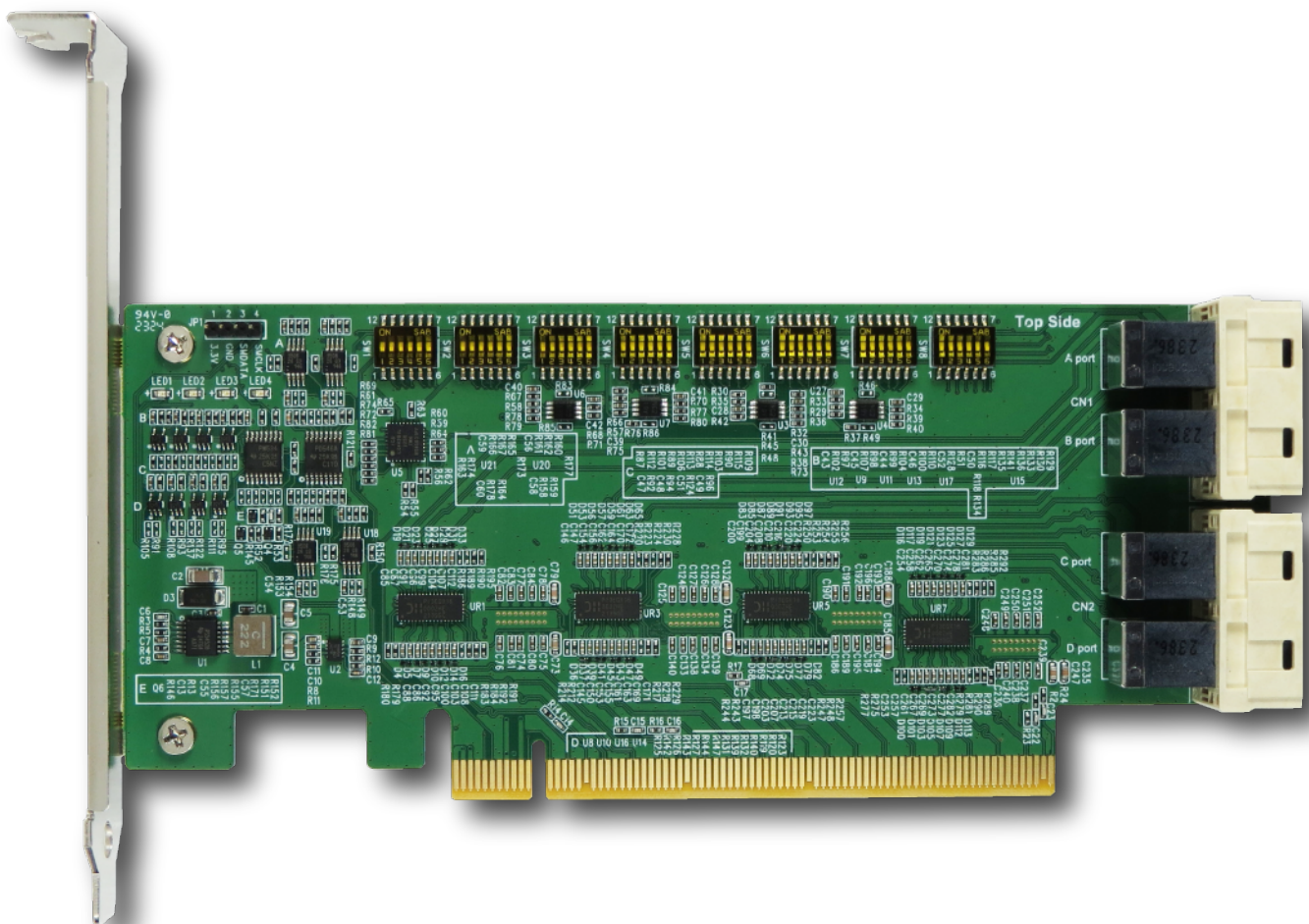


# Innocard Minerva

## DP7105

PCIe x16 Gen4 with ReDriver to SFF-8673 1x2, 4X Dual Port AIC



## PCIe x16 Gen4 with ReDriver to SFF-8673 1x2, 4X Dual port AIC

### Features

- ※ Internal Mini SAS HD 1x2, 4X(SFF-8673) dual port to PCIe x16 Gen4 convert
- ※ Built-in SFF-8673 1x2, 4X dual port connector with 30u"(0.38um) min Au mating area plating
- ※ Input +12V, +3.3V, 3.3VAUX with TVS protection
- ※ Built-in +12V to 3.3V\_IN, 5.5A current PWM Power controller
- ※ Built-in 3.3V\_IN Power Load Switch for ReDriver controller Power Protection.
- ※ PCIe 4.0 16-lane signals input and output with ESD protection
- ※ Built-in ReDriver to extend PCIe 4.0, 16GT/s 16 lanes differential pair signals and may provides programmable linear equalization, output swing and flat gain
- ※ The PCIe 16 lanes can be bifurcated into four x4 link width to support different system topologies
- ※ Built-in PCIe 100MHz Clock buffer(Address: 0x6C) for SFF-8673 dual port to drive longer cable length. It may be buffered and fanned out to the SFF-8673 dual port clock pin.
- ※ Built-in SMBus Switch(Address: 0x70) with Reset Funtion for SFF-8673 dual port SMBus communication
- ※ Built-in SMBus I/O Expander(Address: 0x20) for OOB(out of band) management to remote SFF-8673 dual port Reset signals.
- ※ Supports PCIe PERST# management to control SFF-8673 dual port Reset signals.
- ※ Built-in PERST# Bus Buffer to be used longer cable length.
- ※ Built-in WAKE# Auto-Bidirectional Bus Buffer to be used longer cable length.
- ※ Built-in CLKREQ# Auto-Bidirectional Bus Buffer to be used longer cable length.
- ※ LED1 Green LED on indicates AIC ready
- ※ LED2 Red OFF indicates WAKE# Normal (Function intentionally inverted)
- ※ LED3 Red OFF indicates CLKREQ# Normal (Function intentionally inverted)
- ※ LED4 Red OFF indicates PERST# Normal (Function intentionally inverted)
- ※ PCI Express Base Specification Rev 4.0
- ※ PCIe\_CEM\_SPEC\_R4\_V1\_0\_08072019\_NCB
- ※ Compliant with Support SFF-9402 Rev1.1
- ※ Compliant with PCI\_Express\_OCuLink\_1.0a

