

EK-AI6108LT-S User Guide



AcSiP Technology Corp.

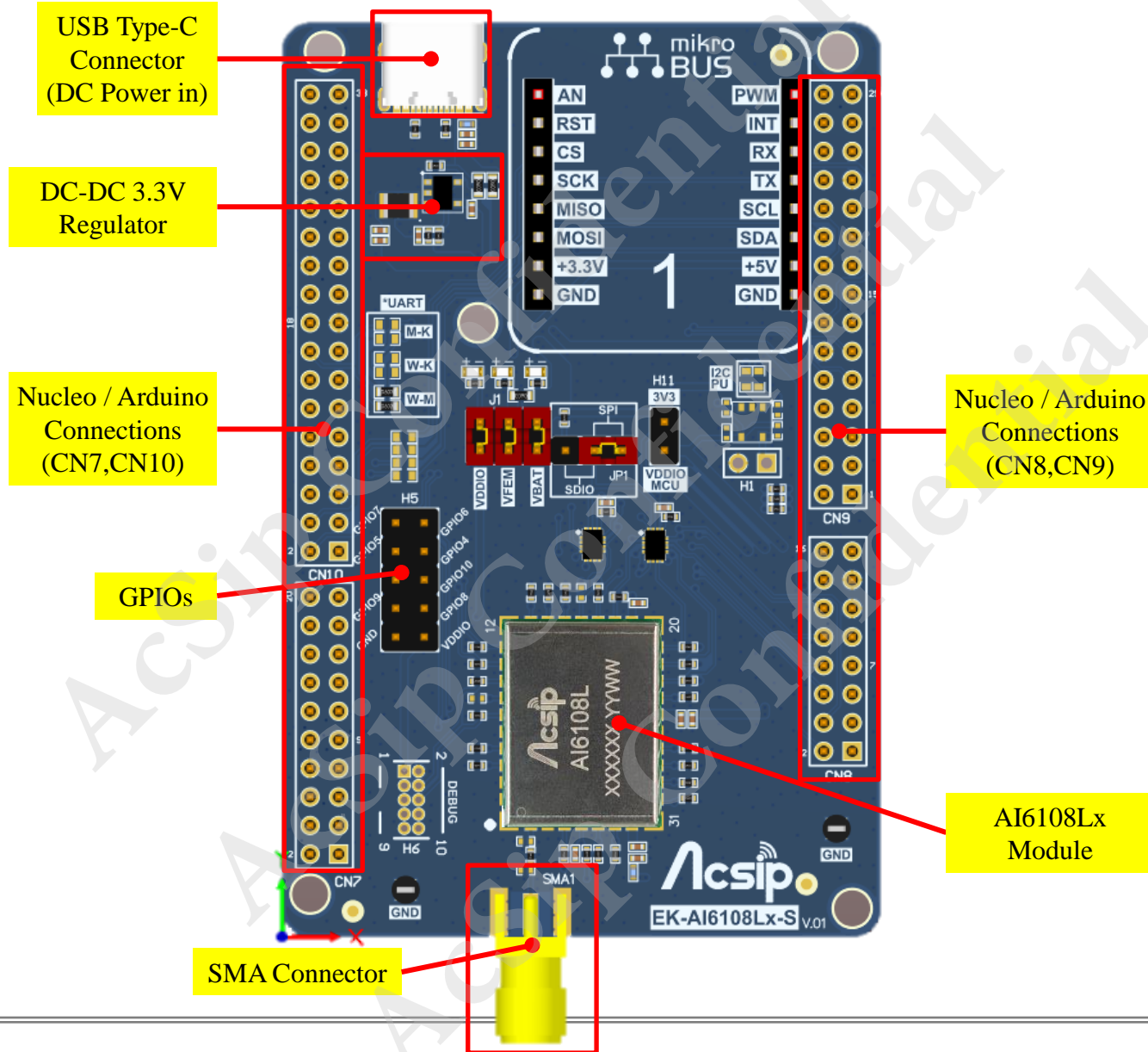
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Ver. : B

