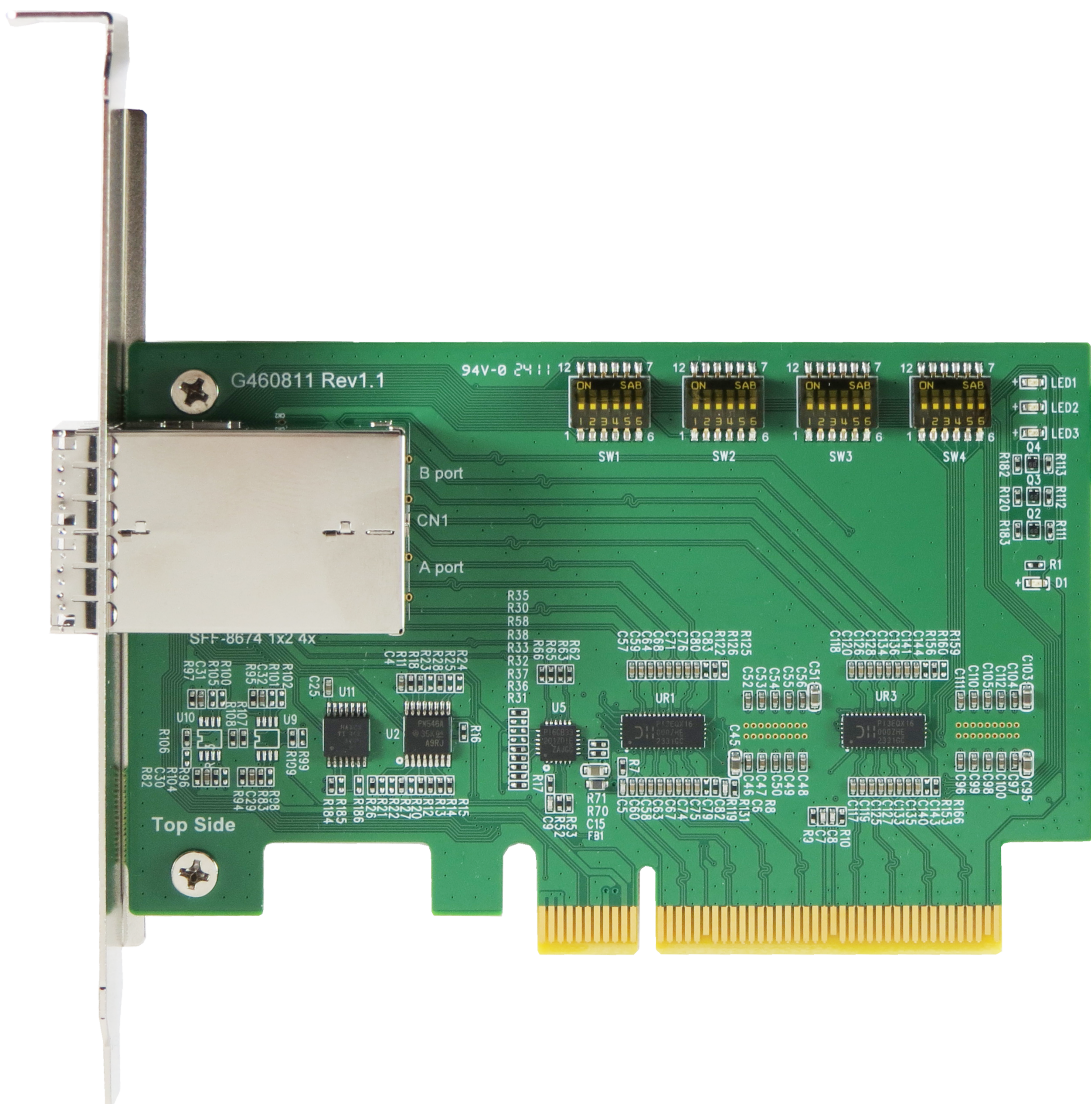


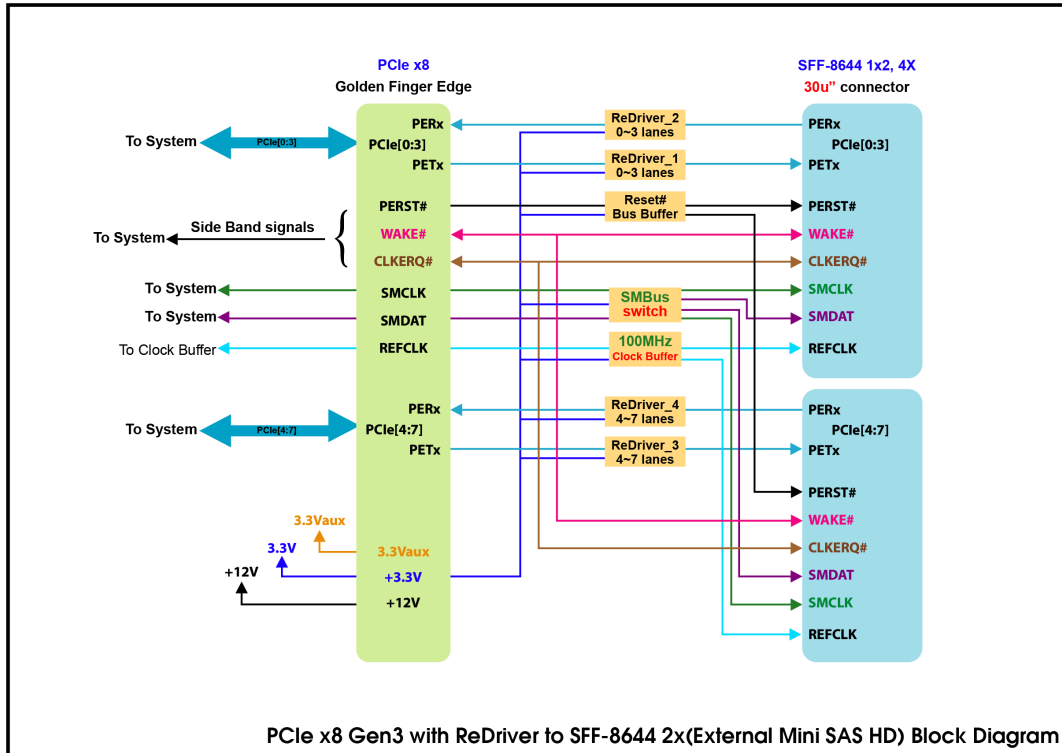
Innocard Minerva

PE0806

PCIe x8 Gen3 with Redriver to External Mini SAS HD 1x2, 4X



PCIe x8 Gen3 with Redriver to External Mini SAS HD 1x2, 4X



Features

- ✧ External Mini SAS HD 1x2, 4X(SFF-8674) to PCIe x8 Gen3 convert
- ✧ Built-in SFF-8674 1x2, 4X connector with 30u"(0.38um) min Au mating area plating
- ✧ Built-in ReDriver to extend PCIe 4.0, 16GT/s 8 lanes signals data link width, and may provides programmable linear equalization, output swing and flat gain
- ✧ The PCIe 8 lanes can be bifurcated into two x4 link width to support different system topologies
- ✧ Built-in PCIe 100MHz Clock buffer for SFF-8674 1x2, 4X to drive longer cable length.
