



# Quick Start Guide i.MX 6SoloLite Evaluation Kit Quick Start Guide

i.MX 6SoloLite Evaluation Kit



### ABOUT THE i.MX 6SOLOLITE EVALUATION KIT

The i.MX 6SoloLite evaluation kit (EVK) offers a solid platform to evaluate the i.MX 6 series single-core applications processor built on ARM® Cortex®-A9 technology as well as a reference for future designs. Key features of this platform include:

- ▶ i.MX6SL single Cortex-A9 core operating up to 1 GHz
- ▶ 1 GB LPDDR2 (400 MHz)
- ▶ SPI NOR
- ▶ SD socket for external devices
- ▶ SD socket for boot code
- ▶ SD socket for Wi-Fi® and accessories
- ▶ eMMC expansion footprint
- ▶ Audio codec
- ▶ EPDC expansion port
- ▶ Parallel display port
- ▶ Port for CSI CMOS sensor (camera)
- ▶ SIM card slotButton matrix
- ▶ Ethernet
- ▶ Lithium battery charger
- ▶ USB host, USB OTG and USB to UART ports

## GETTING STARTED

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

- ▶ Board: MCIMX6SLEVK
- ▶ Cables: Micro USB-B-2-USB-Type A male, V2.0
- ▶ Power supply: 100/240 V input, 5 V, 2.4 A output W/AC adaptor
- ▶ Documentation: Quick Start Guide (this document)
- ▶ Two SD cards: Programmed Android™

## Quick Start Guide

### GET TO KNOW THE i.MX 6SOLOLITE EVK

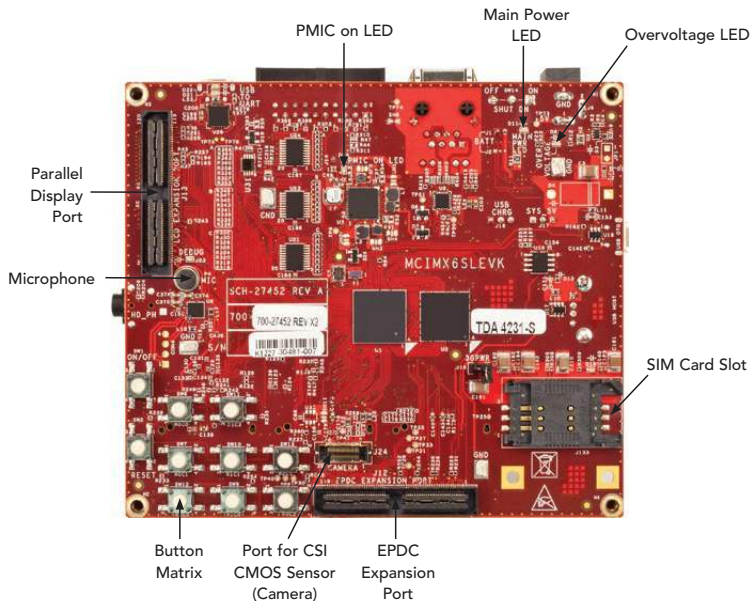


Figure 1: Front side of i.MX 6SoloLite EVK (top)

