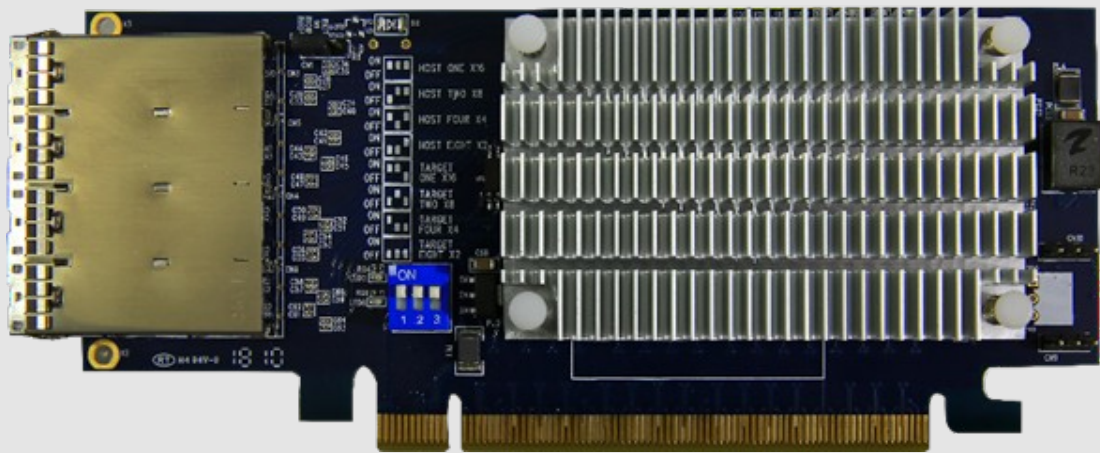




# Microchip X16 External Host Card



User's Manual

REV: 1.0

May. 2021

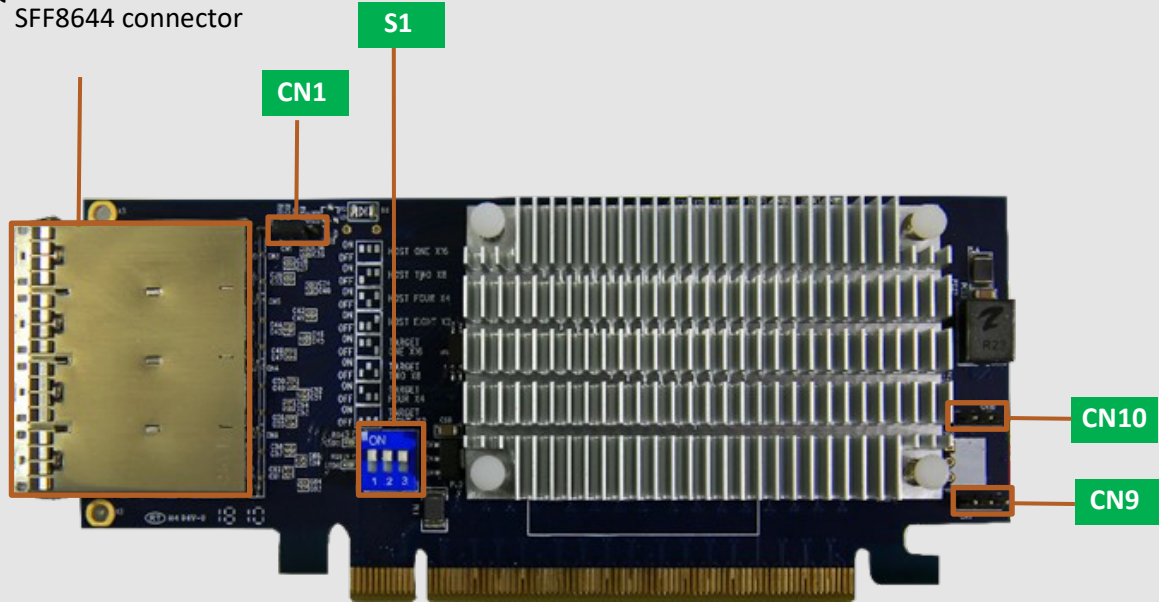
#



# Microchip X16 External Host Card

## Host Card Description

Quad Ports MiniSAS HD  
SFF8644 connector



Location	Descriptions	Pinout
CN1	Pin1&2 ON: Normal operation mode. Pin2&3 ON: Switchtec FW recovery mode	
CN9	Switchtec UART Port UART with 3.3V TTL signals level, Baud rate 230400	TX/RX/GND
CN10	On-board uP UART Port UART with 3.3V TTL signals level, Baud rate 115200	TX/RX/GND