- ✧ Built-in SMBus Switch(Address: 0x70) with Reset Funtion for SFF-8674 1x2, 4X SMBus communication
- ✧ Built-in PERST# Bus Buffer Gate to be used for longer trace lengths and longer cable lengths.
- ✧ D1 Green LED ON indicates AIC ready
- ✧ LED1 Green OFF indicates PERST# Normal (Function intentionally inverted)
- ✧ LED2 Green OFF indicates WAKE# Normal (Function intentionally inverted)
- ✧ LED3 Green OFF indicates CLKREQ# Normal (Function intentionally inverted)

Specifications

- ✧ PCI Express Base Specification Rev 3.1
- ✧ PCIe_CEM_SPEC_V3.0
- ✧ PCI_Express_External_Cabling_R3.0a_06042020_NCB

Applications

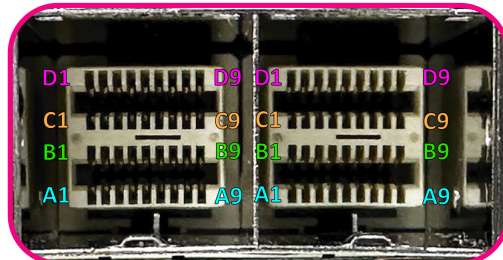
- ✧ Rack server
- ✧ Microserver and Tower server
- ✧ High performance computing
- ✧ Hareware accelerator
- ✧ Storage Controller HBA(Host Bus Adapter)
- ✧ Desktop PC/motherboard