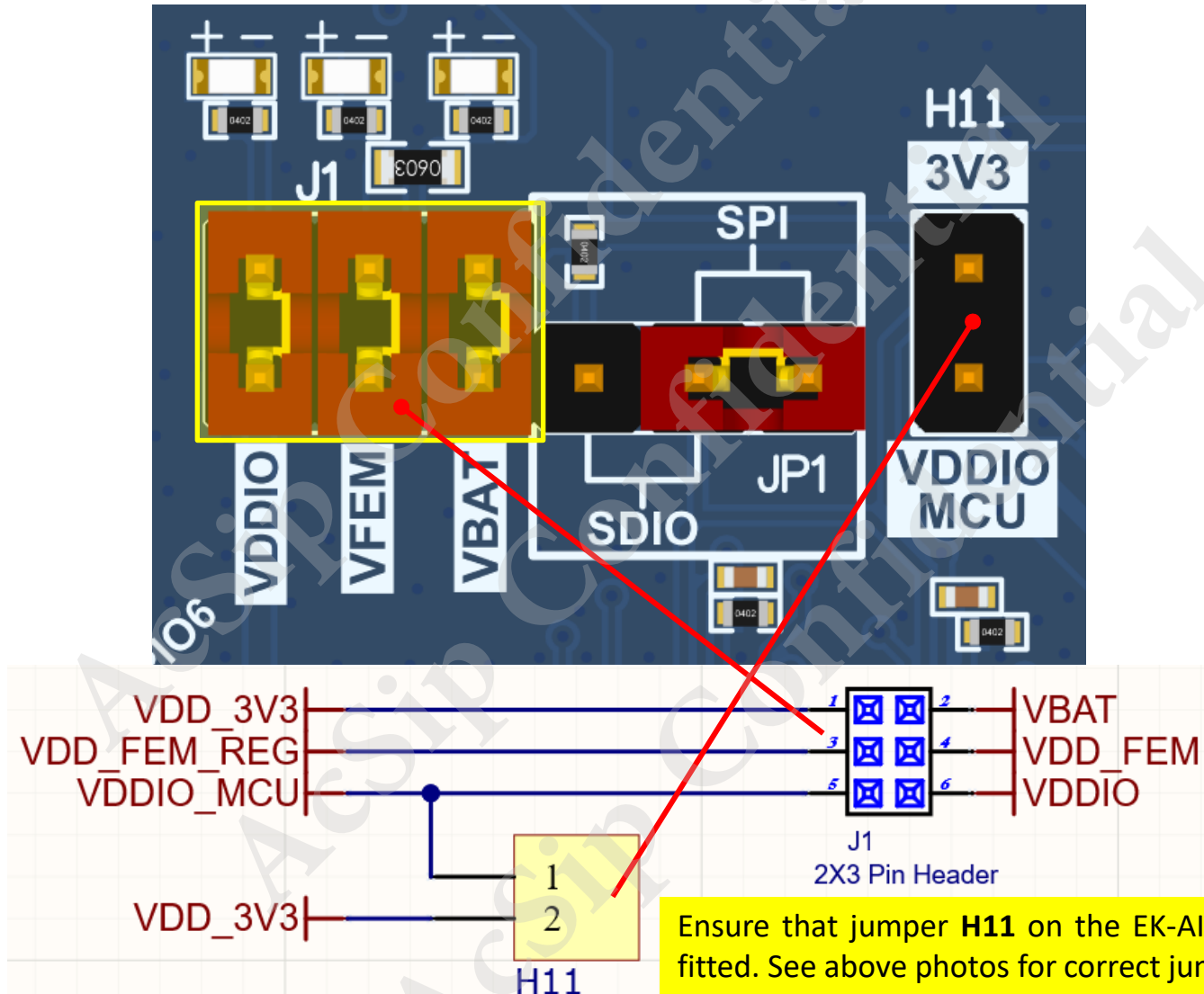
Date: 2024/10/15

Functional Description

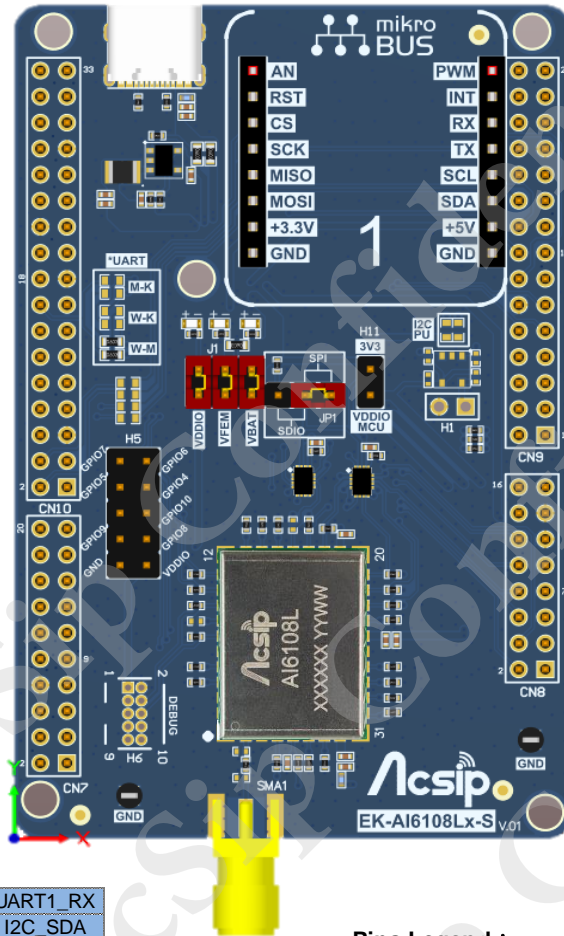


DC Power Jumper

Jumper Settings vs. Schematic



Pinout Diagram



34	33
32	31
30	29
28	27
26	25
24	23
22	21
20	19
18	17
16	15
14	13
12	11
10	9
8	7
6	5
4	3
2	1
CN10	
20	19
18	17
16	15
14	13
12	11
10	9
8	7
6	5
4	3
2	1
CN7	

UART1_TX	GPIO7
UART1_RX	GPIO6

SPI_CS	SDIO_D3
SPI_MOSI	SDIO_CMD
SPI_MISO	SDIO_D0
SPI_SCK	SDIO_CLK
GND	

UART1_TX	GPIO7
I2C_SCL	GPIO5
GPIO9	
GND	

H5	
10	9
8	7
6	5
4	3
2	1

GPIO6	UART1_RX
GPIO4	I2C_SDA
GPIO10	
GPIO8	
VDDIO	

Pins Legend :

Module Pin Name
POWER
GND
SDIO Interface Pins
SPI Interface Pins
Control Pins
*Serial Pins

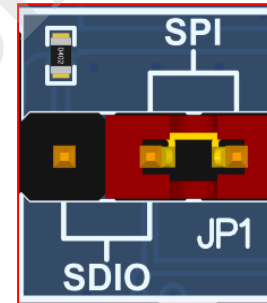
*Pending software support

30	29
28	27
26	25
24	23
22	21
20	19
18	17
16	15
14	13
12	11
10	9
8	7
6	5
4	3
2	1
CN9	
16	15
14	13
12	11
10	9
8	7
6	5
4	3
2	1
CN8	

