Quick Start Guide

i.MX 6SLL Evaluation Kit

ABOUT THE i.MX 6SLL EVALUATION KIT

The following features are available with the EVK based on i.MX 6SLL applications processor:

- i.MX 6SLL applications processor with a 1 GHz ARM® Cortex®-A9 core
- 2 GB LPDDR3, 400 MHz
- eMMC (unpopulated)
- SD socket for boot code
- SD socket for Wi-Fi and external device
- Audio codec
- LCD expansion port connector
- EPDC expansion port (unpopulated)
- Board-mounted microphone
- L/R speaker connectors (unpopulated)
- USB OTG connector
- USB Host connector
- 3.5 mm audio stereo headphone jack
- Bluetooth connector
- JTAG connector (unpopulated)

GETTING STARTED

The i.MX 6SLL EVK includes the following items:

- ▸ Board: MCIMX6SLL-EVK
- ▸ Cables: USB AM TO MICRO USB 5P 1.0M
- ▸ Power supply: 100/240 V input, 5 V, 4 A output
- ▸ Documentation: Quick Start Guide (this document)
- ▸ SD cards: containing Linux OS
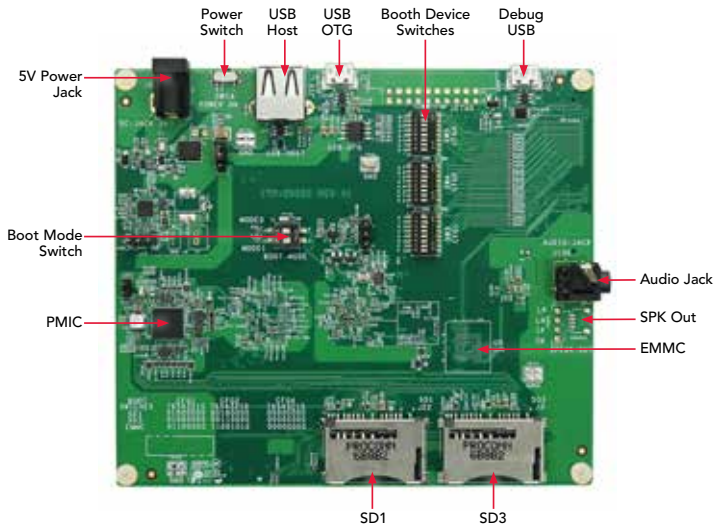
GET TO KNOW THE i.MX 6SLL EVK
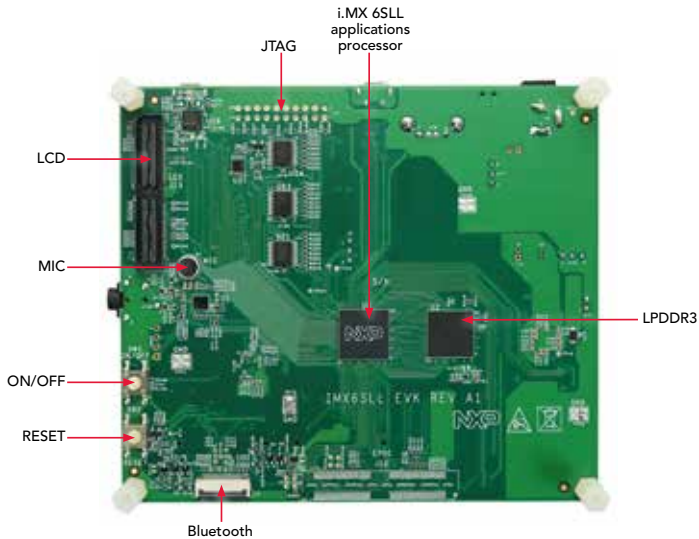

Figure 1: Front side of i.MX 6SLL EVK (top)

Figure 2: Back side of i.MX 6SLL EVK (bottom)

SETTING UP THE BOARD

1 Insert SD Card

Insert the supplied SD card into the SD1 card slot.

2 Set Up Boot Switches

By default, boot switches are configured to boot from SD1. If any other boot source is desired, boot switches have to be configured according to Table 1.

