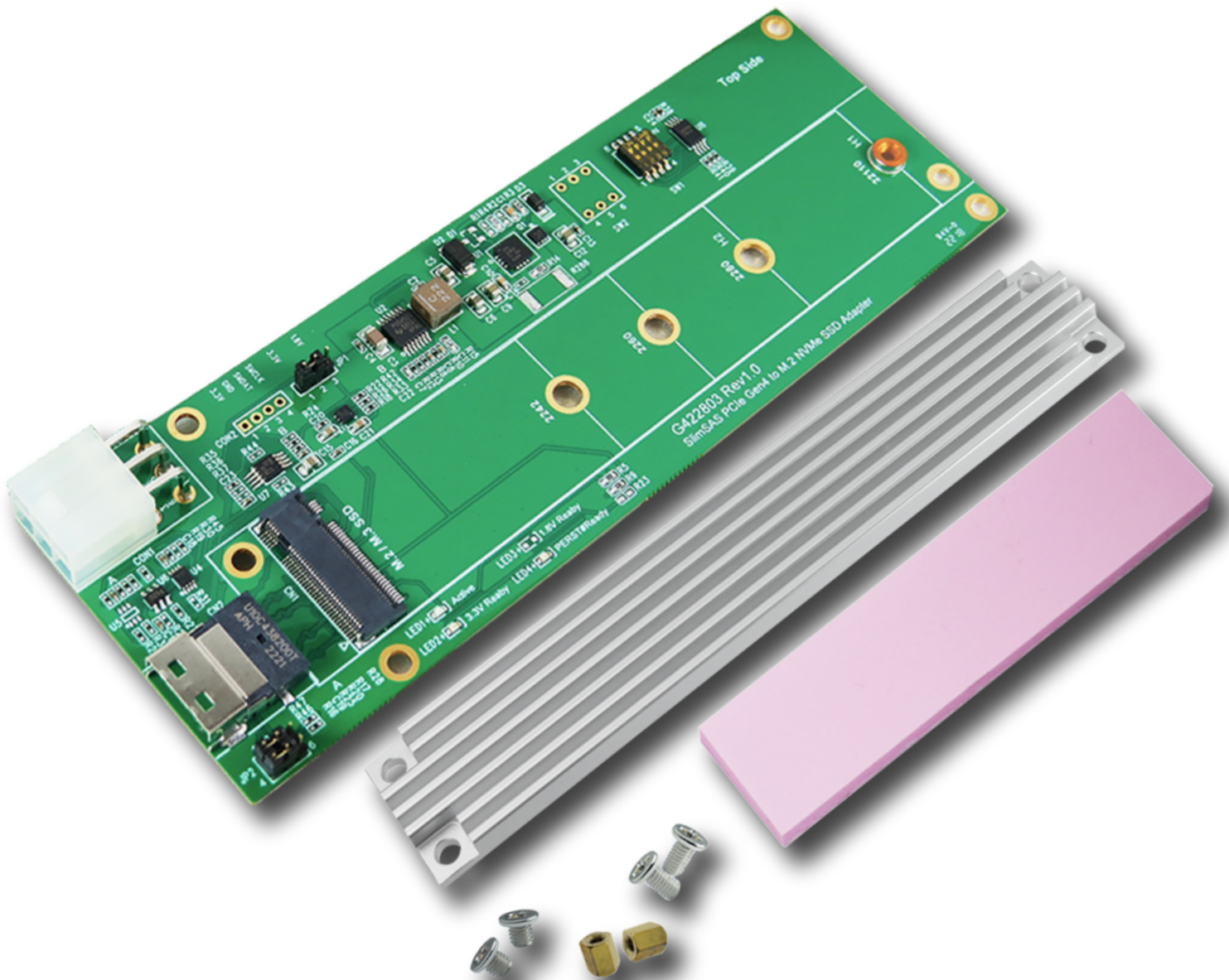


Innocard

# Minerva

**GD2409A**

SlimSAS 4i *PCIe 4.0* to M.2 NVMe Adapter



# SlimSAS 4i *PCIe 4.0* to M.2 NVMe Adapter

## Features

- ※ M.2 NVMe to SlimSAS 4i(SFF-8654) convert
- ※ Built-in SFF-8654 connector, pin-out defined by SFF-9402 Rev1.1
- ※ Built-in PCIe 2x3 Auxiliary Power Connector for 12V, 6.5A MAX.currenrent input
- ※ 12V to 3.3V PWM synchronous buck converter Power for M.2 NVMe SSD
  - ◆ 5.5A maximum output current
  - ◆ Output Discharge Control
  - ◆ The output overcurrent protection(OCP)
  - ◆ Undervoltage lock out protection(UVLO) monitor
  - ◆ Over/Under Voltage Protection
  - ◆ Thermal shutdown protection
  - ◆ ESD HBM (Human Body Mode)/500V
- ※ Built-in 3.3V Hotswap Power controller with programmable Inrush Slew rate, support a maximum continuous current of 6.5A for M.2 SSD protection
