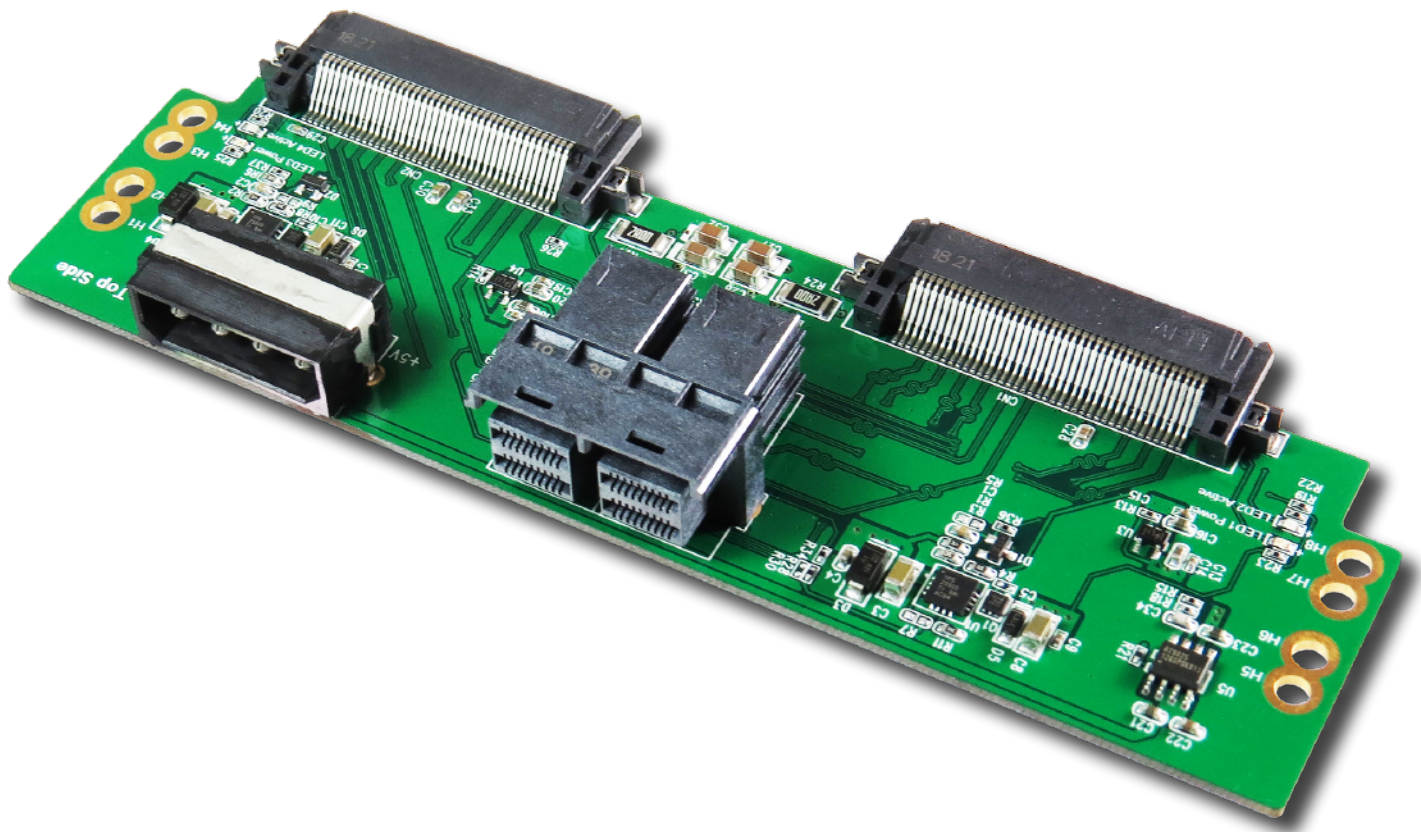


Innocard

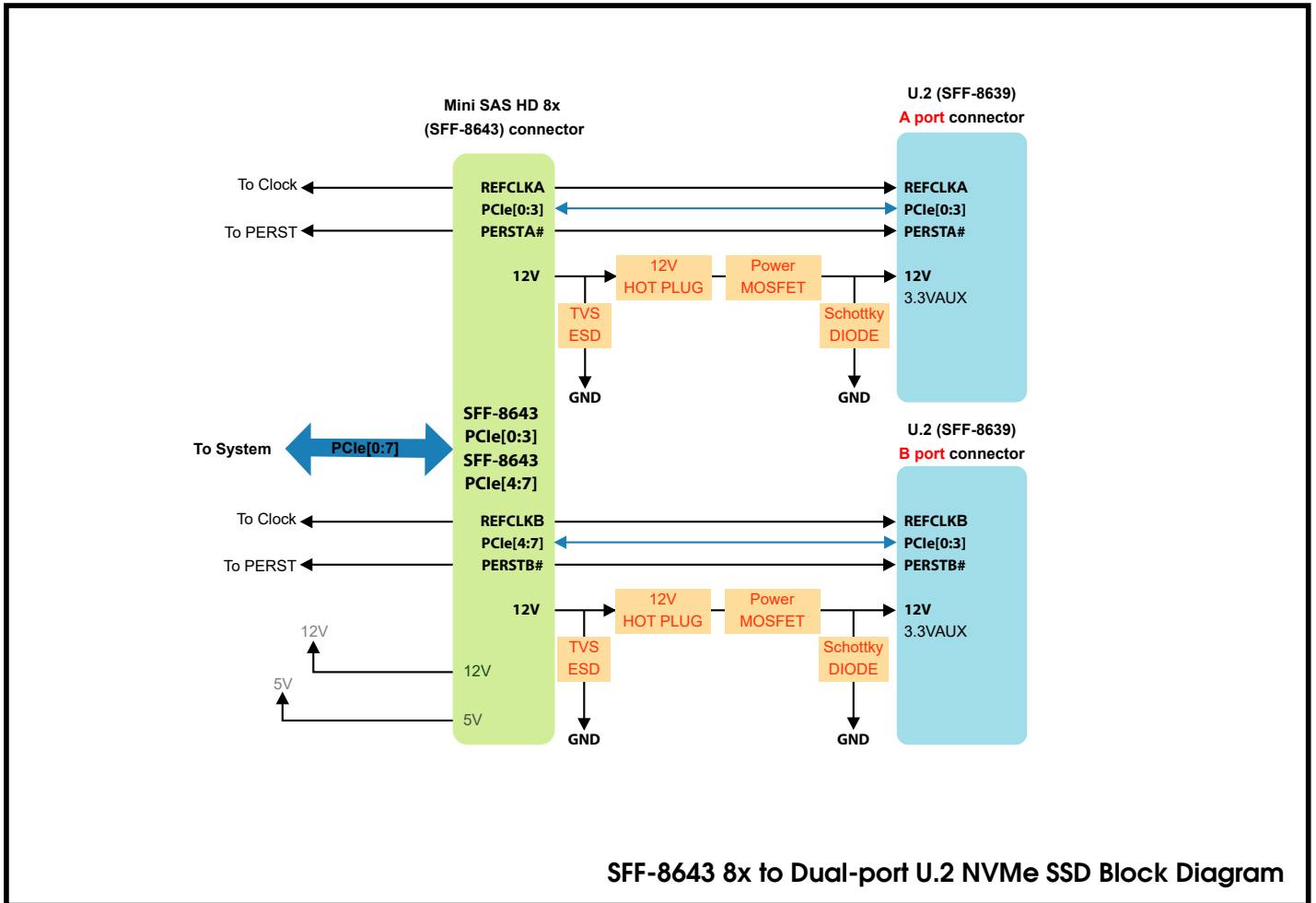
Minerva

PA804A

Mini SAS HD (SFF-8643) 8-Lane for dual ports
Hot Plug U.2 NVMe SSD Adapter



Mini SAS HD (SFF-8643) 8-Lane for dual ports Hot Plug U.2 NVMe SSD Adapter



Features

- ※ Built-in SFF-8643 8x(MINI SAS HD) Female connector
- ※ Built-in U.2 SFF-8639 Female connector x2
- ※ LED1, LED3 Green LED on indicates U.2 SSD power ready
- ※ LED2, LED4 Red LED on indicates U.3 SSD activity
- ※ Built-in +12V Hot Plug Power Module to protect U.2 NVMe SSD destroyed
- ※ Provides 3.3Vaux for U.2 NVMe SSD SMBUS Access

Specifications

- ※ Compliant with NVM Express 1.0a
- ※ Supports PCI Express Base Specification Rev 3.1
- ※ Supports SSD_Form_Factor_Version1_a
- ※ Compliant with SFF-8643 Specification Rev 3.5
- ※ Compliant with PCIe_SFF-8639_R3.0_V1.0
- ※ Compliant with SFF-9402 Specification Rev 1.0
- ※ Compliant with Broadcom MegaRAID and HBA Tri-mode Storage Adapter
- ※ Compliant with Intel TriMode Adapter