SDIO_D2	
SDIO_D1	SPI_INT
GPIO1	
BUSY	BUSY
WAKE	WAKE
RESET_N	RESET_N

GND
GND
VDD5V_MCU
VDDIO_MCU

JP1: Interface switch jumper setting

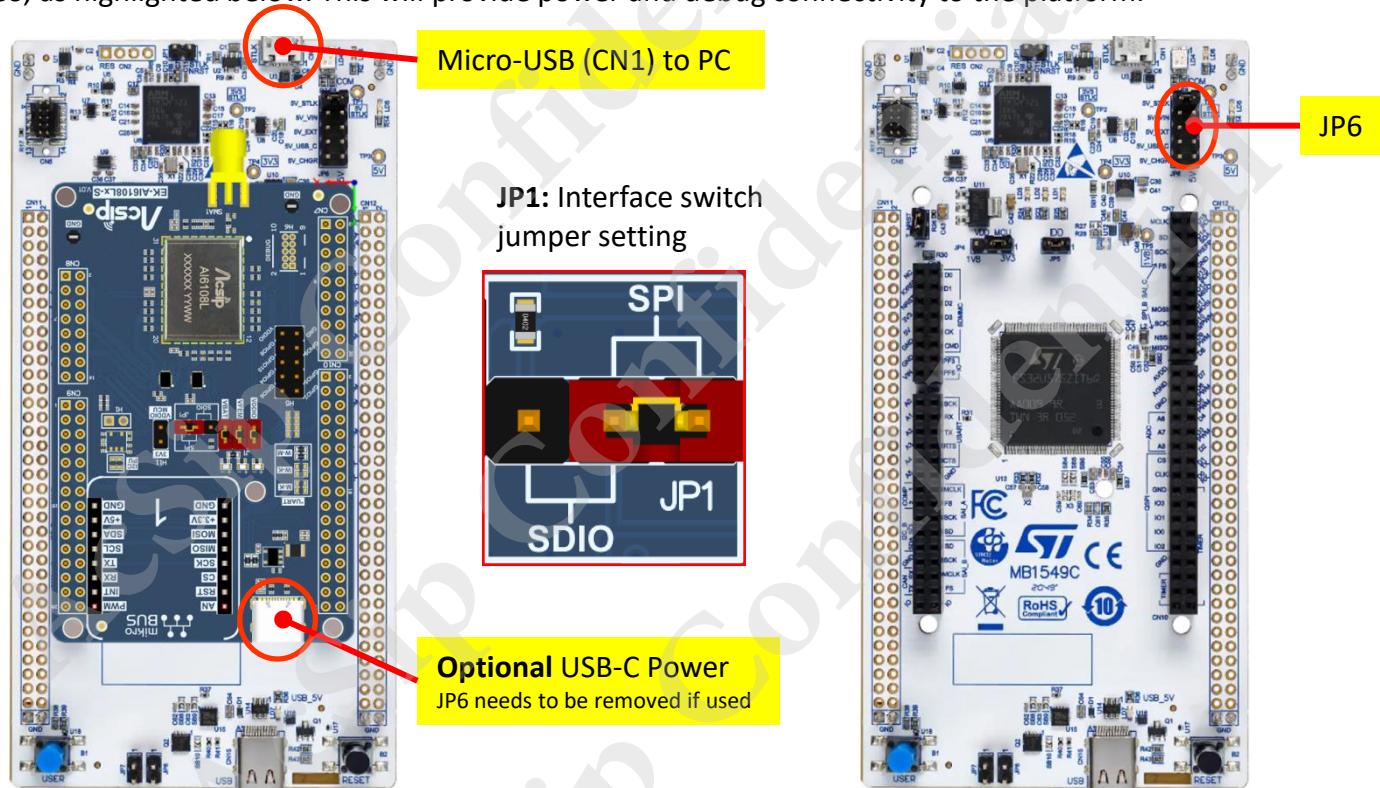


Module Pin Name	SDIO	SPI
SDIO_CMD	SDIO_CMD	SPI_MOSI
SDIO_CLK	SDIO_CLK	SPI_SCK
SDIO_D3	SDIO_D3	SPI_CS
SDIO_D2	SDIO_D2	
SDIO_D1	SDIO_D1	SPI_INT
SDIO_D0	SDIO_D0	SPI_MISO

Reference Platforms

STM32 NUCLEO-U575ZI-Q

- This uses the [STM32 NUCLEO-U575ZI-Q](#) as the host MCU development board.
- The two boards connect together as shown in the photo below. This is connected to the PC by the micro-USB connector **CN1** on the Nucleo, as highlighted below. This will provide power and debug connectivity to the platform.