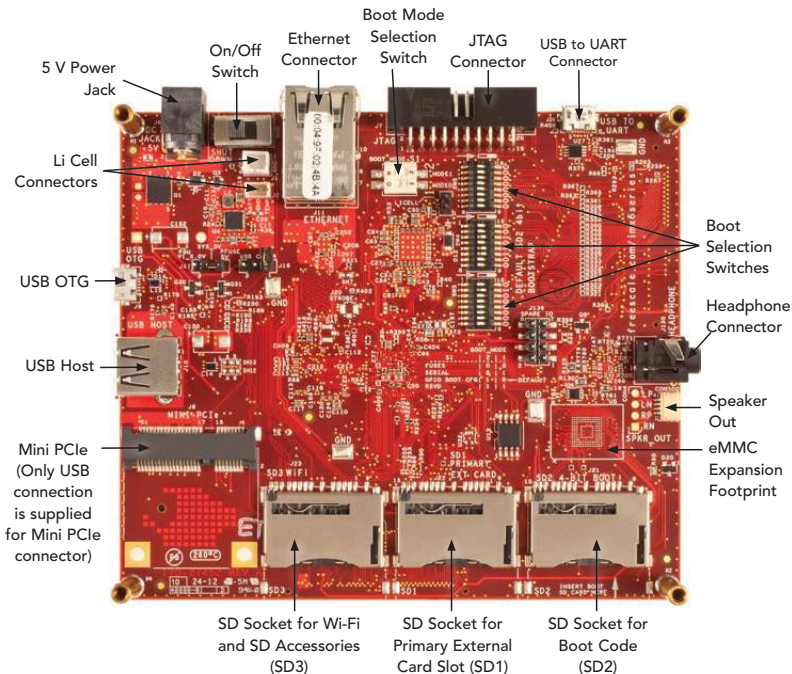


Figure 2: Back side of i.MX 6SoloLite EVK (bottom)

### SETTING UP THE BOARD

#### 1 Insert SD Card

Insert the supplied SD card into the SD2 card slot.

#### 2 Set Up Boot Switches

By default, boot switches are configured to boot from SD2. 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 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](http://ftdichip.com/drivers/vcp.htm) to download the correct driver.

#### 4 Connect EPDC or Parallel Display

Connect by means of the IMXEBOOKDC3-E board, which has to be connected to J12 and J13. For more information about this board, please visit [www.nxp.com](http://www.nxp.com).

#### 5 Connect Power Display

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

## SETTING UP THE BOARD (CONT.)

The i.MX 6SoloLite EVK is compatible with the following daughter cards through the LCD extension slot:

- ▶ MCIMX28LCD—LCD daughter card\*
- ▶ MCIMXHDMICARD—HDMI daughter card
- ▶ IMXEBOOKDC3-E—EPD daughter card



\* EVK does not natively support the resistive touchscreen on the LCD and HDMI cards. Use a USB mouse to navigate when using the LCD or HDMI cards. Touch is supported on the EPDC card.

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The Android BSP is provided on two different SD cards, depending upon the display daughter card used.

### LCD/HDMI SD CARD FOR BOOTING ANDROID

The default boot mode configures the system to display the UI on the MCIMX28LCD (sold separately).

To change the default configuration and enable the MCIMXHDMICARD daughter card (sold separately), hit any key to stop u-boot from proceeding. Once prompt is visible, the u-boot can be configured as follows:

For **LCD** boot up, type the following commands (as one line):

```
setenv bootargs console=ttymx0,115200 init=/initandroidboot.console=ttymx0  
panel=lcdsaveenvreset
```

For **HDMI** boot up, type the following commands (as one line):

```
setenv bootargs console=ttymx0,115200 init=/initandroidboot.console=ttymx0  
panel=hdmsaveenvreset
```

### EPDC SD CARD FOR BOOTING ANDROID

The default settings should be used and no change is needed.



## BOOT OPTIONS AND SWITCH CONFIGURATION

**TABLE 1: BOOT OPTIONS**

	S1_2	S1_1
	BOOT_MODE1	BOOT_MODE0
Boot from fuses	0	0
Serial downloader <sup>D</sup>	0	1
Internal boot	1	0
Reserved	1	1

**TABLE 2: SW3 CONFIGURATION**

	SW3_8	SW3_7	SW3_6	SW3_5	SW3_4	SW3_3	SW3_2	SW3_1
	BT_CFG1_0	BT_CFG1_1	BT_CFG1_2	BT_CFG1_3	BT_CFG1_4	BT_CFG1_5	BT_CFG1_6	BT_CFG1_7
SD1	*	**	*	*	*	0	1	0
SD2 <sup>D</sup>	*	**	*	*	*	0	1	0
SD3	*	**	*	*	*	0	1	0
SD4	*	**	*	*	*	0	1	0
eMMC	X	X	*	*	*	1	1	0
SPI NOR	X	X	X	X	1	1	0	0

X None specified

<sup>D</sup> Default configuration

\* Switch needs to be configured for high or low depending on the application needs. Please check reference manual for boot configuration options.

