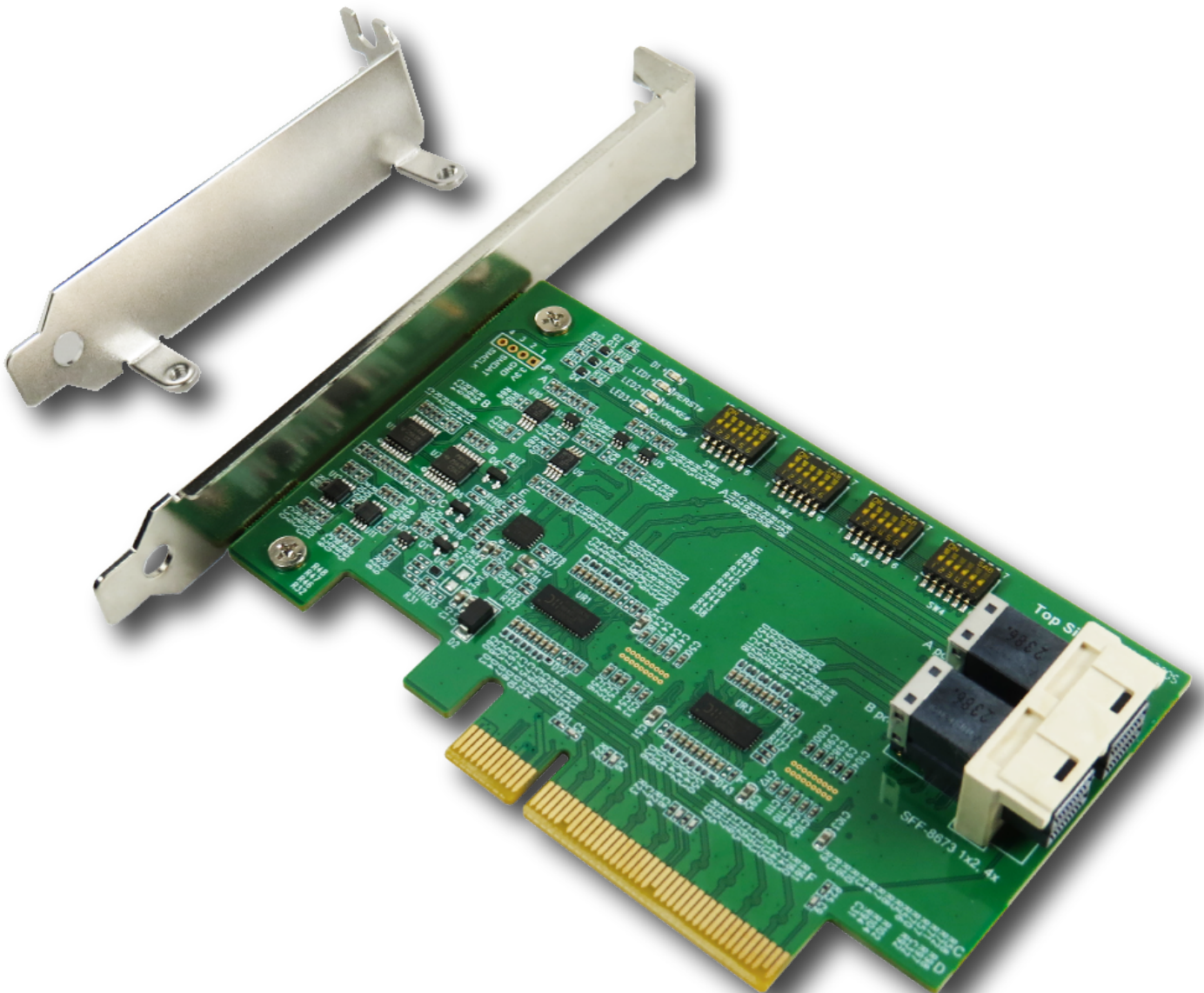




Minerva

DP8811

PCIe x8 Gen4 with ReDriver to
Internal Mini SAS HD 1x2, 4X(SFF-8673)