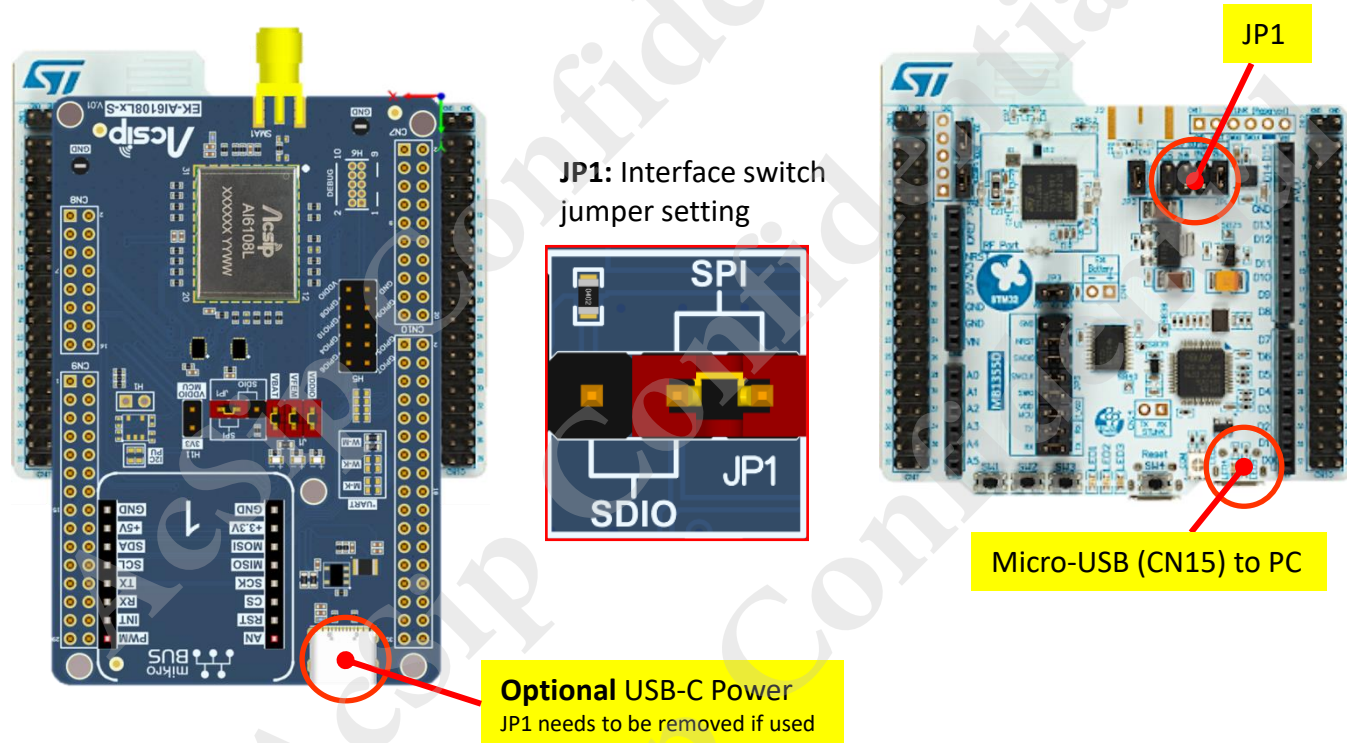


Optionally power can be supplied via the USB-C connector on the EK-AI6108Lx-S instead. In most cases this should not be necessary, but may be necessary if the USB port is not able to supply sufficient power. Note that if power is supplied via the USB-C connector then **JP6** on the Nucleo must be removed. The Nucleo must still be connected to the PC via micro-USB connector **CN1** in order to use the debug interface.

Reference Platforms

STM32 NUCLEO-WB55RG

- This uses the [STM32 NUCLEO-WB55RG](#) as the host MCU development board.
- The two boards connect together as shown in the photo below. This is connected to the PC by the micro-USB connector **CN15** on the Nucleo, as highlighted below. This will provide power and debug connectivity to the platform.