3 Connect USB to UART Cable

Connect from USB to UART port (J26) using a micro USB cable to PC. Once the PC recognizes the virtual USB to UART device, it can be seen it in your PC Device Manager list.

Serial port configuration: 115.2 Kbaud, 8 data bits, 1 stop bit, no parity.

Note: The PC needs a driver to enable a virtual COM port through the PC USB port.

Visit **ftdichip.com/drivers/vcp.htm** to download the correct driver.

4 Connect Parallel Display

LCD daughter card MCIMX28LCD, which has to be connected to J13. For more information about this board, please visit **www.nxp.com**.

5 Connect Power Display

Connect 5 V power supply into power jack J6 and set SW14 to the On position.

BOOT PROCESS FOR LINUX IMAGE

Boot Process

▸ Change S1 to enter internal boot mode (BOOT_MODE [1:0] = 10), and then switch SW3, SW4, SW5 to boot from the SD1 card, as shown in Table1 and Table2. After the boot switches are correctly configured, the system is ready to run.

▸ Power on the EVK board.

▸ During the boot process, there will be operating system status information scrolling on the terminal window of the PC (if connected). The Linux penguin images will initially appear in the upper left corner of the LCD screen.

▸ When the boot process is complete, the Linux operating system (Yocto Project) will be displayed on the LCD screen.

▸ To work from the terminal window on the host PC, press 'Enter' at the terminal window to get the command prompt. Account name: root.
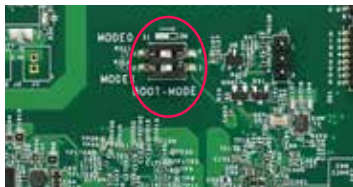
BOOT OPTIONS AND SWITCH CONFIGURATION

▸ Table 1 shows the switch configuration of boot mode for i.MX 6SLL EVK. Internal boot is chosen as default.

▸ Table 2 shows the switch configuration of boot device for i.MX 6SLL EVK. SD1 is chosen as default.

BOOT_MODE[1:0]	BOOT TYPE
00	Boot from fuses
01	Serial downloader
10	Internat boot
11	Reserved

Table 1: Boot options

BOOT SWITCHES	SW3 76543210	SW4 76543210	SW5 76543210
SD1	01000000	00100000	00000000
SD3	01000000	00110000	00000000
EMMC	01100000	11001010	00000000

Table 2: SW3, SW4, SW5 configuration

JUMPER, PUSH BUTTONS AND SWITCHES CONFIGURATION

Reference	Shunt Installation	Function
J16	1–2	Use cable to pins 1 and 2 to connect an external charger
	2–3	Shunt 2–3 to experiment with USB charging
	OpenD	No charger
J17	1–2	5 V rail supplied by PMIC (600 mA limited)
	2–3	5 V rail supplied from wall adapter
J14	1–2	Connect the coin cell if needed
	OpenD	
SW14	Evaluation kit switch • Sliding the switch to the ON position connects the 5 V power supply to the Evaluation Kit main power system. • Sliding the switch to the OFF postition immediately removes all power from the board.	
SW1	Evaluation kit ON/OFF button • Prolonged depress (>5 sec) will force an immediate hardware shutdown. • If board is in the SHUTDOWN state, short press of the button will restart (boot) the system. • If board is in the STANDBY state, short press of the button will bring the system out of standby (resume operations, no boot).	
SW2	Evaluation kit RESET button • Press of the button will reset the system and begin a boot sequence.	

TIPS AND PRECAUTIONS

The i.MX 6SLL includes an overvoltage protection circuit that will disconnect the power supply from the system by opening transistor Q1 in case the supply voltage exceeds 5.5 V. The user must take into account this is the maximum voltage that can be plugged into J6.

FURTHER DOCUMENTATION

▸ MCIMX6SLL-EVK schematics

▸ MCIMX6SLL-EVK BOM

▸ MCIMX6SLL-EVK gerber files

▸ MCIMX6SLL-EVK reference manual

Complete documentation is available at **www.nxp.com/iMX6SLLEVK**

SUPPORT

Visit the i.MX community at **www.imxcommunity.org**.

WARRANTY

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

Get Started

Download installation software and documentation under **"Getting Started"** at **www.nxp.com/iMX6SLLEVK**.

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