PCIe x8 Gen4 with ReDriver to Internal Mini SAS HD 1x2, 4X

Features

- ※ Internal Mini SAS HD 1x2, 4X(SFF-8673) to PCIe x8 Gen4 convert
- ※ Built-in SFF-8673 1x2, 4X connector,
- ※ Input power 3.3V with TVS and Load Switch protection to protect ReDriver controller
- ※ PCIe 4.0 8 lanes signals input and output with ESD protection
- ※ Built-in ReDriver controller to extend PCIe 4.0, 16GT/s 8 lanes differential pair 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(Address: 0x6C) for SFF-8673 1x2, 4X to drive longer cable length. It may be buffered and fanned out to the SFF-8673 1x2, 4X clock pin dual port output.
- ※ Built-in SMBus Switch(Address: 0x70) with Reset funtion for SFF-8673 1x2, 4X dual port SMBus communication
- ※ Built- in SMBus bidirectional buffer repeater
- ※ Built-in SMBus I/O Expander(Address: 0x20) for OOB(out of band) management to remote SFF-8673 1x2, 4X dual port Reset signals
- ※ Built-in PERST# Bus Buffer Gate to be used over longer trace lengths and over longer cable lengths.
- ※ Supports PCIe PERST# for OOB(out of band) management to remote SFF-8673 1x2, 4X dual port Reset
- ※ Built-in WAKE# Bus Buffer Gate to be used over longer trace lengths and over longer cable lengths.
- ※ Built-in CLKREQ# Bus Buffer Gate to be used over longer trace lengths and over longer cable length.
- ※ 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 4.0
- ※ PCIe_CEM_SPEC_R4_V1_0_08072019_NCB
- ※ PCI_Express_External_Cabling_R3.0a_06042020_NCB
- ※ SFF-TA-8614 R3.5.4_CB
- ※ SFF-9401 Rev1.1

Applications

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

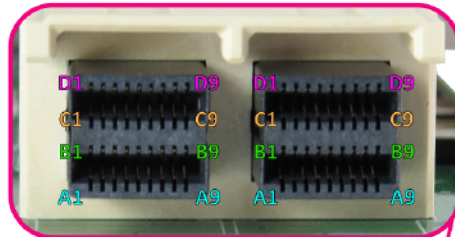
PCIe x8 Gen4 with ReDriver to Internal Mini SAS HD 1x2, 4X

The following figure shows SFF-8673 1x2, 4X pin out

Home host

SFF-8673 1x1, 4X following Intel pin define

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



PCIe 4.0 SFF-8673 1x2, 4X
30µ" Au plating connector

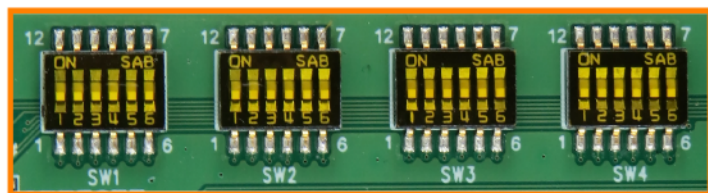
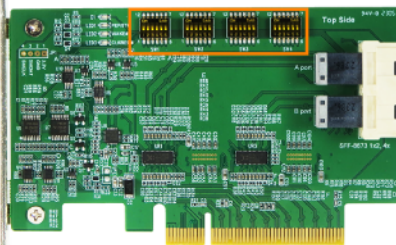


Model No.: DP8811

PCIe x8 Gen4 with ReDriver to Mini SAS HD 1x2, 4X AIC

The switches settings are as noted below

Model No.: DP8811
PCIe x8 Gen 4 with Redriver
to Internal Mini SAS HD 1x2, 4X AIC