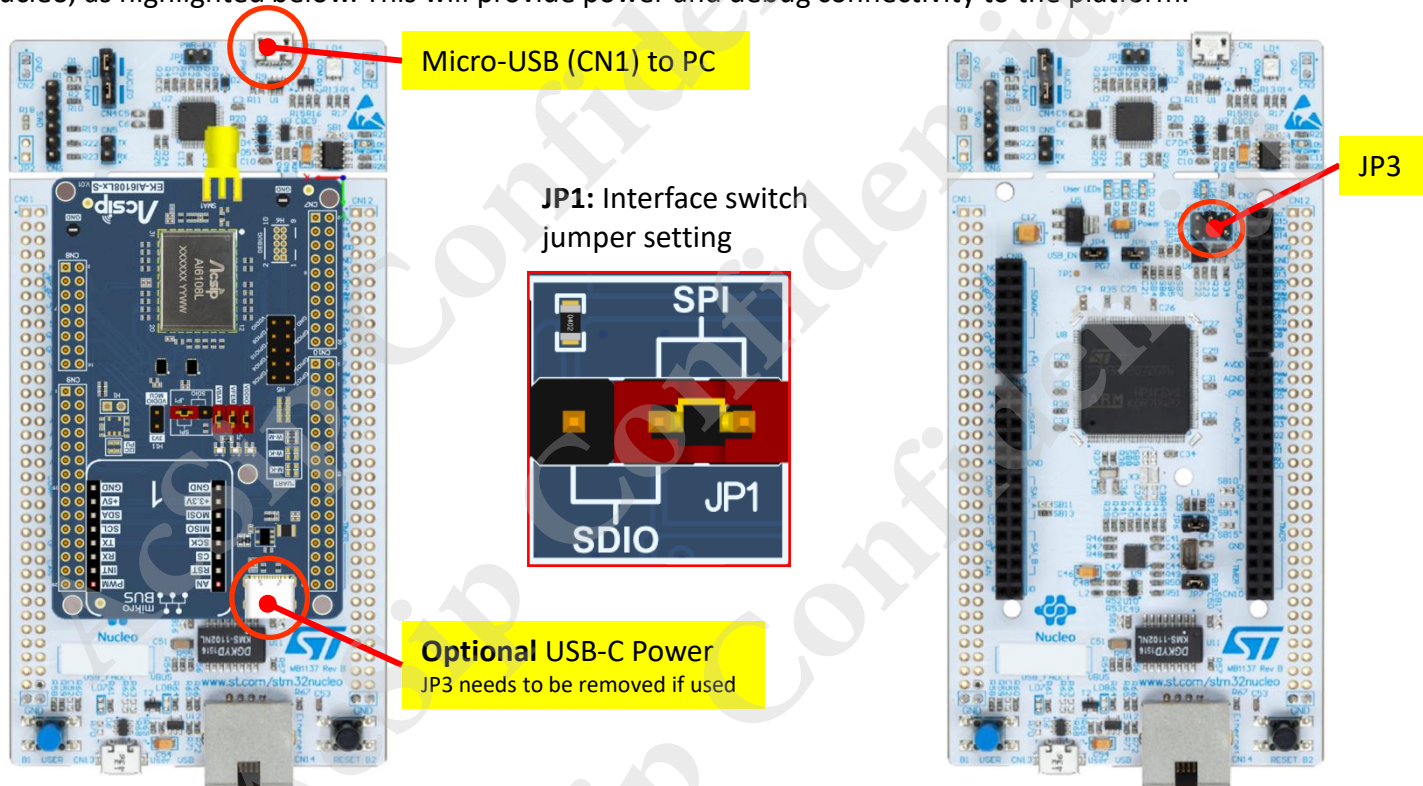


Optionally power can be supplied via the USB-C connector on the EK-AI6108Lx-S instead. In most cases this should not be necessary, but may be necessary if the USB port is not able to supply sufficient power. Note that if power is supplied via the USB-C connector then **JP1** on the Nucleo must be removed. The Nucleo must still be connected to the PC via micro-USB connector **CN15** in order to use the debug interface.

Reference Platforms

STM32 NUCLEO-F429ZI

- This uses the [STM32 NUCLEO-F429ZI](#) as the host MCU development board..
- The two boards connect together as shown in the photo below. This is connected to the PC by the micro-USB connector **CN1** on the Nucleo, as highlighted below. This will provide power and debug connectivity to the platform.



Optionally power can be supplied via the USB-C connector on the EK-AI6108Lx-S instead. In most cases this should not be necessary, but may be necessary if the USB port is not able to supply sufficient power. Note that if power is supplied via the USB-C connector then **JP3** on the Nucleo must be removed. The Nucleo must still be connected to the PC via micro-USB connector **CN1** in order to use the debug interface.

