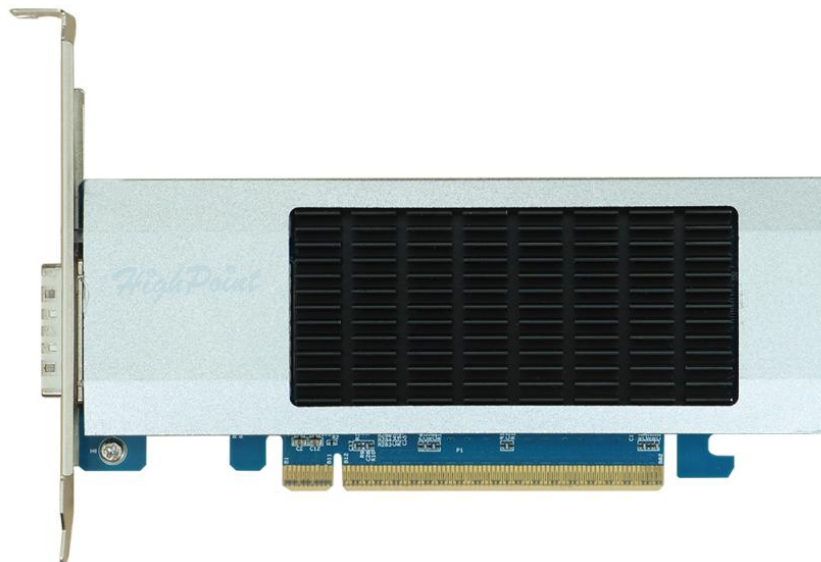




Rocket 7638D (R7638D)

Gen5 External Adapter User Guide



V1.01 - November 24, 2025

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1. Overview

The R7638D is the latest member of our PCIe Gen5 External Adapter product family.

The R7638D redefines system expansion by merging the capabilities of a external Enclosure with NVMe SSDs into a single unified platform. Leveraging the latest PCIe 5.0 interface standard, it dramatically enhances data transfer speeds. Designed for professionals requiring GPU acceleration and massive parallel storage, it delivers unrivaled performance for enterprise-class data processing.

1.1. Key Features

- Dedicated PCIe 5.0 x16 host interface
- Provide two MCIO x8 connector
- Provide one CDFP connector
- Support data transfer rate 64GB/s
- Support one Enclosure
- Supports four NVMe devices compatible with any MCIO connector
- Complies with CoopLink Copmliant standard
- CDFP HotPlug
- Data Port Reconfiguration (Support either downstream configuration 1x16 /2x8 /4x4 /8x2 /16x1)
- FRU Inventory support
- Software Secure Boot (only Windows)
- Hardware Secure Boot
- Downstream port containment
- Real-Time Power Measurement
- SafeStorage Encryption (SED)
- Support LED Management
- Support Alarming
- Support the following Operating Systems:
 - Windows 11,10/ Server 2025,2022,2019,2016/ Microsoft Hyper-V
 - RHEL/Debian/Ubuntu/Fedora/Proxmox/Rocky Linux

1.1.1. FRU

The *Field Replacement Unit (FRU)* ensures smooth operation and efficient maintenance of complex systems. The unit is designed to house and protect vital product data (VPD).

Information fields within a VPD resource type contain a three-byte header and some data. The three-byte header contains a two-byte keyword and a one-byte length. A keyword is a two-character (ASCII) mnemonic that uniquely identifies the information in the field. The last byte of the header is binary and represents the length value (in bytes) of the following data.

In the event of a hardware failure, the *FRU* can be quickly replaced, returning the device to a fully functional state without requiring extensive diagnostics or data recovery. This reduces downtime and minimizes the possibility of data loss, ensuring that critical operations can continue uninterrupted.

The following table describes the details and descriptions of the VPD.

Table 1: Details and Descriptions of the VPD

Key Word	Details	Descriptions
PN	AIC Part Number	This keyword is an extension to the Device ID (or Subsystem ID) in the Configuration Space header.
EC	Engineering Change Level	The characters are alphanumeric and represent the engineering change level for this add-in card.
MN	Manufacture ID	This keyword is an extension of the Vendor ID (or Subsystem Vendor ID) in the Configuration Space header. It allows vendors to identify an additional level of detail regarding the sourcing of this device.
SN	Serial Number	The characters are alphanumeric and represent the unique add-in card Serial Number.
Vx	Vendor Specific	This is a vendor-specific item, and the characters are alphanumeric. The keyword's second character (x) can be 0 through 9 or A through Z. V0 indicates the Vendor Name V1 indicates the Main Chip

1.1.2. Hardware Secure Boot

The secure boot feature permits only authenticated firmware to execute. The switch boots the root of the trusted firmware from the internal boot ROM (IBR) and uses that firmware to authenticate the external firmware stored in the SPI flash and prevent the execution of unauthenticated code.