PCIe x8 Gen3 with Redriver to External Mini SAS HD 1x2, 4X

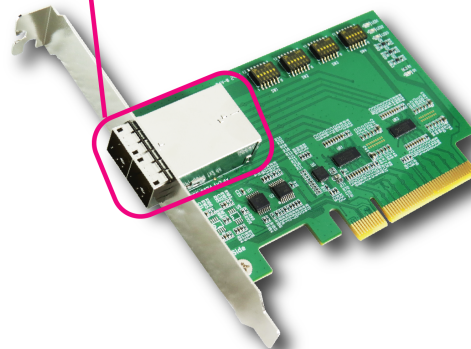
The following figure shows SFF-8644 1x2, 4X pin out

SFF-8644 1x1, 4X pin define

Pin#	Net	Pin#	Net
A1	REFCLKp	B1	PERST#
A2	REFCLKn	B2	NC
A3	GND	B3	GND
A4	PERp0	B4	PERp1
A5	PERn0	B5	PERn1
A6	GND	B6	GND
A7	PERp3	B7	PERp2
A8	PERn3	B8	PERn2
A9	GND	B9	GND
C1	SMCLK	D1	WAKE#
C2	SMDAT	D2	CLKREQ#
C3	GND	D3	GND
C4	PETp0	D4	PETp1
C5	PETn0	D5	PETn1
C6	GND	D6	GND
C7	PETp3	D7	PETp2
C8	PETn3	D8	PETn2
C9	GND	D9	GND



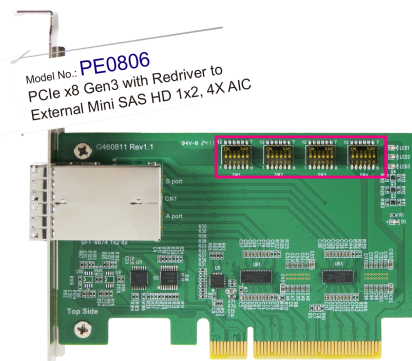
PCIe 3.0 SFF-8644 1x2, 4X 30μ" Au plating connector



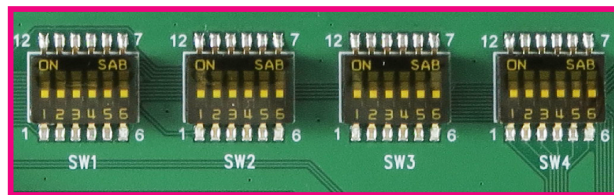
Model No.: PE0806

PCIe x8 Gen3 with ReDriver to SFF-8644 1x2, 4X AIC

The switches settings are as noted below



Model No.: PE0806
PCIe x8 Gen3 with Redriver to
External Mini SAS HD 1x2, 4X AIC



SW1 OR SW2 OR SW3 OR SW4	Pin	Setting	Output Swing Setting	
			on	0
SW1	1-12	Output Swing Setting	on	0
	2-11	FG0	off	1
SW2	3-10	Flat Gain Setting	on	0
	4-9	EQ0	off	1
SW3	5-8	EQ1	on	0
	6-7	EQ2	off	1

Flat Gain Setting		
FG1	FG0	dB
0	0	-3.5
0	1	-2
1	0	-0.5
1	1	1

Default Value : { 1. Swing : High
2. Flat Gain : High
3. Equalization : High

Equalizer Setting (dB)						
EQ2	EQ1	EQ0	@1.25GHz	@2.5GHz	@4GHz	@8GHz
0	0	0	0.2	1.0	2.3	5.6
0	0	1	0.2	1.1	2.6	6.2
0	1	0	1.8	2.7	3.9	7.0
0	1	1	2.1	3.3	4.8	8.5
1	0	0	3.0	4.2	5.8	9.4
1	0	1	3.2	4.6	6.5	10.4
1	1	0	4.3	5.8	7.8	11.7
1	1	1	4.5	6.5	8.8	13.0