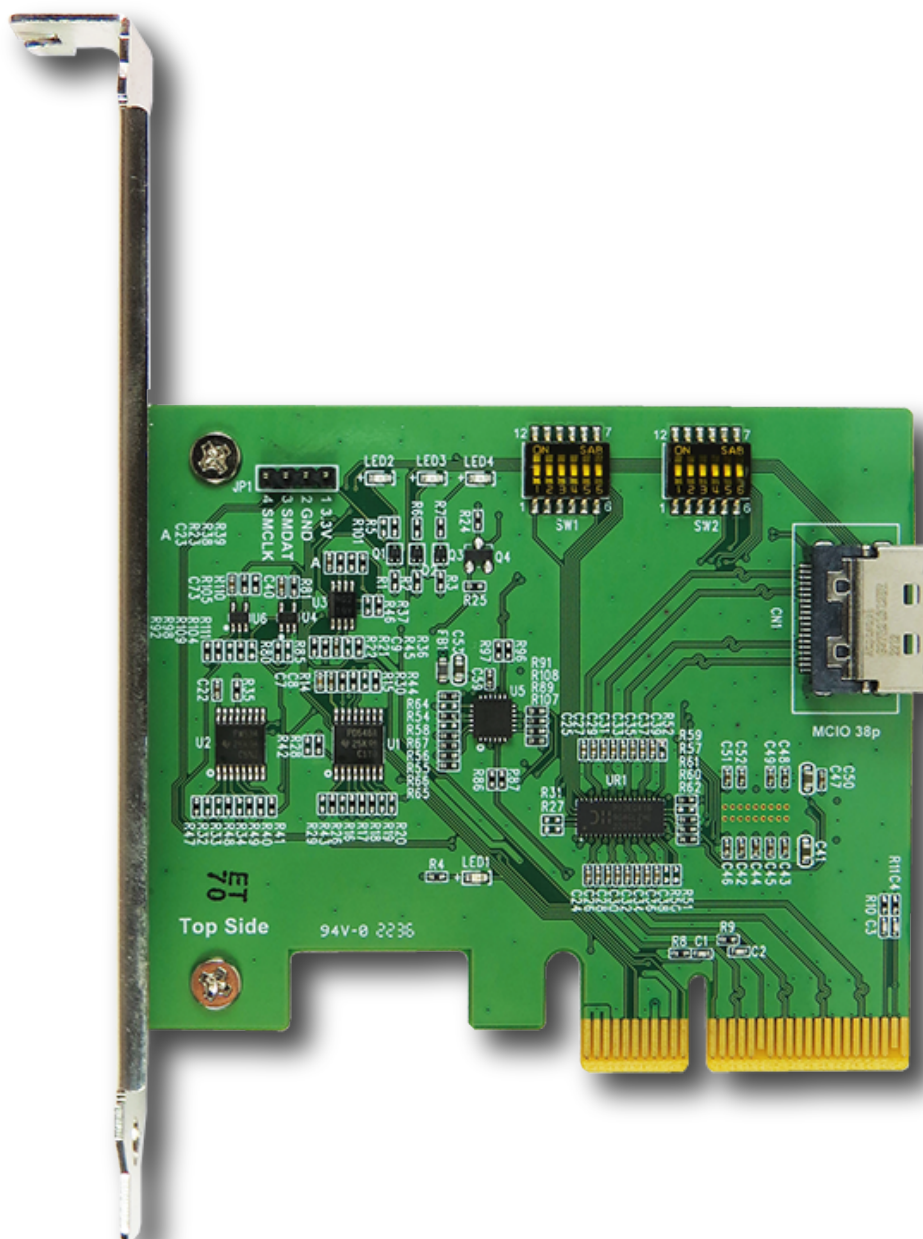




# Minerva

**DP9609**

**PCIe x4 Gen4 with ReDriver to MCIO 38P AIC**



## PCIe x4 Gen4 with ReDriver to MCIO 38P AIC

### Features

- ※ Supports Server BMC management
- ※ Supports Industrial Grade temperature range
- ※ MCIO 38P to PCI Express x4 Gen4 convert
- ※ Built-in SFF-TA-1016/MCIO 38P, 30u" connector
- ※ Built-in ReDriver to extend PCIe 4.0, 16GT/s 16 lanes differential pair signals data link width, and may provides programmable linear equalization, output swing and flat gain
- ※ Built-in PCIe 100MHz Clock buffer to drive longer trace lengths and more longer cable, Address: 0x6C(7 bits)
- ※ Built-in SMBus Switch, Address: 0x71(7 bits)
- ※ Built-in SMBus I/O Expander, Address: 0x20(7 bits) for MCIO 38P PWRDIS control
- ※ Supports PCIe PERST# for OOB(out of band) management to remote MCIO 38P Reset
- ※ Built-in WAKE# bidirectional voltage-level translator for Open-Drain output to be used over longer trace lengths and more longer cable
- ※ Built-in CLKREQ# bidirectional voltage-level translator for Open-Drain output to be used over longer trace lengths and more longer cable
- ※ LED1 Green LED on indicates AIC ready
- ※ LED2 Green LED on to off indicates PCIe WAKE# signals
- ※ LED3 Green LED on to off indicates PCIe CLKREQ# signals
- ※ LED4 Green LED on to off indicates PCIe PERST# signals