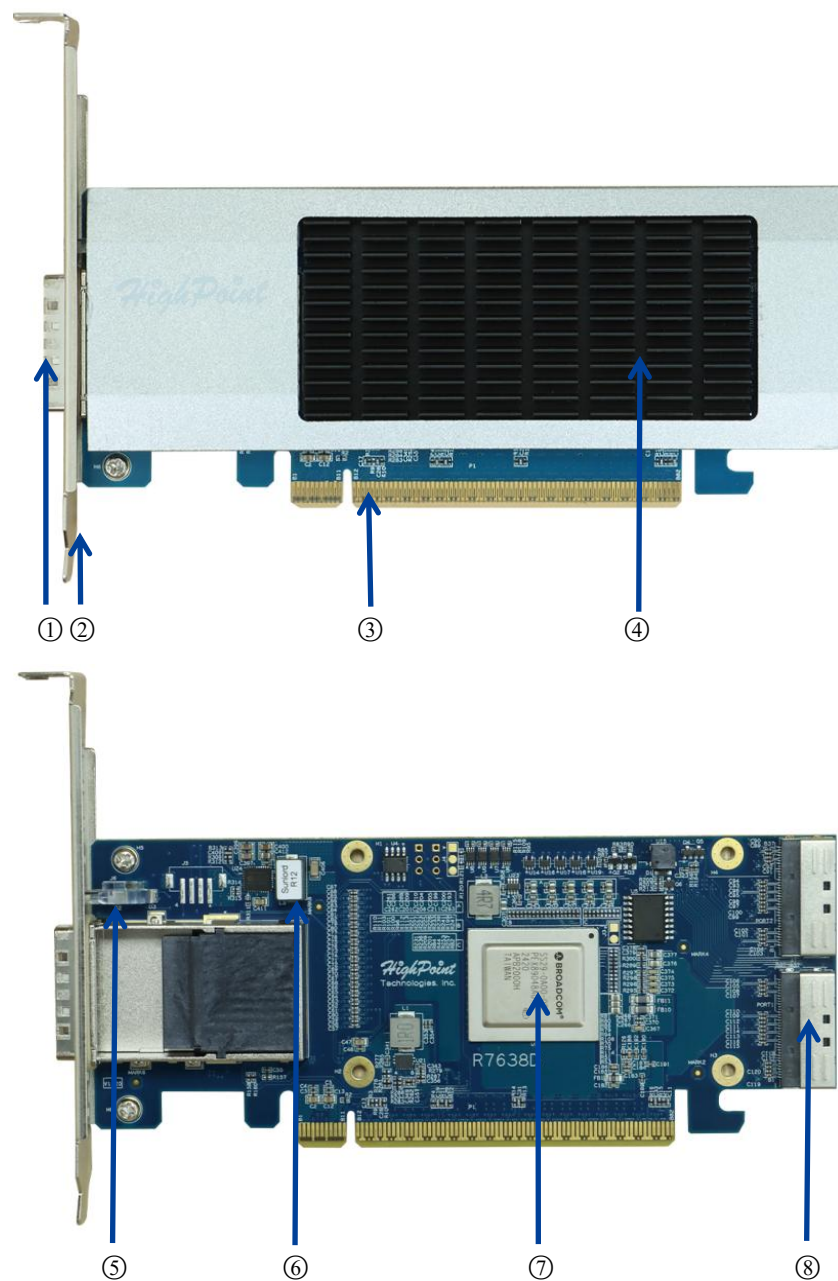
2. R7638D Hardware Description

2.1. R7638D Layout

The layout of the R7638D is presented in two parts.

2.1.1. Front View (Host Interface Card)

The following figure shows the key components of the host interface card.



The following table describes the key components of the host interface card.

