

Minerva

DP8416

PCIe x8 Gen4 with ReTimer to MCIO 74P Add-in Card



PCIe x4 Gen4 with ReTimer to MCIO 74P Add-in Card

Features

- ※ PCIe CEM 12V input with fuse/ 5A to protect Retimer controller to be destroyed by over current.
- ※ PCIe CEM 12V input with schottky to protect Retimer controller to be destroyed by reverse voltage.
- ※ PCIe CEM 12V with High Side controller and to enable N-MOS Power
- ※ PCIe CEM 12V to 1.17V/25A SWIFT Synchronous Step-Down Converter
- ※ 1.17V with load switch protection for Retimer PWR_2A Power Rail
- ※ 1.17V with load switch protection for Retimer PWR_2B & PWR_2C Power Rail
- ※ Built-in MCIO 74P connector with 30u"(0.38um) min Au mating area plating
- ※ MCIO 74P to PCI Express 4.0 eight Lanes link width convert
- ※ Built-in ReTimer to extend PCIe 4.0, 16GT/s 8 lanes link width.
- ※ Supports x8 link width or x4x4 link width bifurcation
- ※ Built-in PCIe 100MHz Clock buffer to drive longer trace length and longer cable length.
- ※ Built-in PCIe SMBus Switch for MCIO 74P SMBus Hot Plug
- ※ Built-in PERST# Bus Buffer Gate to be used to extend pcb trace lengths and longer cable length.
- ※ Built-in WAKE#, CLKREQ# dual bidirectional Bus Buffer Gate to extend pcb trace lengths and longer cable length.
- ※ LED1 Red ON to OFF indicates PERST# Ready (Function intentionally inverted)
- ※ LED2 Red ON to OFF indicates WAKE# Ready (Function intentionally inverted)
- ※ LED3 Red ON to OFF indicates CLKREQ# Ready (Function intentionally inverted)
- ※ LED4 Green ON indicates PCIe AIC 12V ready
- ※ LED5 Red ON indicates 12V Error
- ※ LED6 Green ON indicates 1.17 ready
- ※ LED7 Green ON indicates 1.8V ready
- ※ LED8 Green ON indicates Retimer PWR_2A Power Rail ready
- ※ LED9 Green ON indicates Retimer PWR_2B & PWR_2C Power Rail ready
- ※ LED10 Green ON indicates PCIe AIC 3.3V ready



Specifications

- ※ PCI Express Base Specification Rev 4.0
- ※ PCIe_CEM_SPEC_R4_V1_0_08072019_NCB
- ※ Support SSD_Form_Factor_Version1_a
- ※ Compliant with SFF-TA-1016 Specification Version 1.3

Operating system support

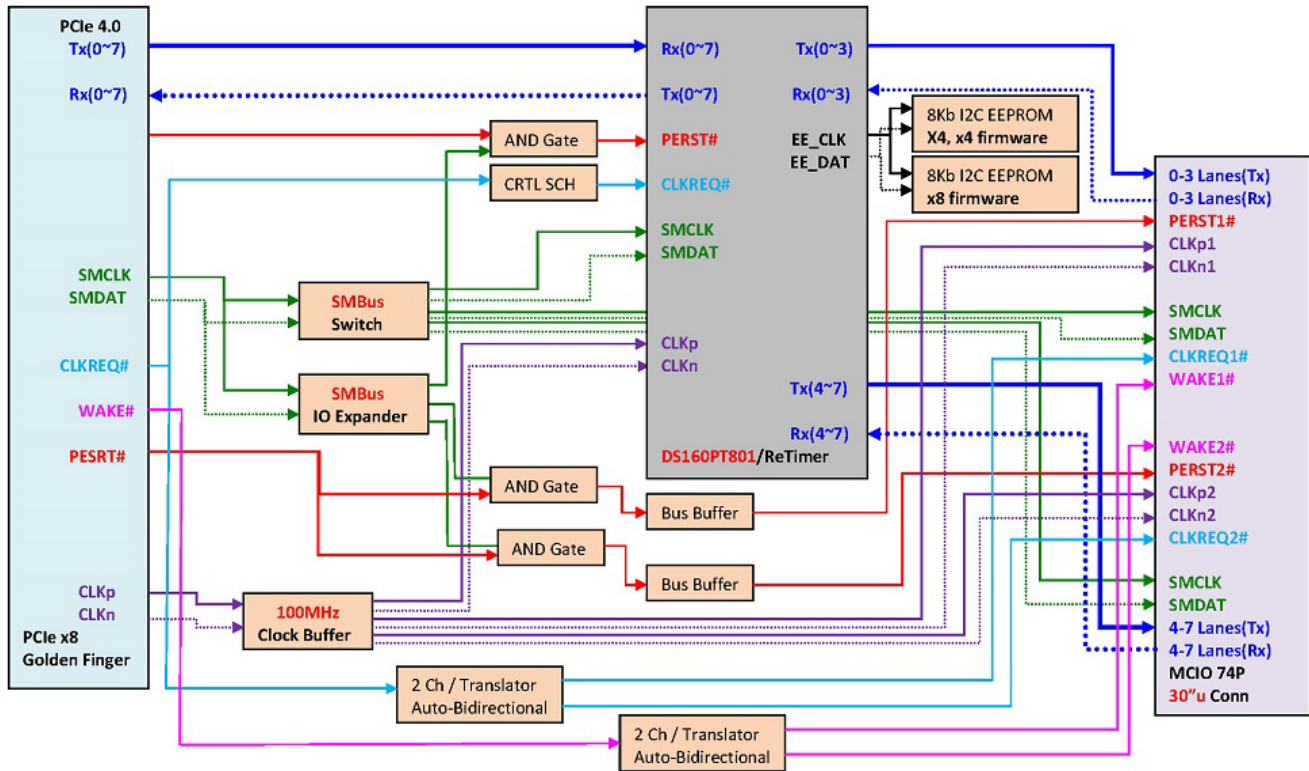
- ※ Windows 8 & 8.1
- ※ Windows 10
- ※ Windows 11
- ※ Linux
- ※ VMware

Applications

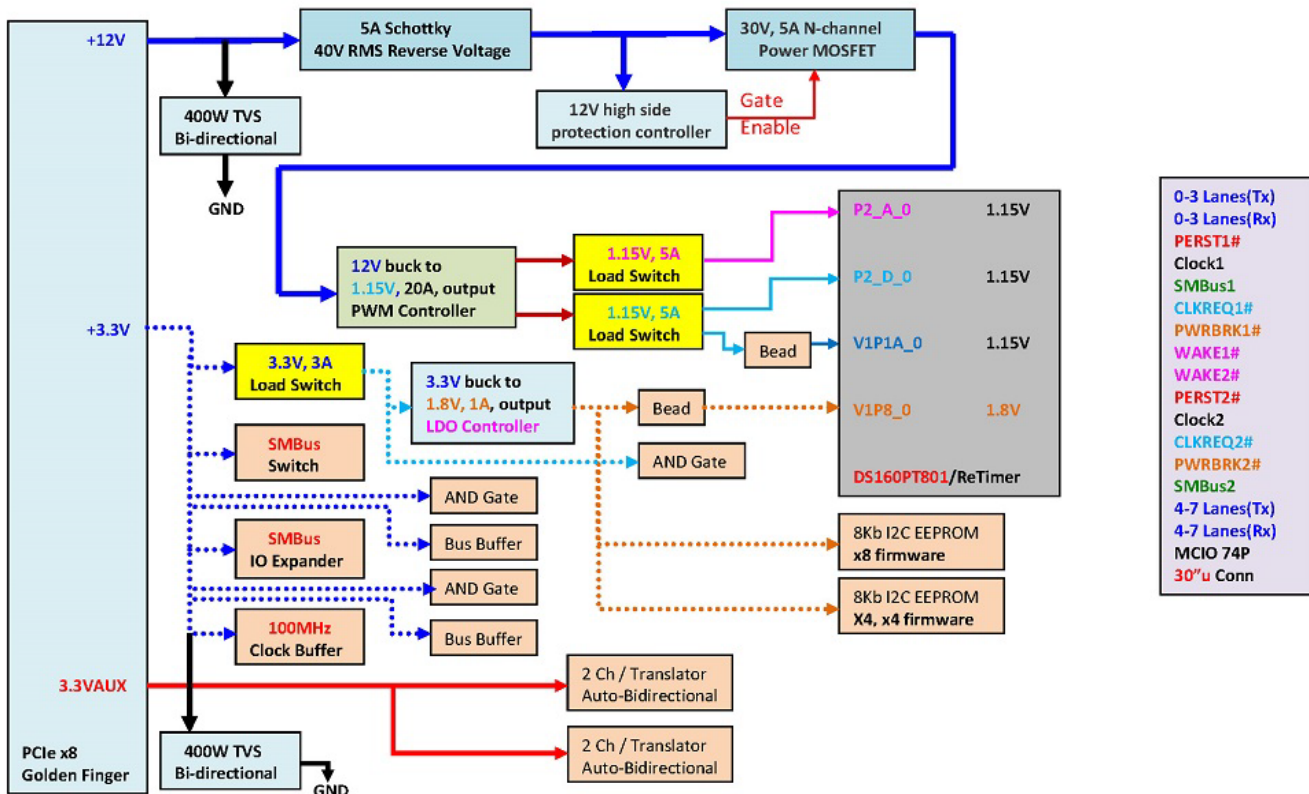
- ※ Rack server
- ※ Microserver and Tower server
- ※ High performance computing
- ※ Hardware accelerator
- ※ Storage Controller HBA(Host Bus Adapter)
- ※ Desktop PC/motherboard

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PCIe x8 Gen4 with ReTimer to MCIO 74P Block Diagram



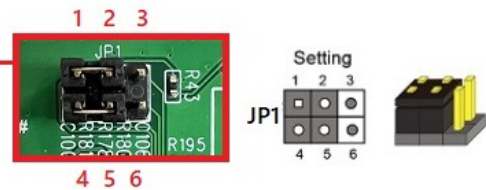
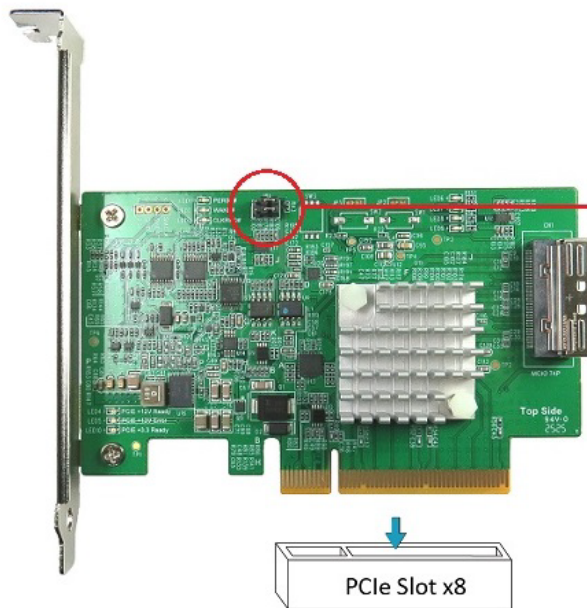
PCIe x8 Gen4 with ReTimer to MCIO 74P Power Tree



PCIe x4 Gen4 with ReTimer to MCIO 74P Add-in Card

The Switch settings are as noted below

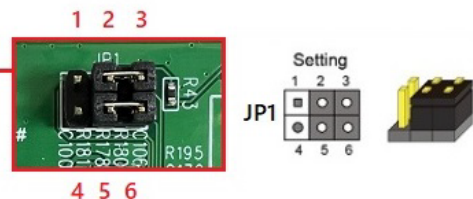
Case 1. Inserts AIC into PCIe x8 or X16 Slot for x8 link width



JP1 Jumper Settings

1-2	4-5	ON	Support x8 link width
2-3	5-6	OFF	

Case 2. Inserts AIC into PCIe x8 or x16 Slot for x4, x4 link width



JP1 Jumper Settings

1-2	4-5	OFF	
2-3	5-6	ON	Support x4,x4 link width