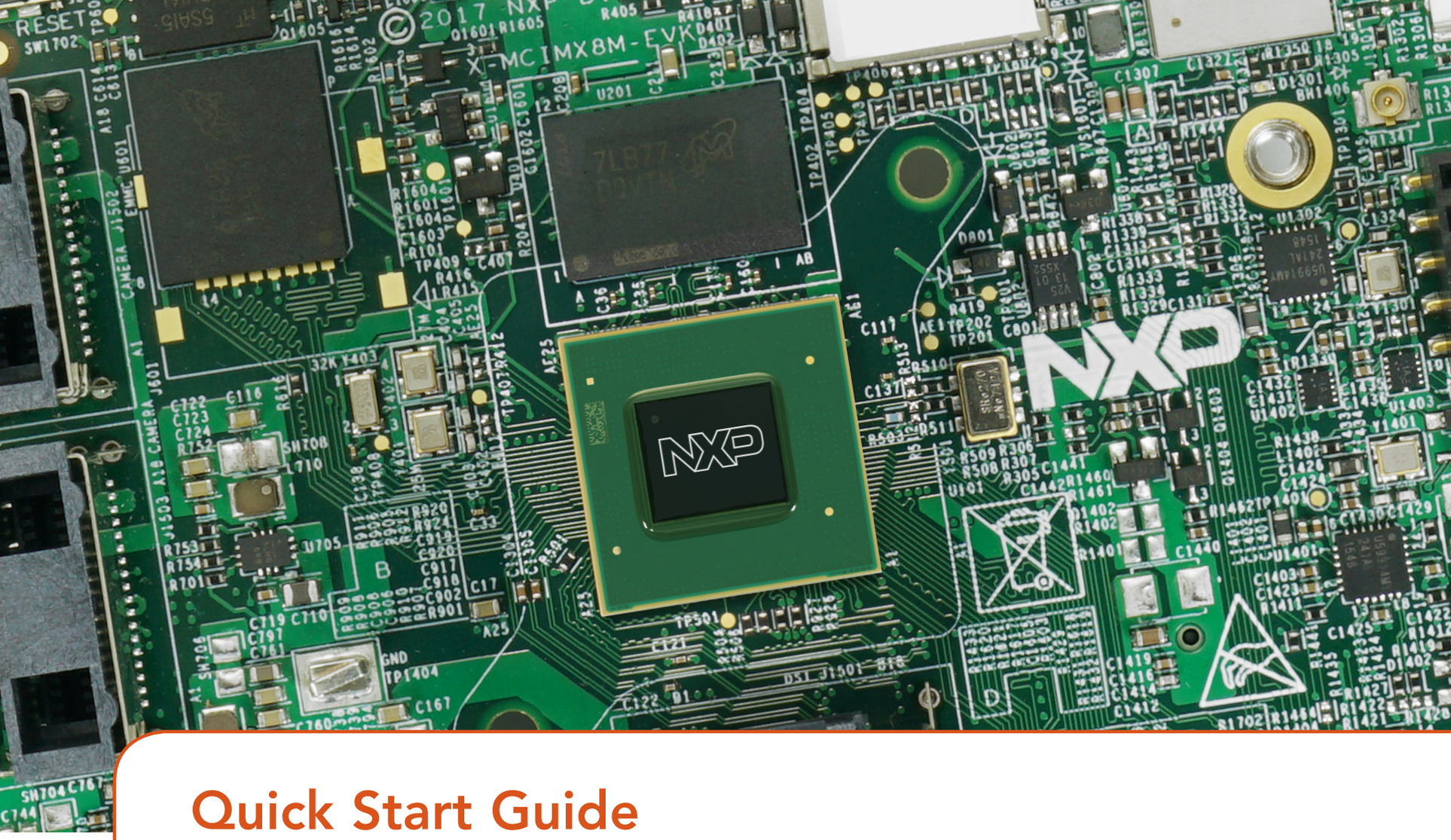


Quick Start Guide

i.MX 8M Quad Evaluation Kit

GET TO KNOW THE