Table 2: Key component of the host interface card

Number	Type	Description
①	CDFP Connector	One CDFP connector. Connect the controller card using a CDFP cable to the Enclosure.
②	Bracket	Full-height bracket. (optional low-profile bracket included). The R7638D is secured to the Enclosure by a bracket.
③	PCIe Host Interface	PCIe 5.0 x16 host interface. The interface between the host interface card and the host system. With the PCIe interface, this connector provides power to the board.
④	Cooling System	Passive Heatsink. Used to dissipate heat from electronic components prone to heat generation.
⑤	Diagnostic LED	CDFP Status LED and Host Status LED. ● CDFP Status LED -- The bandwidth of the Enclosure MCU feedback. ● Host Status LED -- The status of the host interface card PCIe bandwidth.
⑥	Beeper	This beeper is for factory commissioning only.
⑦	Chip	Broadcom PEX 89048 chip.
⑧	Storage Interface	Two MCIO (SFF-1016 x8) connectors. Connect the R7638D by cable to the storage devices.

2.1.2. Diagnostic LED View (Host Interface Card)

The following figure shows the LED Indicators of the host interface card.

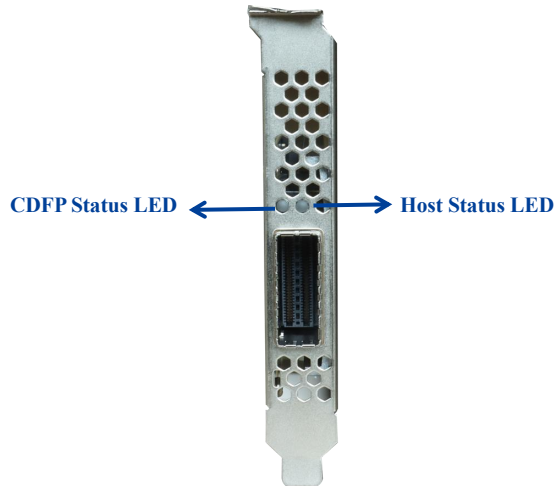


Table 3: LED Indicators of the host interface card

LED	Color	Status	Description
CDFP Status LED		OFF	The Enclosure is powered off.
		Solid Blue	The CDFP status is working at PCIe 5.0 with 1 x16 Mode. Note: When the GPU is in power-saving mode with no I/O, the link speed will be below the PCIe 5.0 standard, and bandwidth cannot reach its maximum value. At this time, the LED will flash blue.
		Solid Green	The CDFP status is working at PCIe 5.0 with 4 x4 Mode.
		Solid Red	Unknown Configuration.
		Flash Blue	The LED blinks red at 1 Hz to indicate that the CDFP status is working at not PCIe 5.0 but 1 x16 Mode.
		Flash Green	The LED blinks red at 1 Hz to indicate that the CDFP status is working at not PCIe 5.0 but 4 x4 Mode.
Host Status LED		OFF	The host interface card is powered off.
	Note: The following represents the bandwidth status of the host interface card.		
		Solid Blue	PCIe 5.0 x16.
		Solid Green	PCIe 5.0 x8 or PCIe 4.0 x16.
		Solid Yellow	PCIe 5.0 x4 or PCIe 4.0 x8 or PCIe 3.0 x16.
		Solid Cyan	PCIe 4.0 x4 or PCIe 3.0 x8.

		Solid White	PCIe 3.0 x4.
		Solid Red	Not appear as above.

2.2. PCIe Host Interface

The R7638D's PCIe 5.0 host interface provides maximum transmission. Other PCIe host interface features include the following:

- 16-lane PCIe host interface
- Support of x16 link width
- 16-lane aggregate bandwidth of up to 64GB/s

2.3. Enclosure Bus Interface

The R7638D has one CDFP connector. Other features include the following:

- Dedicated PCIe 5.0 x16 port
- Support one Enclosure
- Data transfer at 64GB/s

2.4. Storage Interface

The R7638D has two MCIO (SFF-1016 x8) interfaces. Other storage interface features include the following:

- Dedicated PCIe 5.0 x4 per port
- Supports up to four NVMe devices (up to x4 lanes)
- Data transfer at 16GB/s

2.5. Basic Specifications

The following table describes the basic specifications of the R7638D.