Reference Platforms

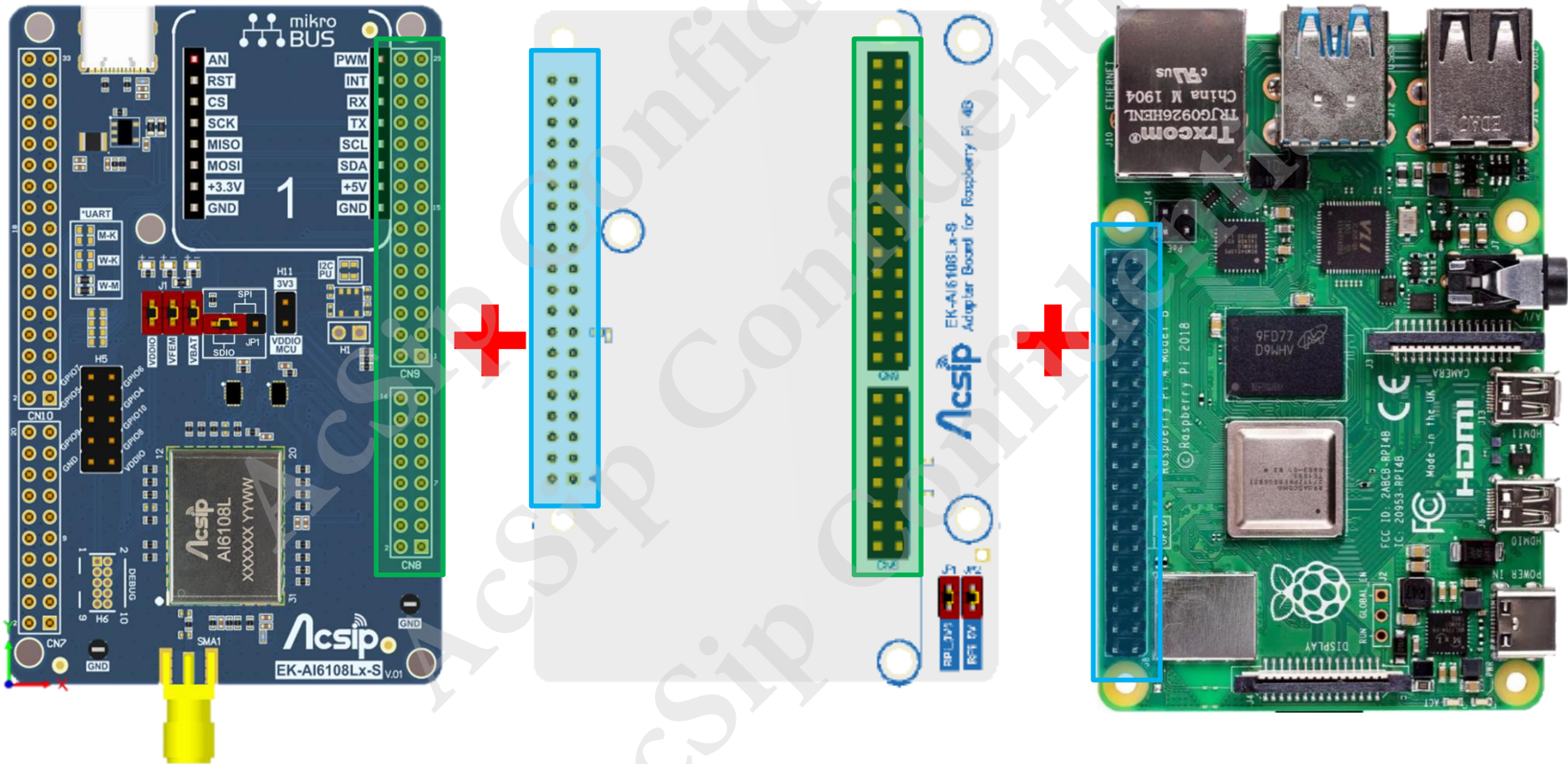
Raspberry Pi 4B

EK-AI6108Lx-S needs to be connected to the Raspberry Pi 4B through an adapter board, as shown in the image below.