i.MX 8M QUAD EVK

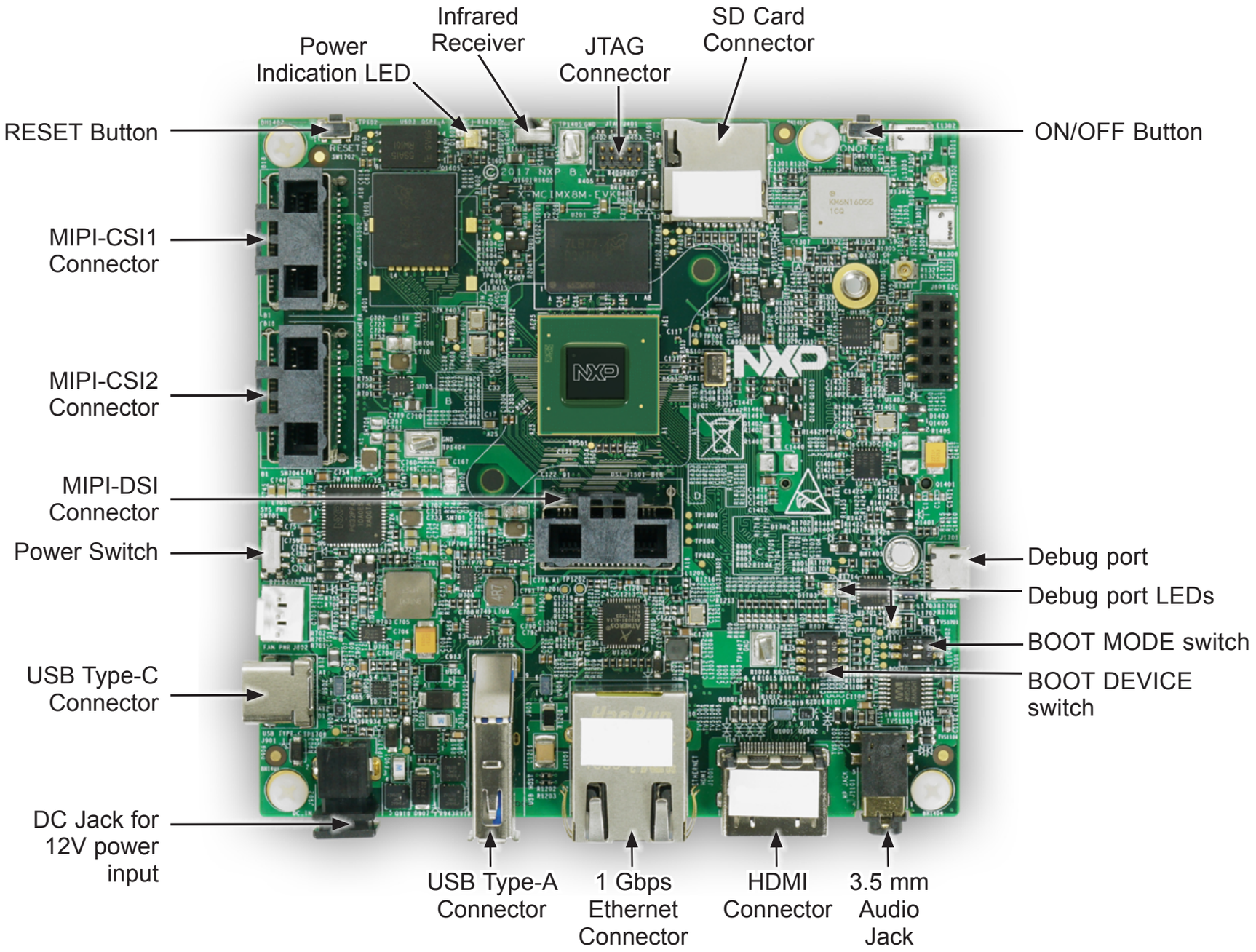


Figure 1: Front side of i.MX 8M Quad EVK (top)

