-pin connector
				31	CLIX1 40-pin connector

NOTE: * CAN Bus connector can only be used with EDM1-IMX6

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 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/