Application

※ The adapter card PA804A is designed for using with **Broadcom MegaRAID Tri-mode Storage Adapter Table 1** as below :

MegaRAID 9460-16i
 MegaRAID 9460-8i
 MegaRAID 9480-8i8e
 MegaRAID 9440-8i

Table 1 MegaRAID Tri-Mode Storage Adapters

Adapter	9460-16i	9460-8i	9480-8i8e	9440-8i
Ports	16 internal	8 internal	8 internal, 8 external	8 internal
I/O Processor	SAS3516	SAS3508	SAS3516	SAS3408
Form Factor	LP-MD2	LP-MD2	LP-MD2	LP-MD2
Storage Interface Connectors	Four SFF-8643 x4	Two SFF-8643 x4	Two SFF-8643 x4, Two SFF-8644 x4	Two SFF-8643 x4
Host Interface	x8 PCIe 3.1	x8 PCIe 3.1	x8 PCIe 3.1	x8 PCIe 3.1
Storage Interface	SAS, SATA, and PCIe (NVMe)	SAS, SATA, and PCIe (NVMe)	SAS, SATA, and PCIe (NVMe) ^a	SAS, SATA, and PCIe (NVMe)
Cache Memory	4 GB, 2133 MHz, DDR4 SDRAM	2 GB, 2133 MHz, DDR4 SDRAM	4 GB, 2133 MHz, DDR4 SDRAM	N/A
Cache Protection	Yes	Yes	Yes	N/A
Super Capacitor	CVPM05 module	CVPM05 module	CVPM05 module	N/A

a. NVMe is supported for internal connection only.

※ The adapter card PA804A is designed for using with **Broadcom HBA Tri-mode Storage Adapter Table 2** as below :

HBA 9400-16i
 HBA 9400-8i
 HBA 9400-8i8e
 HBA 9405W-16i

Table 2 HBA Tri-Mode Storage Adapters

Adapter	9400-16i	9400-8i	9400-8i8e	9405W-16i
Ports	16 internal	8 internal	8 external, 8 internal	16 internal
I/O Processor	SAS3416	SAS3408	SAS3516	SAS3616W
Form Factor	LP-MD2	LP-MD2	LP-MD2	LP-MD2
Storage Interface Connectors	Four SFF-8643 x4	Two SFF-8643 x4	Two SFF-8643 x4, Two SFF-8644 x4	Four SFF-8643 x4
Host Interface	x8 PCIe 3.1	x8 PCIe 3.1	x8 PCIe 3.1	x16 PCIe 3.1
Storage Interface	SAS, SATA, and PCIe (NVMe)	SAS, SATA, and PCIe (NVMe)	SAS, SATA, and PCIe (NVMe) ^a	SAS, SATA, and PCIe (NVMe)

a. NVMe is supported for internal connection only.

Application

※ The adapter card PA804A is designed for using with [Intel TriMode_Adapter_Hardware_User_GuideRev1.2-2019-12](#) as below :

RSP3TD160F – Full featured tri-mode RAID adapter with **16 internal ports**

RSP3MD088F– Full featured tri-mode RAID adapter with **8 internal** and **8 external ports**

RSP3DD080F– Full featured tri-mode RAID adapter with **8 internal ports**

RSP3WD080E– Entry level tri-mode RAID adapter with **8 internal ports**

Table 1. Intel® Tri-Mode RAID adapter comparative feature set

Feature	RSP3TD160F	RSP3MD088F	RSP3DD080F	RSP3WD080E
I/O Processor	Broadcom® SAS3516 PCIe® RAID On-Chip (ROC)	Broadcom® SAS3516 PCIe® RAID On-Chip (ROC)	Broadcom® SAS3508 PCIe® RAID On-Chip (ROC)	Broadcom® SAS3408 PCIe® RAID On-Chip (ROC)
RAID Levels	0,1,5,6,10, 50, 60	0,1,5,6,10, 50, 60	0,1,5,6,10, 50, 60	0,1,5,10
JBOD Mode or Pass-thru mode (SAS/SATA)	Yes	Yes	Yes	Yes
Cache Memory	4 GB DDR4 at 2133 MHz	4 GB DDR4 at 2133 MHz	4 GB DDR4 at 2133 MHz	N/A
Form Factor	MD2 (PCIe card)	MD2 (PCIe card)	MD2 (PCIe card)	MD2 (PCIe card)
Drive Interface Connectors	4 internal	2 internal, 2 external	2 internal	2 internal