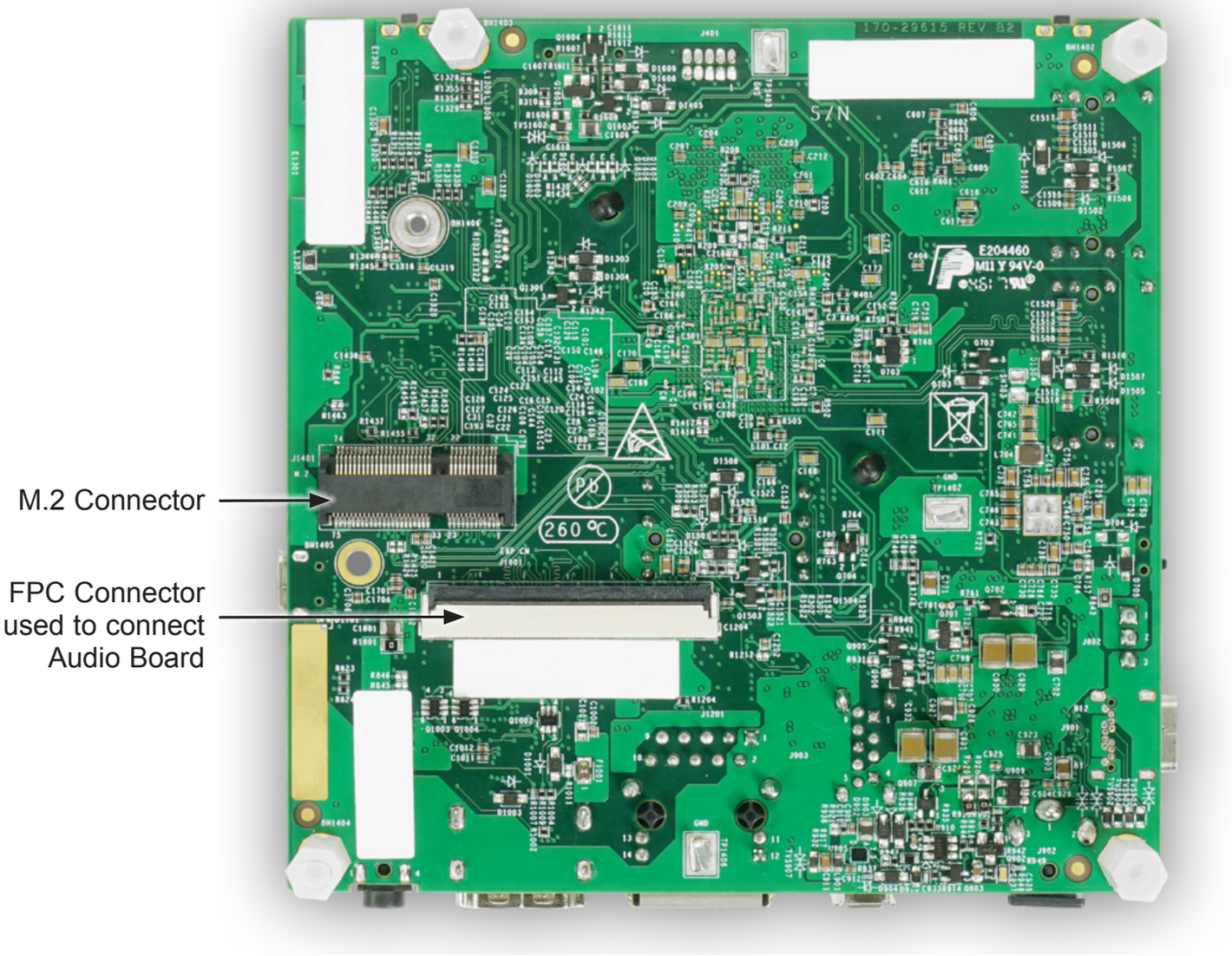


Figure 2: Back side of i.MX 8M Quad EVK (bottom)

ABOUT THE i.MX 8M QUAD EVK

The Evaluation Kit (EVK) based on i.MX 8M Quad introduces developers to the i.MX 8M Quad applications processor. To speed development, hardware design files are provided, tools and board support packages (BSPs) for Linux®, FreeRTOS™ and Android are available.

