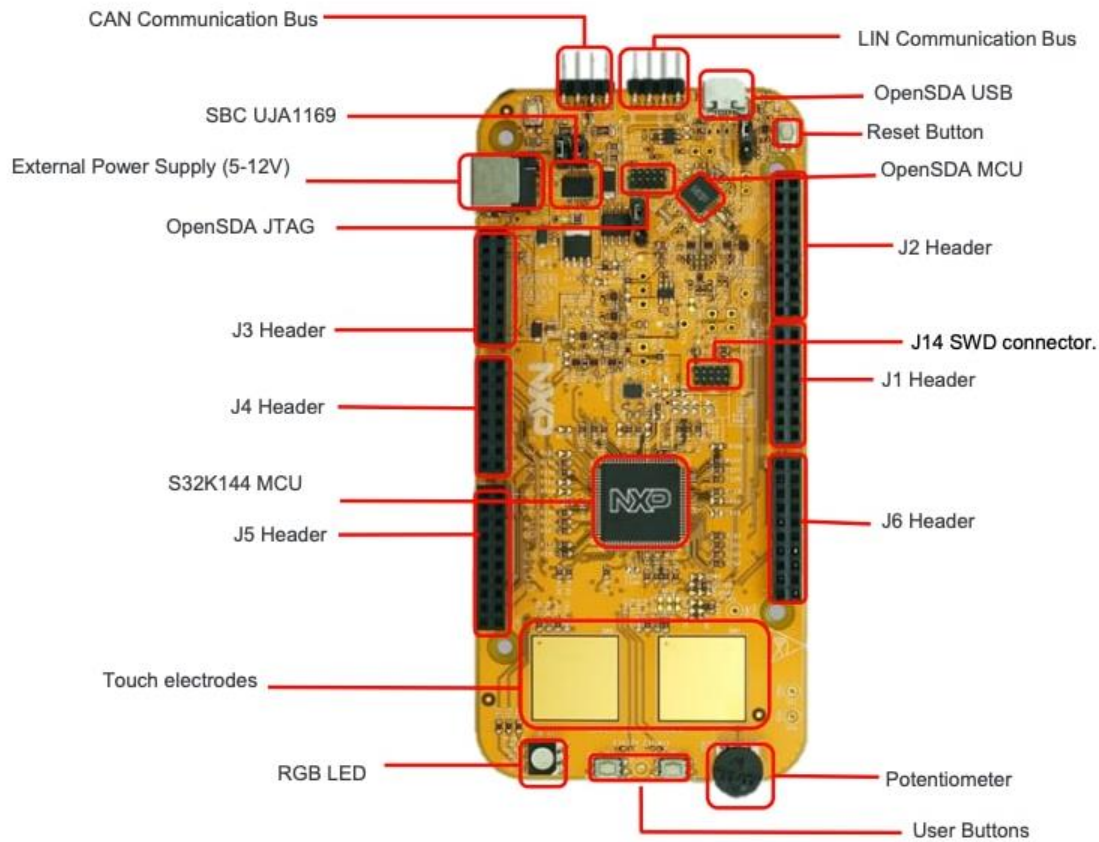


Applies for the S32K144EVB evaluation board ( REV B )

## 1.1 Get to Know Your Evaluation Board



## 1.2 Understanding the Header/Pinout

Pin	Port	Function	J3	Pin	Port	Function
J3-02	PTB0*	GPIO	J3-05		VIN	
J3-04	PTB7*	GPIO	J3-03		ONOFF	
J3-06	PTB0	GPIO	J3-05	PTA5	RESET	
J3-08	PTB9	GPIO	J3-02		TX	
J3-10	PTC1	GPIO	J3-09		TX	
J3-12	PTC8	GPIO	J3-11		GN0	
J3-14	PTA20	GPIO	J3-13		GN0	
J3-16	PTA4	GPIO	J3-15		VIN	

Pin	Port	Function	J4	Pin	Port	Function
J4-02	PTC2	GPIO	J4-01	PTD4	ADC0	
J4-04	PTC5	GPIO	J4-03	PTB12	ADC1	
J4-06	PTB17	GPIO	J4-05	PTB0	ADC2	
J4-08	PTB14	GPIO	J4-07	PTB1	ADC3	
J4-10	PTB15	GPIO	J4-09	PTA6/PTB12/PTA2	ADC4	
J4-12	PTB16	GPIO	J4-11	PTC9/PTB20/PTA3	ADC5	
J4-14	PTC14	GPIO	J4-13	PTC2	ADC6	
J4-16	PTC3	GPIO	J4-15	PTC6	ADC7	

Pin	Port	Function	J5	Pin	Port	Function
J5-03	PTB16	GPIO	J5-01	PTA15/PTB11	ADC8	
J5-04	PTB15	GPIO	J5-03	PTA16/PTB10	ADC9	
J5-06	PTB14	GPIO	J5-05	PTA1	ADC10	
J5-08	PTB13	GPIO	J5-07	PTA0	ADC11	
J5-10	VDD		J5-09	PTA7	ADC12	
J5-12	GN0		J5-11	PTB13	ADC13	
J5-14	PTB1	GPIO	J5-13	PTC1	ADC14	
J5-16	PTD7	GPIO	J5-15	PTC2	ADC15	
J5-18	PTB6	GPIO	J5-17	NC	GPIO	
J5-20	PTC15	GPIO	J5-19	NC	N/A	