### S1\_Host Mode



**One  
X16**



**Two X8**



**Four X4**



**Eight  
X2**

### S1\_Target Mode



**One  
X16**



**Two X8**



**Four X4**

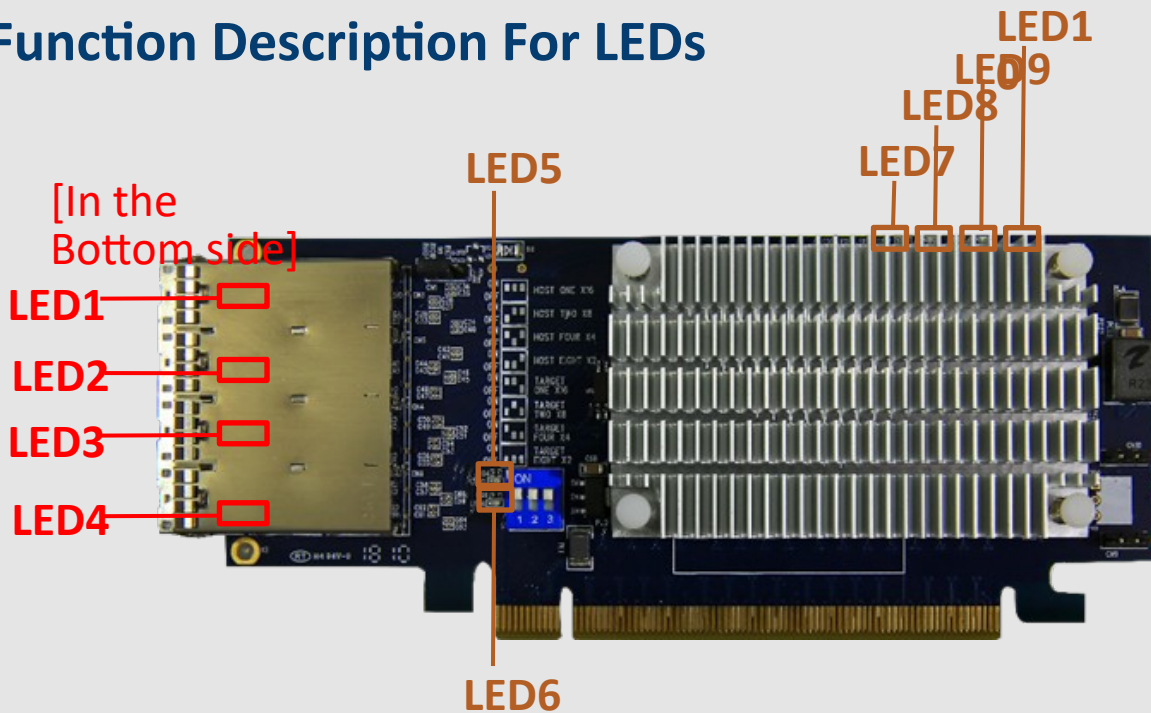


**Eight  
X2**



# Microchip X16 External Host Card

## Function Description For LEDs



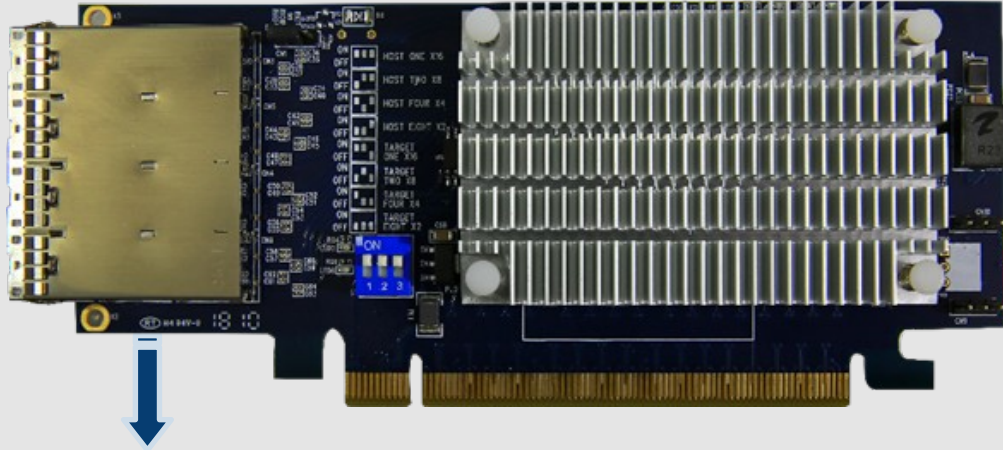
Location	Color	Description
LED5	Blue	<b>Switchtec Heartbeat LED</b> Blinking: indicates the Switchtec working in active mode
LED6	Blue	<b>System Power LED</b> Solid ON: indicates Host adapter card is power on
LED1/2/3/4	Red	<b>Port link matching LED</b> Each LED corresponds to SFF8644 port. All LEDs light when on any drive attached in host card. <b>One x16 mode:</b> LED1 ON: no link or link width isn't x16  <b>Two x8 mode:</b> LED 2/4 ON: no link or link width isn't x8  <b>Four x4 mode:</b> LED 1/2/3/4 ON: no link or link width isn't 4  <b>Eight x2 mode:</b> LED 1/2/3/4 Always OFF
LED 7/8/9	Blue Green Orange	Host/Target x16 mode, LED 7 ON Host/Target x8 mode, LED 8 ON Host/Target x4 mode, LED 9 ON