Table 4: Basic Specifications of R7638D

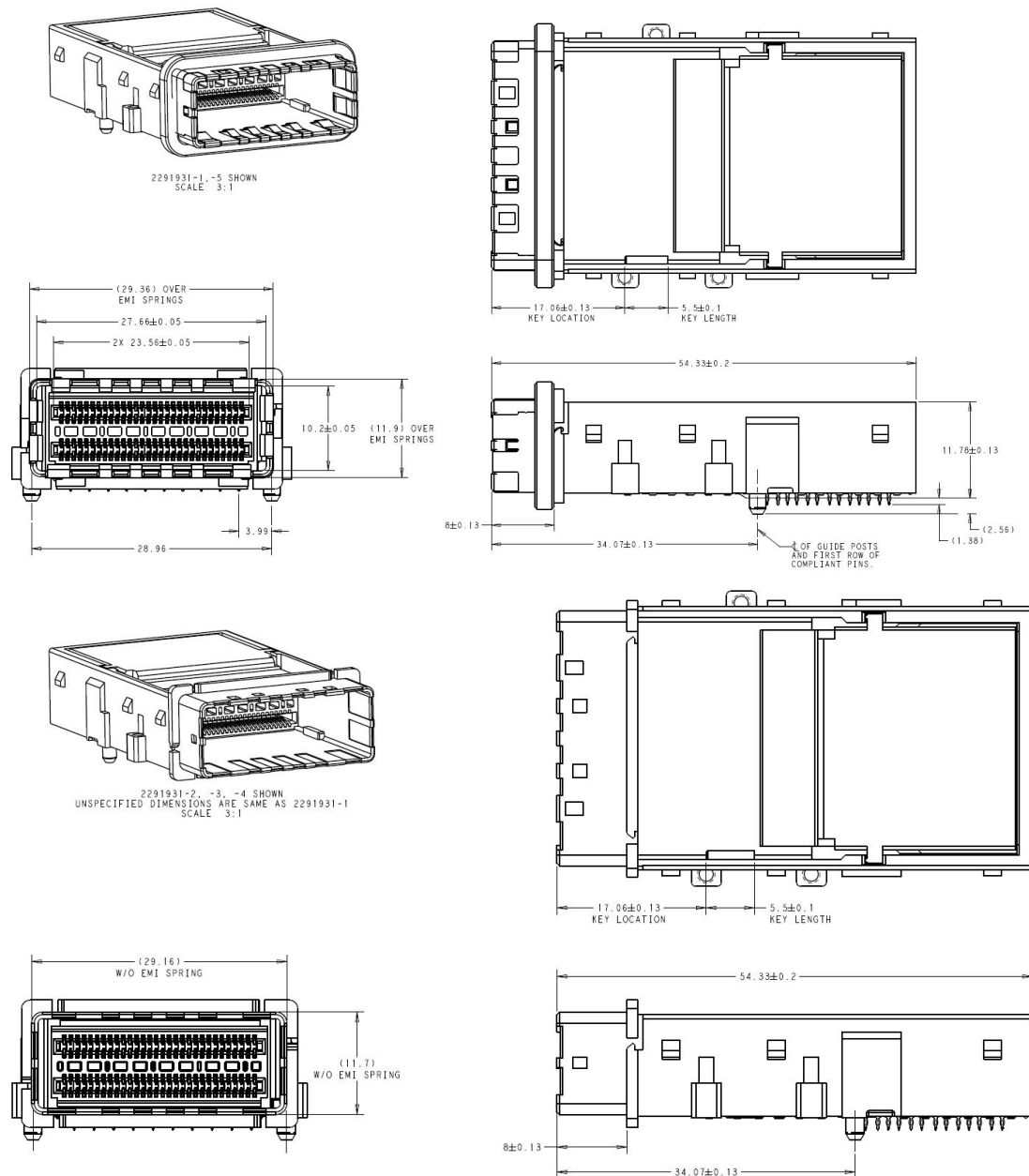
Model		R7638D
Form Factor		LP-MD2, Single Width
Weight		210g
Dimension	Length	6.50In
	Width	0.77In
	Height	2.72In
Power consumption		● Idle mode: 8.2W ● I/Os mode: 355.4W Notes: The I/Os mode power consumption is measured with the GIGABYTE RTX 5070Ti 16G and RS8631C External Enclosure. Actual power consumption may differ based on system hardware and configuration.
Power supply		PCIe: 12V(±8%), 3.3V (±8%)
Work temperature		+5°C ~ + 55°C
Storage temperature		-20°C ~ +80°C
MTBF (Mean Time Before Failure)		> 5,000,000 hours at 40°C