- ※ Built-in 3.3V input with 400W TVS(TRANSIENT VOLTAGE SUPPRESSOR) ESD protection
- ※ Built-in 3.3V output with 30-V, N channel NexFET power MOSFET protection
- ※ Built-in 3.3V output with SCHOTTKY BARRIER Power Rectifier
- ※ Supports 3.3V&1.8V power rail for sideband signals
- ※ Supports M.2 VIO\_CFG Signal
- ※ Supports M.2 PERST# Signal 3.3V and 1.8V voltage level shift
- ※ Supports M.2 CLKREQ# Signal 3.3V and 1.8V voltage level shift
- ※ Supports M.2 WAKE# Signal 3.3V and 1.8V voltage level shift
- ※ Supports PWRDIS Signal from SlimSAS 4i(SFF-8654) to M.2 pin out
- ※ Supports M.2 /1.8V to SlimSAS 4i /3.3V SMBus Hot Swap, Level Shift
- ※ Supports M.2 /1.8V to SlimSAS 4i /3.3V SMBus isolated, repeater
- ※ Built-in SMBus EEPROM 64KB
- ※ LED1 RED Blinking indicates M.2 active
- ※ LED2 Green ON indicates 3.3V Power Ready
- ※ LED4 Green OFF indicates PERST# Normal (Function intentionally inverted)