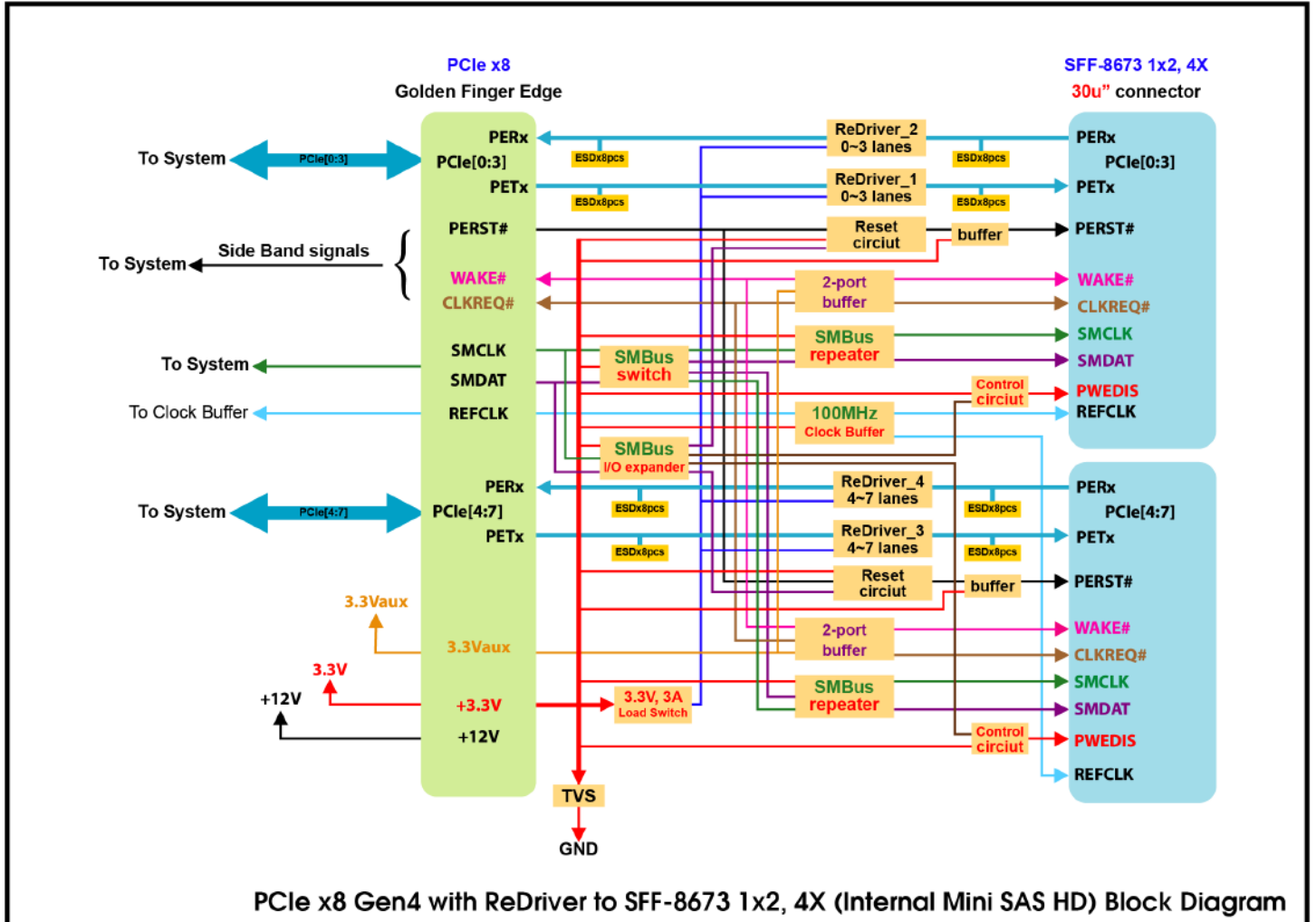
SW	Pin	Setting	Value	Unit
SW1	1-12	Output Swing Setting	on	0
			off	1
SW2	2-11	Flat Gain Setting	on	0
	FG0		off	1
	3-10		on	0
SW3	4-9	Equalization Setting	on	0
	EQ0		off	1
SW4	5-8	Equalization Setting	on	0
	EQ1		off	1
SW4	6-7	Equalization Setting	on	0
	EQ2		off	1

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

PCIe x8 Gen4 with ReDriver to Internal Mini SAS HD 1x2, 4X



PCIe x8 Gen4 with ReDriver to SFF-8673 1x2, 4X (Internal Mini SAS HD) Block Diagram