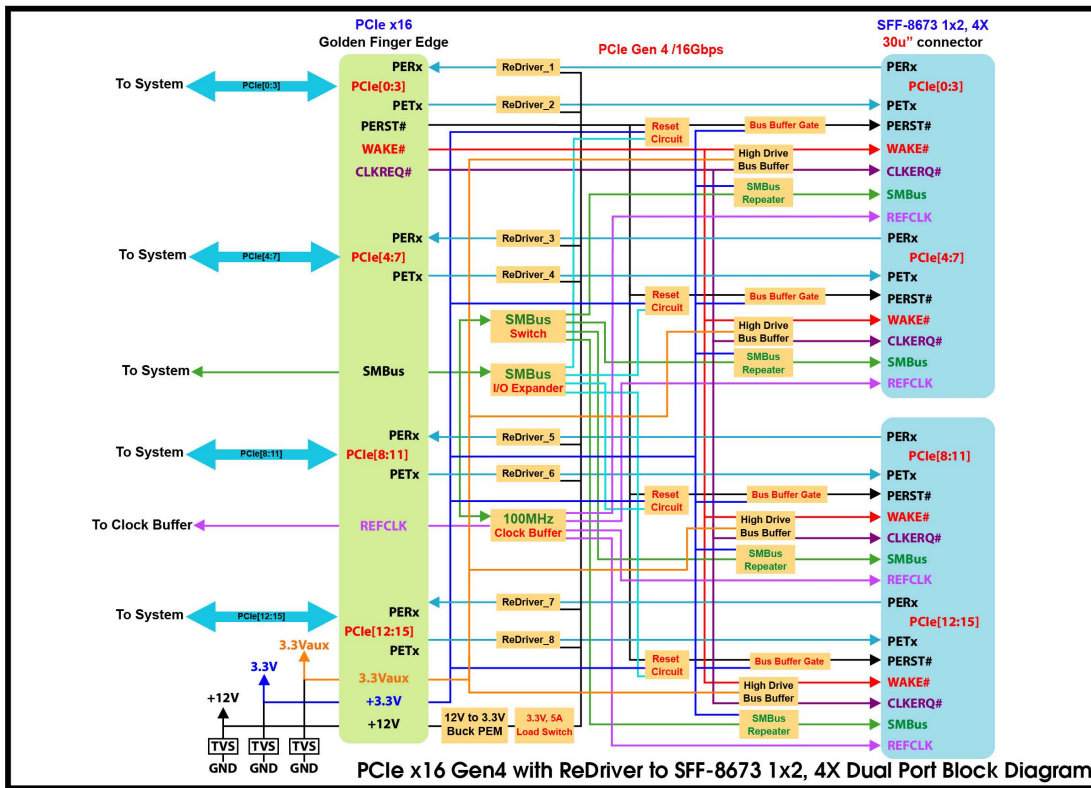
### Specifications

- ※ PCI Express Base Specification Rev 4.0
- ※ PCIe\_CEM\_SPEC\_R4\_V1\_0\_08072019\_NCB
- ※ Compliant with Support SFF-9402 Rev1.1
- ※ Compliant with Support SFF-8613Rev3.5

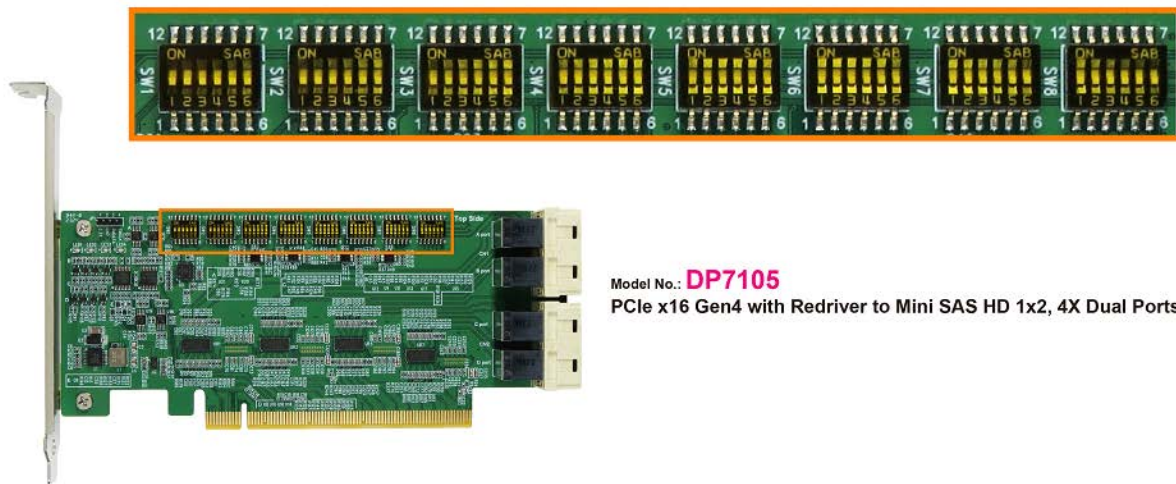
### Applications

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

PCIe x16 Gen4 with ReDriver to SFF-8673 1x2, 4X Dual port AIC



The switches settings are as noted below



Model No.: **DP7105**  
PCIe x16 Gen4 with Redriver to Mini SAS HD 1x2, 4X Dual Ports AIC

SW	Switch Label	Output Swing Setting		800 mVp-p	1200 mVp-p
		on	off		
SW1	1-12	on	0	800 mVp-p	
SW2	2-11	off	1	1200 mVp-p	
SW3	FG0	on	0		
SW4	3-10	off	1		
SW5	4-9	on	0		
SW6	EQ0	off	1		
SW7	5-8	on	0		
SW8	6-7	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	

<http://www.minerva.com.tw/>