\*\* 1 = power cycle on power-up via SDa\_RST\_B (SD3\_RST). 0 = no power cycle

### BOOT OPTIONS AND SWITCH CONFIGURATION (CONT.)

**TABLE 3: SW4 CONFIGURATION**

	SW4_8	SW4_7	SW4_6	SW4_5	SW4_4	SW4_3	SW4_2	SW4_1
	BT_CFG2_0	BT_CFG2_1	BT_CFG2_2	BT_CFG2_3	BT_CFG2_4	BT_CFG2_5	BT_CFG2_6	BT_CFG2_7
SD1	*	X	X	0	0	1	*	*
SD2 <sup>Ⓓ</sup>	*	X	X	1	0	1	*	*
SD3	*	X	X	0	1	1	*	*
SD4	*	X	X	1	1	1	*	*
eMMC	*	*	*	1	0	0	1	1
SPI NOR	X	X	X	X	X	X	X	X

**TABLE 4: SW5 CONFIGURATION**

	SW5_8	SW5_7	SW5_6	SW5_5	SW5_4	SW5_3	SW5_2	SW5_1
	BT_CFG4_0	BT_CFG4_1	BT_CFG4_2	BT_CFG4_3	BT_CFG4_4	BT_CFG4_5	BT_CFG4_6	BT_CFG4_7
SD1	X	X	X	X	X	X	X	X
SD2 <sup>Ⓓ</sup>	X	X	X	X	X	X	X	X
SD3	X	X	X	X	X	X	X	X
SD4	X	X	X	X	X	X	X	X
eMMC	X	X	X	X	X	X	X	X
SPI NOR	0	0	0	1	0	0	X	X

X None specified

<sup>Ⓓ</sup> Default configuration

\* Switch needs to be configured for high or low depending on the application needs. Please check reference manual for boot configuration options.

\*\* 1 = power cycle on power-up via SDA\_RST\_B (SD3\_RST). 0 = no power cycle

## JUMPER AND SOLDER SHORT CONFIGURATION

TABLE 5: JUMPER AND SOLDER SHORT CONFIGURATION

Reference	Shunt Installation	Function
J16	1–2	Use pins 1 and 2 to connect an external charger
	2–3	Shunt 2–3 to experiment with USB charging
	Open <sup>D</sup>	No charger
J17	1–2 <sup>D</sup>	5 V rail supplied by PMIC (600 mA limited)
	2–3	5 V rail supplied from wall adapter
J18	1–2	Mini-PCIe connector J8 supply voltage connected
	Open <sup>D</sup>	Mini-PCIe connector J8 supply voltage unconnected
SH12	1–2 <sup>D</sup>	MX_USB_HOST_D_P connected to USB type A connector
	2–3	J10-USB_HOST_D_P
		MX_USB_HOST_D_P connected to PCIE_USB_HOST_D_P
SH13	1–2 <sup>D</sup>	MX_USB_HOST_D_N connected to USB type A connector
	2–3	J10-USB_HOST_D_N
		MX_USB_HOST_D_N connected to PCIE_USB_HOST_D_N
SW14	1–2 <sup>D</sup>	0
	2–3	

<sup>D</sup> Default configuration

## TIPS AND PRECAUTIONS

The i.MX 6SoloLite 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

- ▶ MX6SL EVK schematics
  - ▶ MX6SL EVK BOM
  - ▶ MX6SL EVK gerber files
  - ▶ MX6SL EVK reference manual
- Complete documentation is available at [www.nxp.com/6SLEVK](http://www.nxp.com/6SLEVK).

## SUPPORT

Visit the i.MX community at [iMXcommunity.org](http://iMXcommunity.org).

Visit [www.nxp.com/support](http://www.nxp.com/support) for a list of phone numbers within your region.

## WARRANTY

Visit [www.nxp.com/warranty](http://www.nxp.com/warranty) for complete warranty information.



## Get Started

Download installation software and documentation under **“Jump Start Your Design”** at [www.nxp.com/6SLEVK](http://www.nxp.com/6SLEVK).

[www.nxp.com](http://www.nxp.com) and [www.nxp.com/iMX6series](http://www.nxp.com/iMX6series)

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