FEATURES

- i.MX 8M Quad applications processor with 5 cores (4×Arm® Cortex®-A53 and 1× Cortex-M4)
- 3 GB, 32-bit LPDDR4 with 1.6 GHz clock
- eMMC 5.0, 16 GB
- 32 MB Octal SPI NOR flash
- Micro SD card connector
- USB3.0 Type-C connector with PD support
- USB3.0 Type-A connector
- HDMI2.0a Type-A connector
- 1 Gbps Ethernet
- Mini-SAS MIPI-DSI connector
- 2x mini-SAS MIPI-CSI connectors for camera
- USB to serial convertor for debug
- Infrared receiver
- On-board MIMO 2x2 WiFi and BT4.2
- LEDs for power indication and general-purpose use
- M.2 connector for WiFi/BT (PCIe, USB, UART, I^2C and I^2S)
- 3.5 mm audio jack for amplified speakers
- JTAG 10-pin connector

GETTING STARTED

1 Unpack the Kit

The EVK is shipped with the items listed in Table 1. Ensure the items are available in the i.MX 8M Quad EVK.

ITEM	DESCRIPTION
CPU board	CPU board with i.MX 8M Quad applications processor, memory and PMIC
Power supply	Output: DC 12V/5A, Plug: 1.65 mm x 5.15 mm
USB Type-C Cable	Cable -Assembly, USB 3.0 Type-A Male, USB micro-B Male, Shielded, 1m
USB micro-B Cable	Cable -Assembly, USB 2.0 Type-A Male, USB Type-C Male, Shielded, 1m
Documentation	Quick Start Guide
Android	Android image flashed in the eMMC

Table 1: Contents of the i.MX 8M Quad Evaluation Kit

GETTING STARTED CONTINUED

2 Prepare Accessories

The following items in Table 2 are required to run the i.MX 8M Quad EVK.

ITEM	DESCRIPTION
HDMI display	HDMI display that supports 1080p resolution or higher is required to run the HDMI
HDMI cable	HDMI cable that is used to connect the board and the HDMI display
Mouse	Mouse with USB interface

Table 2: Necessary equipment provided by customer

GETTING STARTED CONTINUED

3 Download Software and Tools

Download installation software and documentation at **www.nxp.com/imx8mquadevk**

The following documents are available on the website:

ITEM	DESCRIPTION
Documentation	• Schematics, layout and Gerber files • i.MX 8M EVK Board Hardware User's Guide • Quick Start Guide
Software Development	Linux BSPs, Android BSPs
Demo Images	Copy of the latest Linux BSP images and Android images that are available to program on to the eMMC

Table 3: Software and documentation available on NXP website

SETTING UP THE SYSTEM

The following will describe how to run the pre-loaded Android image on the i.MX 8M EVK.

1 Connect USB Debug Cable

Connect the micro-B end of a USB cable into debug port J1701. Connect the other end of the cable to a PC acting as a host terminal. 2 UART connections will appear on the PC. The console print will output on "Enhanced COM port," which can be found in "Device Manager" of the PC.

Open the terminal window (i.e., Hyper Terminal or Tera Term), choose the COM port number that corresponds to the "Enhanced COM port" and apply the following configuration.

- Baud rate: 115200
- Data bits: 8
- Stop bit: 1
- Parity: None
- Flow control: None

2 Connect HDMI Display

Connect an HDMI cable to the HDMI connector Jack J1001. Connect the other end of the cable to a HDMI display panel.

3 Connect Mouse

Connect the mouse to the USB host connector J903.

4 Connect Power Supply

Connect the plug of the 12V power supply to the DC power jack J902.