### Specifications

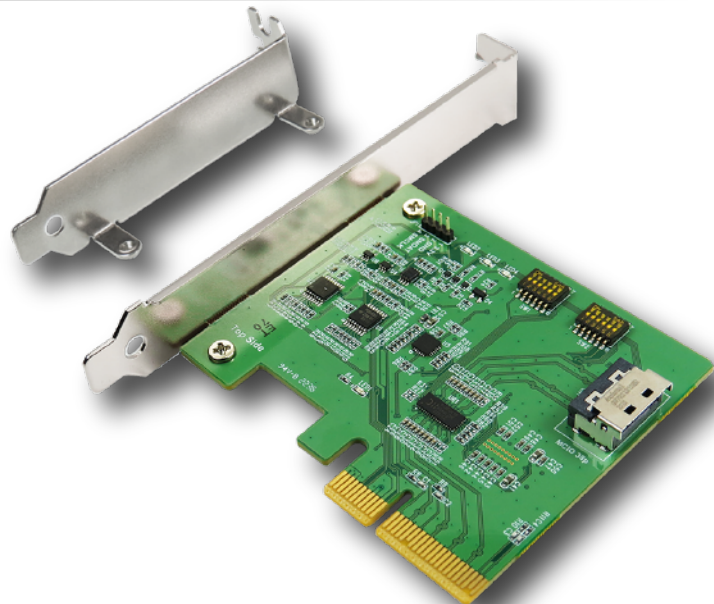
- ※ PCI Express Base Specification Rev 4.0
- ※ PCIe\_CEM\_SPEC\_R4\_V1\_0\_08072019\_NCB
- ※ Compliant with SFF-TA-1016 Specification Version 1.0

### Operating system support

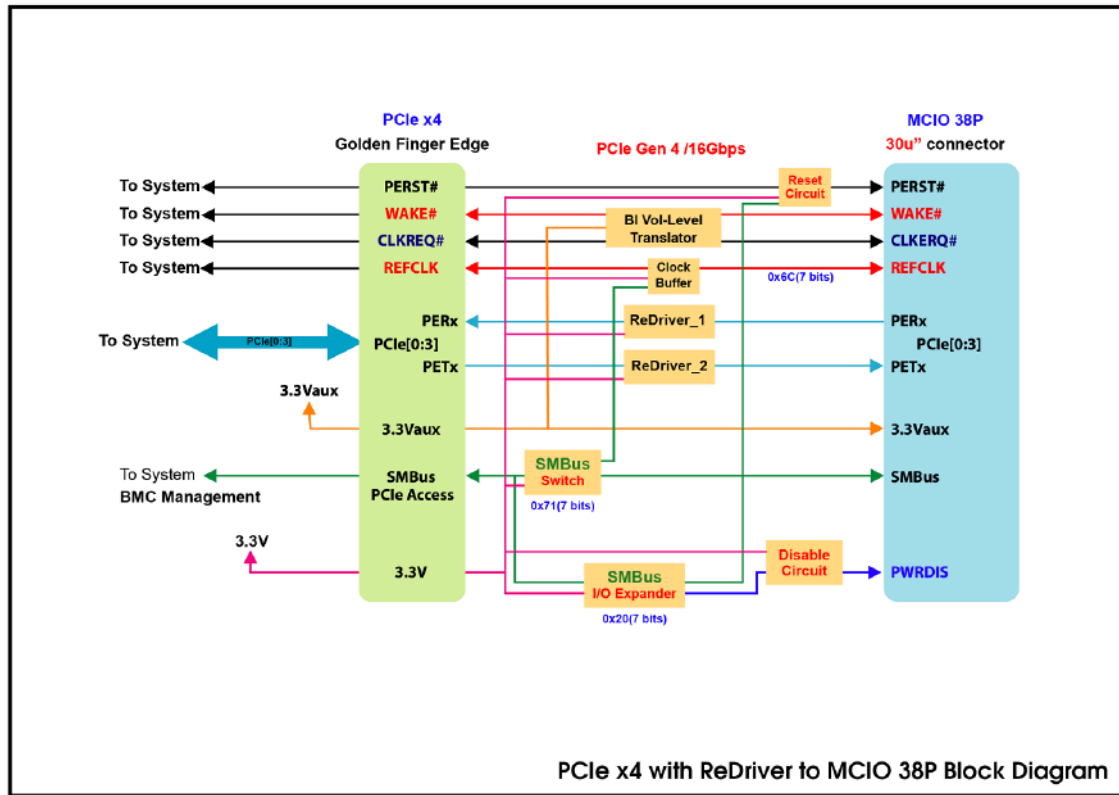
- ※ Windows 7
- ※ Windows 8 & 8.1
- ※ Windows 10
- ※ UEFI 2.3.1 or later

### Applications

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



## PCIe x4 Gen4 with ReDriver to MCIO 38P AIC



The switches settings are as noted below

**SW1**

1-12	Output Swing Setting	on	0
		off	1
2-11	Flat Gain Setting	on	0
FG0		off	1
3-10		on	0
FG1	off	1	
4-9	Equalization Setting	on	0
EQ0		off	1
5-8		on	0
EQ1		off	1
6-7	on	0	
EQ2	off	1	

**Flat Gain Setting**

FG1	FG0	dB
0	0	-3.5
0	1	-2
1	0	-0.5
1	1	1

**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

Model No.: DP9609  
PCIe x4 Gen4 with ReDriver  
to Mini Cool Edge IO 38pin AIC

**SW2**

1-12	Output Swing Setting	on	0
		off	1
2-11	Flat Gain Setting	on	0
FG0_1		off	1
3-10		on	0
FG1_1	off	1	
4-9	Equalization Setting	on	0
EQ0_1		off	1
5-8		on	0
EQ1_1		off	1
6-7	on	0	
EQ2_1	off	1	

**Flat Gain Setting**

FG1	FG0	dB
0	0	-3.5
0	1	-2
1	0	-0.5
1	1	1

**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