EK-AI6108Lx-S

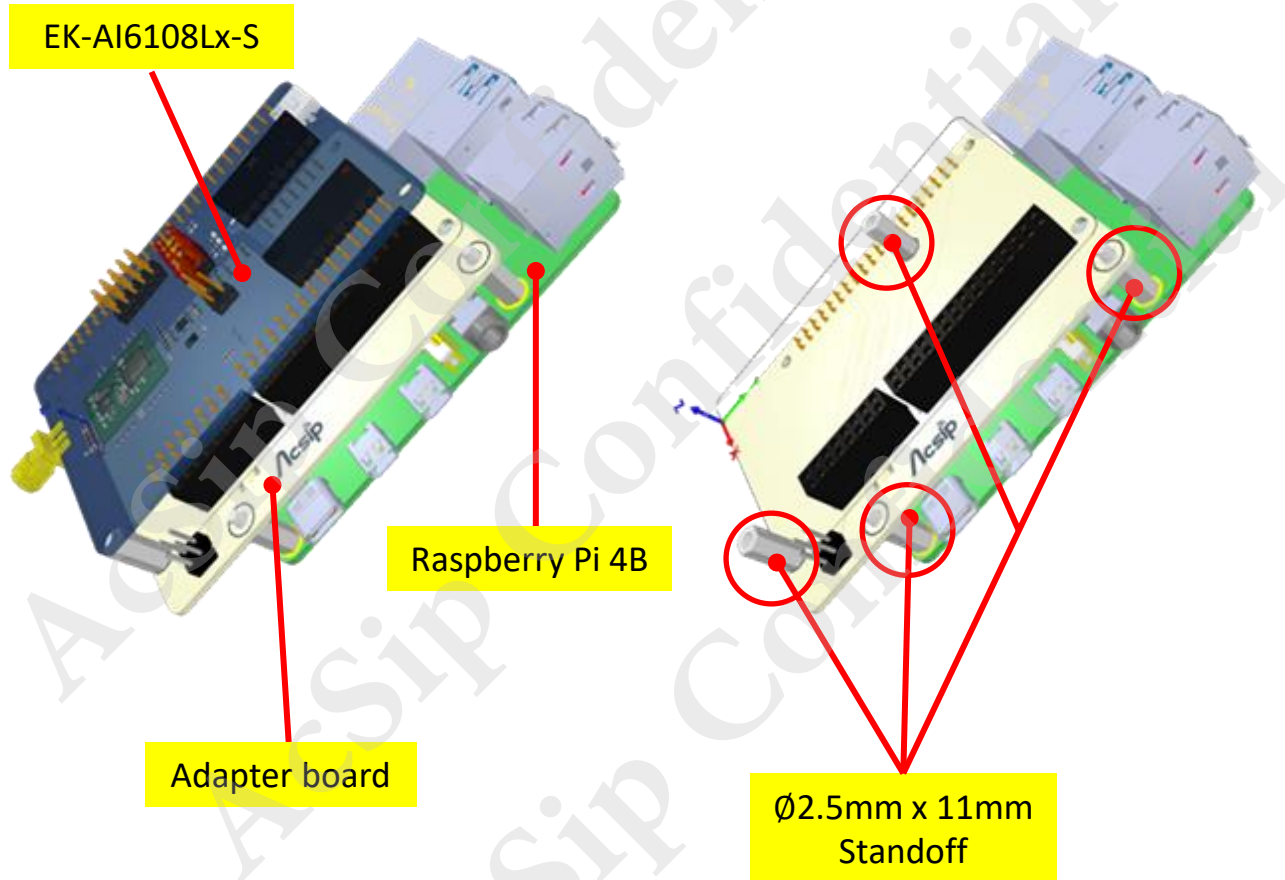
Adapter Board

Raspberry Pi 4B



Reference Platforms

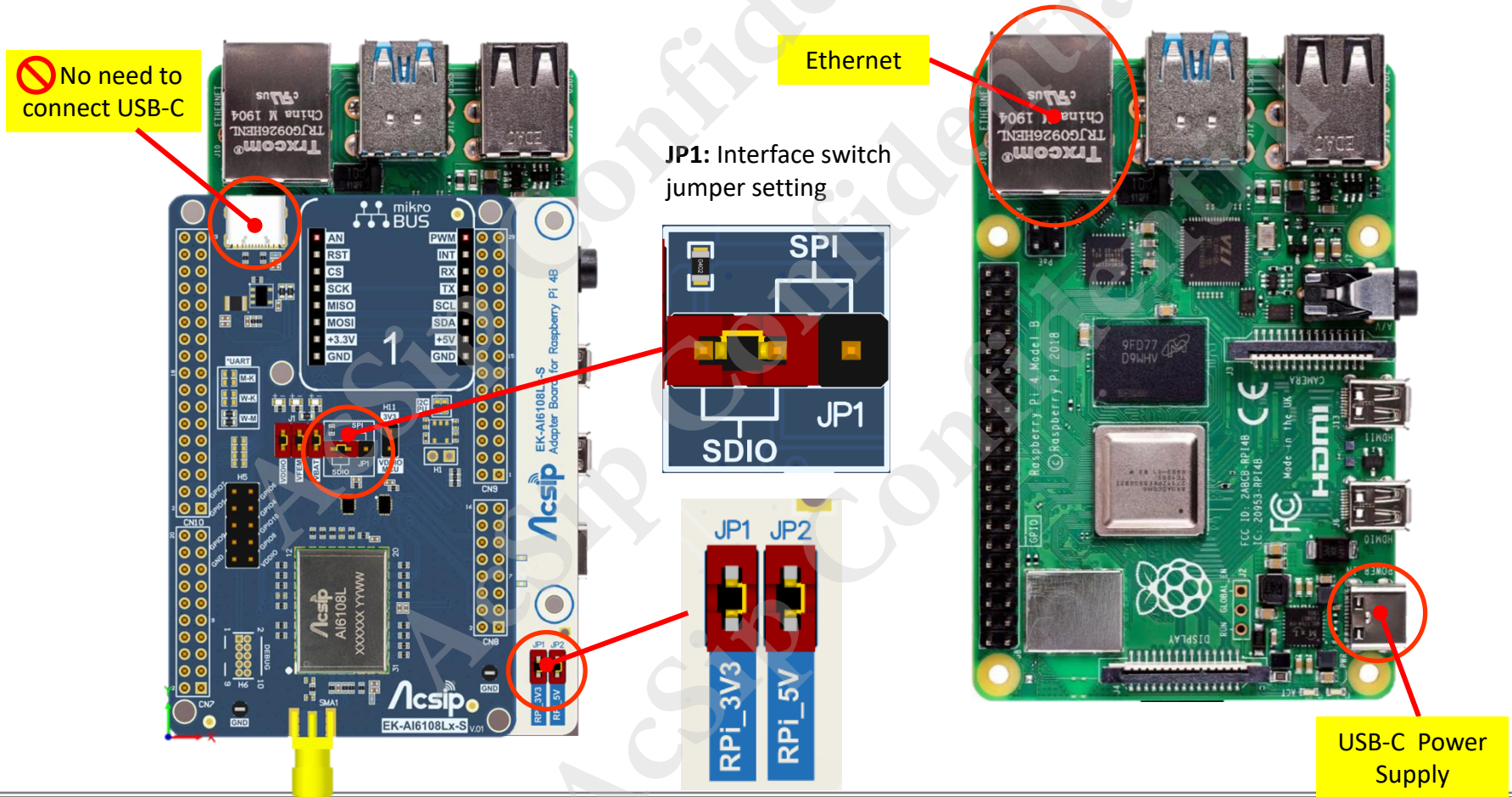
Raspberry Pi 4B



Reference Platforms

Raspberry Pi 4B

- This uses the Raspberry Pi 4 as the host development board.
- Connect the RJ45 Ethernet cable to the Ethernet port.
- Once power is applied, it should take the device around 60 seconds to boot up and be operational.



Antenna Specifications

ARISTOTLE
ENTERPRISES INC.

Specifications

RFA-08-C58-U-B70

Specifications

Frequency range	863 –928 MHz
Peak gain	1.6dBi
Average gain	0.8dBi
VSWR	2.5 : 1 Max.
Polarization	Linear, vertical
Impedance	50 Ω
Connector	SMA PLUG

Environment & Mechanical Characteristics

Temperature	- 10°C to +55°C
Humidity	95% @ 25°C