▶ Video Setup

Go to **www.nxp.com/video/:IMX8MEVK-UNBOXING** for video setup guide

BOOT PROCESS FOR ANDROID IMAGE

Boot Process

- Switch SW801 to OFF, OFF, ON, OFF (from 1-4 bit) to boot from the eMMC, as shown in Figure 3. After the board images are loaded into the eMMC and the boot switches are correctly configured, the system is ready to run.
- Note: The board is shipped with Android image programmed in the eMMC. If you want to use Linux image, see the documentation provided in the EVK website (**www.nxp.com/imx8mquadevk**) on how to load the image. Power on the EVK board by sliding power switch SW701 to ON.
- During the boot process, the Android logo will appear on the HDMI display. Note that the HDMI output resolution is 1080P fixed—to change it, check the documentation in the EVK website.
- The Android UI can be seen after the boot process is finished. You can start operating with the mouse.

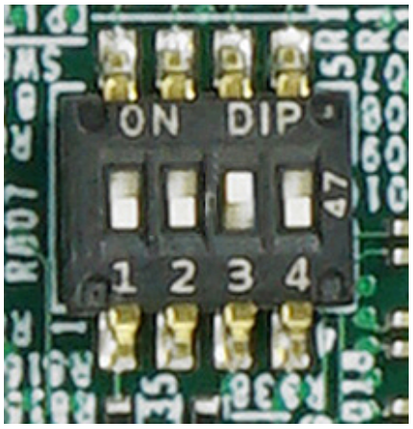
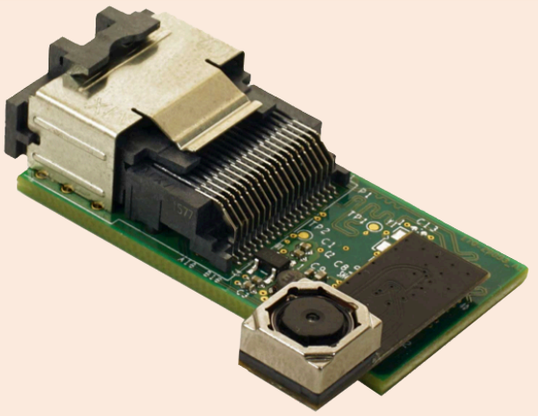


Figure 3: BOOT DEVICE Switch

DO MORE WITH ACCESSORY BOARDS:

IMX-MIPI-HDMI: **MIPI-DSI to HDMI Adapter**	**MX8-DSI-OLED1:** **MIPI miniSAS OLED Display**	**MINISASTOCSI:** **MIPI-CSI Camera Module**
Need dual displays? Use this accessory board to enable MIPI-DSI to HDMI.	Use this OLED display for dual display support.	Use this camera MIPI-CSI camera module for machine vision, video streaming and recording.
		

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This product 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 in a residential installation. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

SUPPORT

Visit **www.nxp.com/support** for a list of phone numbers within your region.

WARRANTY

Visit **www.nxp.com/warranty** for complete warranty information.

Get Started

Download installation software and documentation under **"Jump Start Your Design"** at **www.nxp.com/iMX8M**.

The following information is provided per Article 10.8 of the Radio Equipment Directive 2014/53/EU:

(a) Frequency bands in which the equipment operates.

(b) The maximum RF power transmitted.

PN	RF Technology	(a) Freq Ranges (EU)	(b) Max Transmitted Power
MCIMX8M-EVK	WLAN 2.4GHz Mode 802.11b/g/n	2412 MHz – 2472 MHz	19dBm
	WLAN 5GHz Mode 802.11a/n/ac	5180 MHz – 5825 MHz	16dBm
	BLE	2402 MHz – 2480 MHz	4.5dBm
	BT DH5 / 2DH5 / 3DH5	2402 MHz – 2480 MHz	5.5dBm

EUROPEAN DECLARATION OF CONFORMITY

(Simplified DoC per Article 10.9 of the Radio Equipment Directive 2014/53/EU)

This apparatus, namely MCIMX8M-EVK, conforms to the Radio Equipment Directive 2014/53/EU.

The full EU Declaration of Conformity for this apparatus can be found at this location:
www.nxp.com/iMX8M

www.nxp.com/iMX8MQuadEVK

Document Number: IMX8MQUADEVKQSG REV 1
Agile Number: 926-29615 REV B