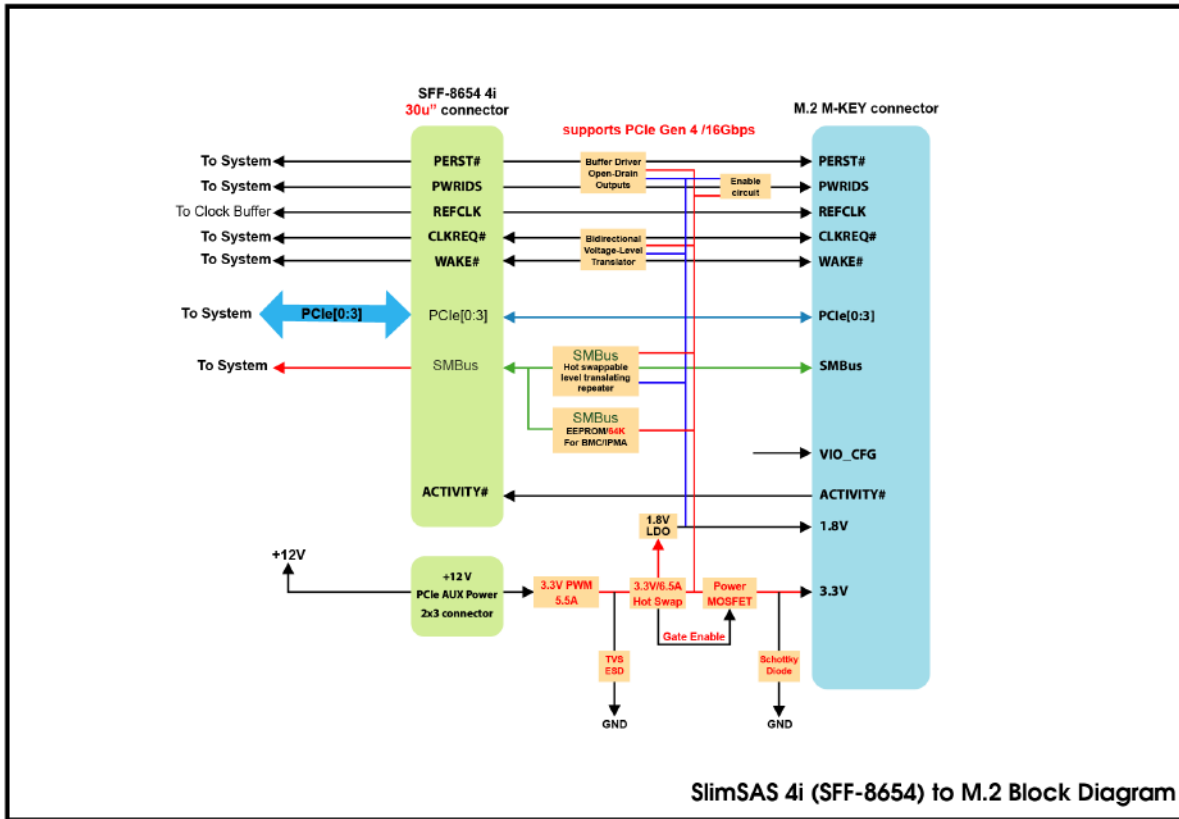
## Specifications

- ※ Compliant with NVM Express 1.3a
- ※ Support PCI Express Base Specification Rev 4.0
- ※ Compliant with PCI Express M.2 Specification Version 1.2
- ※ Compliant with SFF-8654 Rev 1.2

## Supports the following form factor M.2(NGFF) SSD:

- ※ Type 2242-D2-B-M: 42mm(L) x 22mm(W)
- ※ Type 2260-D2-B-M: 60mm(L) x 22mm(W)
- ※ Type 2280-D2-B-M: 80mm(L) x 22mm(W)
- ※ Type 22110-D2-B-M: 110mm(L) x 22mm(W)

# SlimSAS 4i PCIe 4.0 to M.2 NVMe Adapter



The switches settings are as noted below

## The switch settings of GD2409A are as belows

**JP1**

1-2	on	3.3V
2-3	on	1.8V

**SW1**

SW1	POS1	POS2	POS3	POS4
	A0 pin	A1 pin	A2 pin	WP pin
Default(Hi)	1	1	1	1
<b>I2C Address : 0xAE (1010111)</b>				
OFF--Hi(1)	ON--Low(0)	Write-Protection		

**EEPROM : 24AA256T SETUP**

SW1	POS1	POS2	POS3	POS4
	A0 pin	A1 pin	A2 pin	WP pin
Default(Hi)	1	1	1	1
<b>I2C Address : 0xAE (1010111)</b>				
OFF--Hi(1)	ON--Low(0)	Write-Protection		

Model No.: **GD2409A**  
SlimSAS 4i PCIe 4.0 to M.2 NVMe Adapter

**Setting**

Setting	1	2	3
JP2	4	5	6
1-2	ON	PWRBRK#@Connect PCIe B30 pin to SlimSAS 8i B8 pin	
4-5	ON	CLKREQ#@Connect PCIe B12 pin to SlimSAS 8i A12 pin	

**Setting**

Setting	1	2	3
JP2	4	5	6
2-3	ON	for Broadcom 95xx Sereis MegaRAID and HBA TI-Mode Storage Adapters	
5-6	ON	for Broadcom 95xx Sereis MegaRAID and HBA TI-Mode Storage Adapters	