# Microchip X16 External Host Card

## SFF8644 Pin Definition

CONN\_0  
CONN\_1  
CONN\_2  
CONN\_3



		1	2	4	5	7	8
<b>CONN_0</b>	<b>A</b>	CLK_0_N	CLK_0_P	PERP0	PERN0	PERP1	PERN1
	<b>B</b>	Port_FAT0	PERST#_0	PERP2	PERN2	PERP3	PERN3
	<b>C</b>	SSD_DET#_0	SSD_DET#_1	PETP0	PETN0	PETP1	PETN1
<b>CONN_1</b>	<b>A</b>	Port_FAT1 CLK_1_N	PERST#_1 CLK_1_P	PERP4	PERN4	PERP3	PERN3
	<b>B</b>	Port_FAT2	PERST#_2	PERP6	PERN6	PERP7	PERN7
	<b>C</b>	SSD_DET#_2	SSD_DET#_3	PETP4	PETN4	PETP5	PETN5
<b>CONN_2</b>	<b>A</b>	Port_FAT3 CLK_2_N	PERST#_3 CLK_2_P	PERP8	PERN8	PERP9	PERN9
	<b>B</b>	Port_FAT4	PERST#_4	PERP10	PERN10	PERP11	PERN11
	<b>C</b>	SSD_DET#_2	SSD_DET#_3	PETP8	PETN8	PETP9	PETN9
<b>CONN_3</b>	<b>A</b>	Port_FAT5 CLK_3_N	PERST#_5 CLK_3_P	PERP10	PERN10	PERP13	PERN13
	<b>B</b>	Port_FAT6	PERST#_6	PERP14	PERN14	PERP15	PERN15
	<b>C</b>	SSD_DET#_2	SSD_DET#_3	PETP12	PETN12	PETP13	PETN13
	<b>D</b>	Port_FAT7	PERST#_7	PETP14	PETN14	PETP15	PETN15