Pin	Port	Function	J2	Pin	Port	Function
J2-19	PTB10/PTA3	D01/CLK_CLK	J2-20	NC	GPIO	
J2-17	PTB11/PTA2	D01/CLK_SDA	J2-18	NC	GPIO	
J2-15		ANALOGUE REF	J2-16	PTA16	GPIO	
J2-13		GN0	J2-14	PTC7	GPIO	
J2-11	PTB2	D01/SPM_SCK	J2-12	PTC13	GPIO	
J2-09	PTB3	D01/SPM_SIN	J2-10	PTC12	GPIO	
J2-07	PTB4	D01/SPM_SOUT	J2-08	PTB8	GPIO	
J2-05	PTB5	D01/SPM_CS	J2-06	PTD0	GPIO	
J2-03	PTD14	D01/PM/M	J2-04	PTD15	GPIO	
J2-01	PTD13	D01/PM/M	J2-02	PTD15	GPIO	

Pin	Port	Function	J1	Pin	Port	Function
J1-15	PTC11/PTB8	D01	J1-16	PTB3	GPIO	
J1-13	PTC10/PTC3	D01	J1-14	PTD3	GPIO	
J1-11	PTB11	D01	J1-12	PTD5	GPIO	
J1-09	PTB10	D01	J1-10	PTD12	GPIO	
J1-07	PTB9	D01	J1-08	PTD11	GPIO	
J1-05	PTB8	D01	J1-06	PTD10	GPIO	
J1-03	PTA3	D01	J1-04	PTA17	GPIO	
J1-01	PTA2	D01	J1-02	PTA11	GPIO	

Pin	Port	Function	J6	Pin	Port	Function
J6-19	PTA9	D01	J6-20	PTB4	GPIO	
J6-17	PTA8	D01	J6-18	PTB5	GPIO	
J6-15	PTB12	D01	J6-16	PTA12	GPIO	
J6-13	PTD17	D01	J6-14	PTA13	GPIO	
J6-11	PTC9	D01	J6-12		GN0	
J6-09	PTC8	D01	J6-10		VDD	
J6-07	PTD8	D01	J6-08	PTC16	GPIO	
J6-05	PTD9	D01	J6-06	PTC17	GPIO	
J6-03	PTD2	GPIO	J6-04	PTD3	GPIO	
J6-01	PTD0	GPIO	J6-02	PTD1	GPIO	

■ Arduino compatible pins  
■ NXP pins

\*0ohm resistor is not connected

### 1.3 Understanding the HMI Mapping:

Component	S32K144
Red LED	PTD15 (FTM0 CH0)
Blue LED	PTD0 (FTM0 CH2)
Green LED	PTD16 (FTM0 CH1)
Potentiometer	PTC14 (ADC0_SE12)
SW2	PTC12
SW3	PTC13
OpenSDA UART Tx	PTC7 (LPUART1_TX)
OpenSDA UART Rx	PTC6 (LPUART1_RX)
CAN Tx	PTE5 (CAN0_TX)
CAN Rx	PTE4 (CAN0_RX)
LIN Tx	PTD7 (LPUART2_TX)
LIN Rx	PTD6 (LPUART2_RX)
SBC_SCK	PTB14 (LPSPI1_SCK)
SBC_MISO	PTB15 (LPSPI1_SIN)
SBC_MOSI	PTB16 (LPSPI1_SOUT)
SBC_CS	PTB17 (LPSPI1_PCS3)

You can watch the video instruction here: [Get Started with the S32K144EVB | NXP Semiconductors](#) You can use the **OpenSDA** to debug for more convenience.

# Plug It In

## 3.1 Set Up jumpers in S32K144EVB evaluation board

Jumper	Setting	Description
J104	1-2	Reset signal to OpenSDA, use to enter into OpenSDA Bootloader mode
	2-3 (Default)	Reset signal direct to the MCU, use to reset S32K144
J107	1-2	S32K144 powered by 12 V power source
	2-3 (Default)	S32K144 powered by USB micro connector
J109/J108	1-2 (Default)	Removes CAN termination resistor

## 3.2 Plug In the 12 V Power Supply

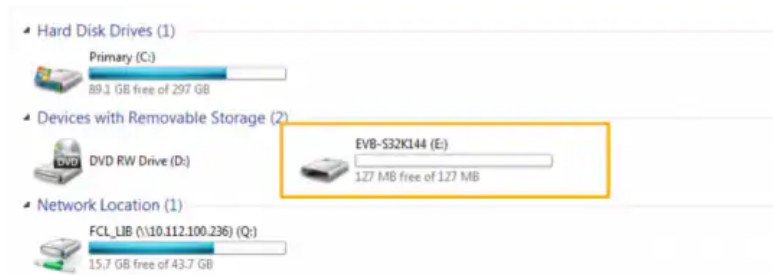
The S32K144EVB evaluation board powers from a USB or external 12 V power supply. By default USB power is enabled with **J107** jumper (2-3 closed).

Connect the USB cable to a PC using a USB cable and connect other end of USB cable (microUSB) to mini-B port on to **J7** on your S32K144EVB.

Allow the PC to automatically configure the USB drivers if needed. Debug is done using OpenSDA through **J7**.

**Note:** When powered through USB, LEDs **D2** and **D3** should light green.

Once the board is recognized, it should appear as a mass storage device in your PC with the name EVB-S32K144.



The S32K144EVB evaluation board is preloaded with a software in which red, blue and green LEDS will toggle at different rates:

