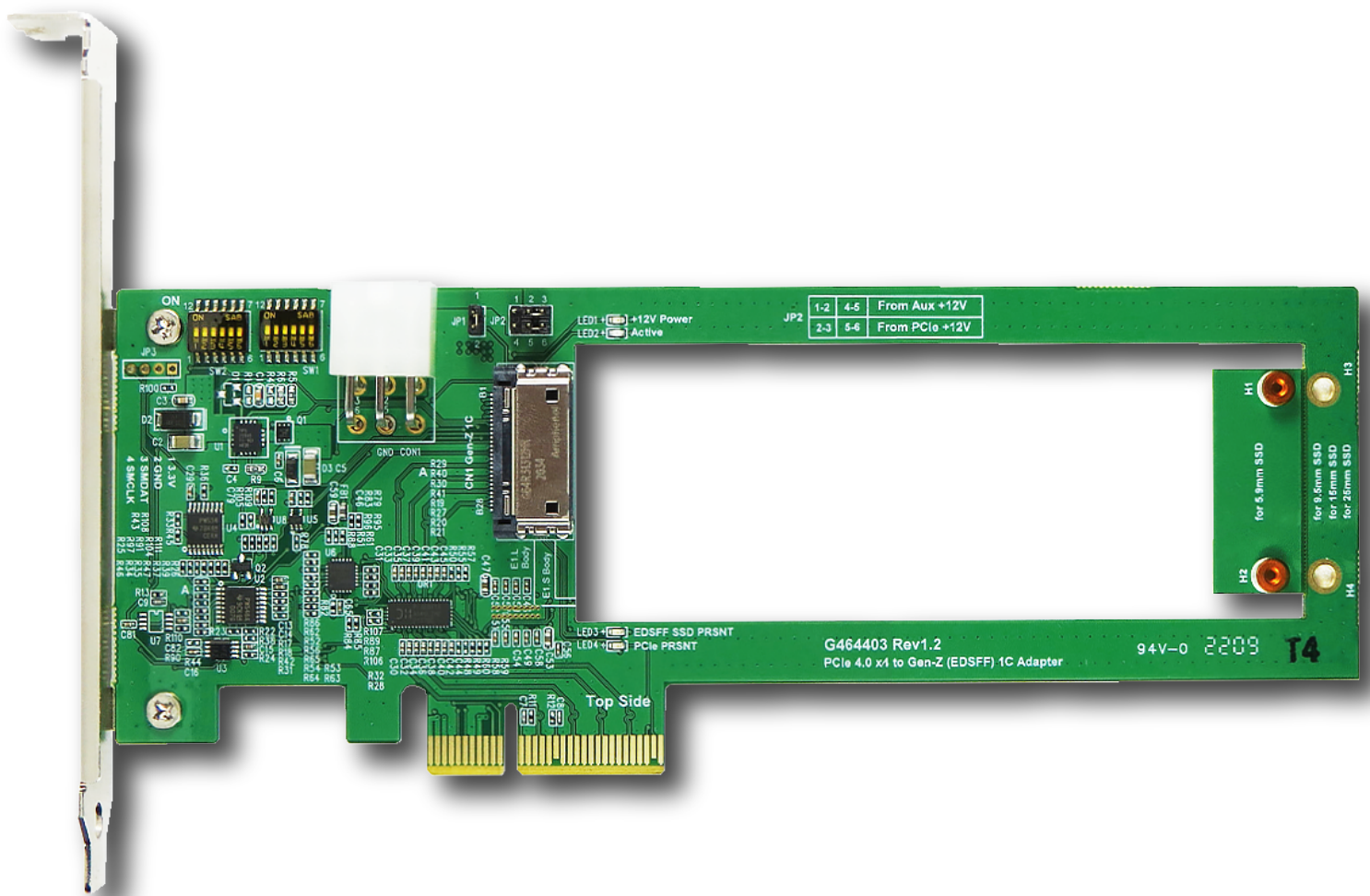


Innocard Minerva

DP9504

PCIe x4 **Gen4** with ReDriver to Gen-Z 1C (EDSFF) Adapter



PCIe x4 **Gen4** with ReDriver to Gen-Z 1C (EDSFF) Adapter

Features

- ※ Supports Server BMC management
- ※ Supports Industrial Grade temperature range
- ※ Gen-Z 1C (EDSFF) to PCI Express 4.0 x4 convert
- ※ Built-in EDSFF 1C with latch connector
- ※ Built-in PCIe ReDriver to extend PCIe Gen4, 16GT/s differential pair signals
- ※ Built-in PCIe 100MHz Clock buffer to drive longer trace lengths and longer cable(Address: 0x20/7 bits)
- ※ Built-in SMBus Switch, Address: 0x71(7 bits)
 - Gen-Z SMBus control
 - PCIe 100MHz Clock buffer control
- ※ Built-in SMBUS I/O Expander, Address: 0x20(7 bits)
 - Gen-Z PWRDIS control
 - Gen-Z SMBRST# control
- ※ Supports PCIe PERST# for OOB(out of band) management to remote Gen-Z Reset
- ※ Built-in WAKE# bidirectional voltage-level translator for Open-Drain output to be used over longer trace lengths and over longer cable
 - Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II
- ※ Built-in CLKREQ# bidirectional voltage-level translator for Open-Drain output to be used over longer trace lengths and longer over cable
 - Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II
- ※ Built-in PWRBRK# bidirectional voltage-level translator for Open-Drain output to be used over longer trace lengths and longer over cable
 - Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II
- ※ Built-in 12V Hot Plug Power with eFuse protection for U.3 NVMe SSD
 - ◆ Programmable Current Limit: 6.5A
 - ◆ Programmable Inrush Current Slew Rate
 - ◆ Thermal shutdown protection and fault alert
 - ◆ Back-to-Back (B2B) FET Operation
- ※ Built-in 12V input with 400W TVS(TRANSIENT VOLTAGE SUPPRESSOR) ESD protection
- ※ Built-in 12V output with 30-V, N channel NexFET power MOSFET, 32 m ohm
- ※ Built-in 12V output with SCHOTTKY BARRIER Power Rectifier

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-1002 Specification Version 1.3
- ※ Compliant with SFF-TA-1009 Specification Version 2.0

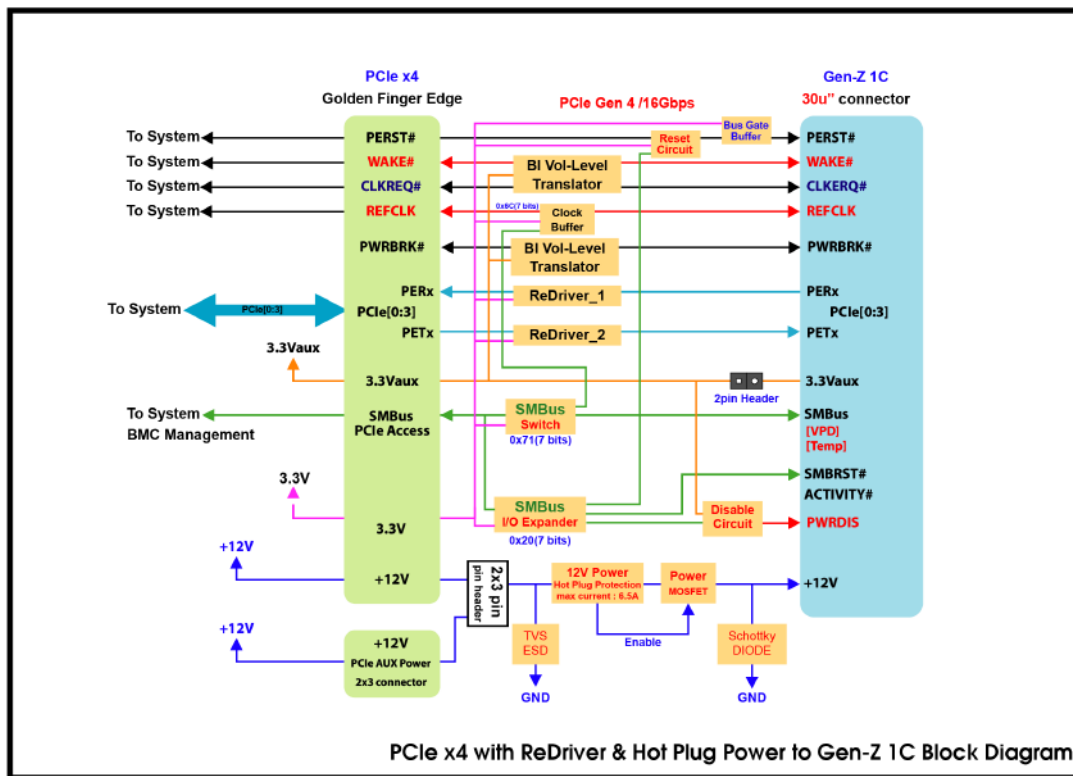
Applications

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

Supports the following form factor EDSFF 1C(Gen-Z) SSD

- ※ EDSFF 1C(Gen-Z) E1.S 5.9mm Height
- ※ EDSFF 1C(Gen-Z) E1.S 9.5mm Height
- ※ EDSFF 1C(Gen-Z) E1.S 15mm Height
- ※ EDSFF 1C(Gen-Z) E1.S 25mm Height

PCIe x4 Gen4 with ReDriver to Gen-Z 1C (EDSFF) Adapter



The switches settings are as noted below

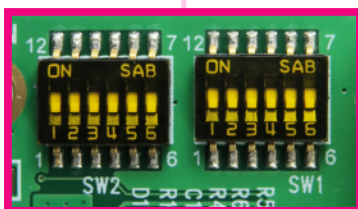
SW1 OR SW2	1-12	Output Swing Setting	on	0
	2-11	Flat Gain Setting	off	1
	FG0		on	0
	3-10		off	1
	FG1		on	0
	4-9	Equalization Setting	off	1
	EQ0		on	0
	5-8		off	1
	EQ1		on	0
	6-7		off	1
	EQ2		on	0

800 mVp-p
1200 mVp-p

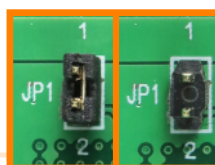
FG1	FG0	dB
0	0	-3.5
0	1	-2
1	0	-0.5
1	1	1

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

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

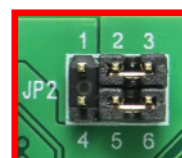


ON OFF



JP1 Jumper Settings

1-2	ON	Gen-Z 3.3Vaux from PCIe CEM
1-2	OFF	Gen-Z 3.3Vaux from External



JP2 Jumper Settings

1-2	4-5	From Aux +12V
2-3	5-6	From PCIe +12V

Model No.: **DP9504**

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