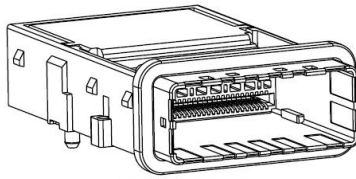
3. R7638D CDFP Connector

3.1. CDFP Connector Pin Designation

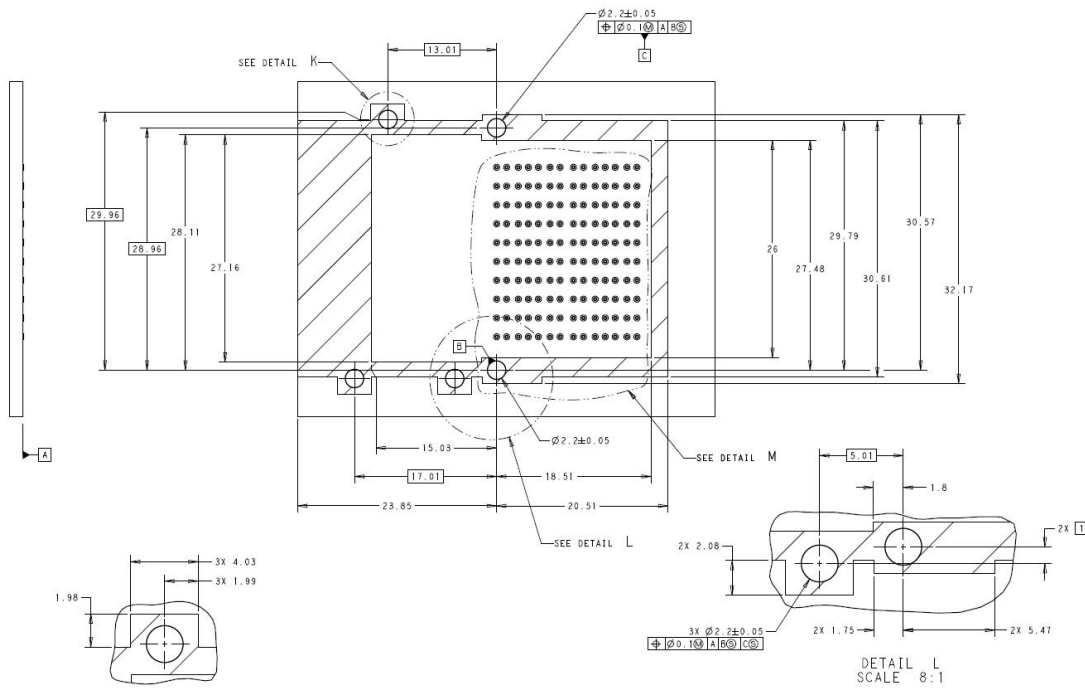
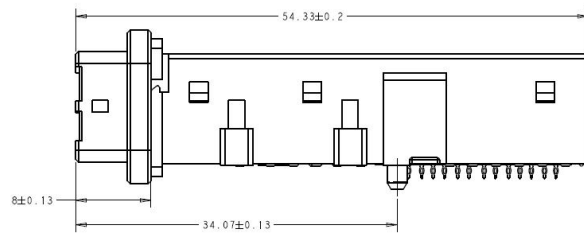
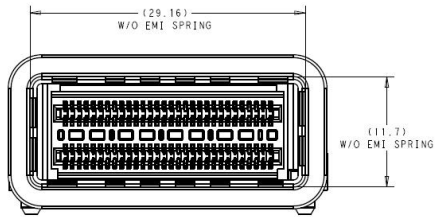
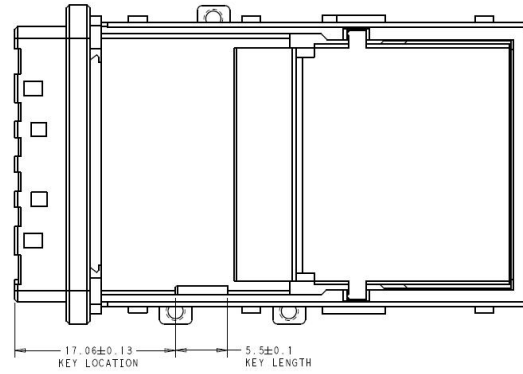
The R7638D has one CDFP connector.

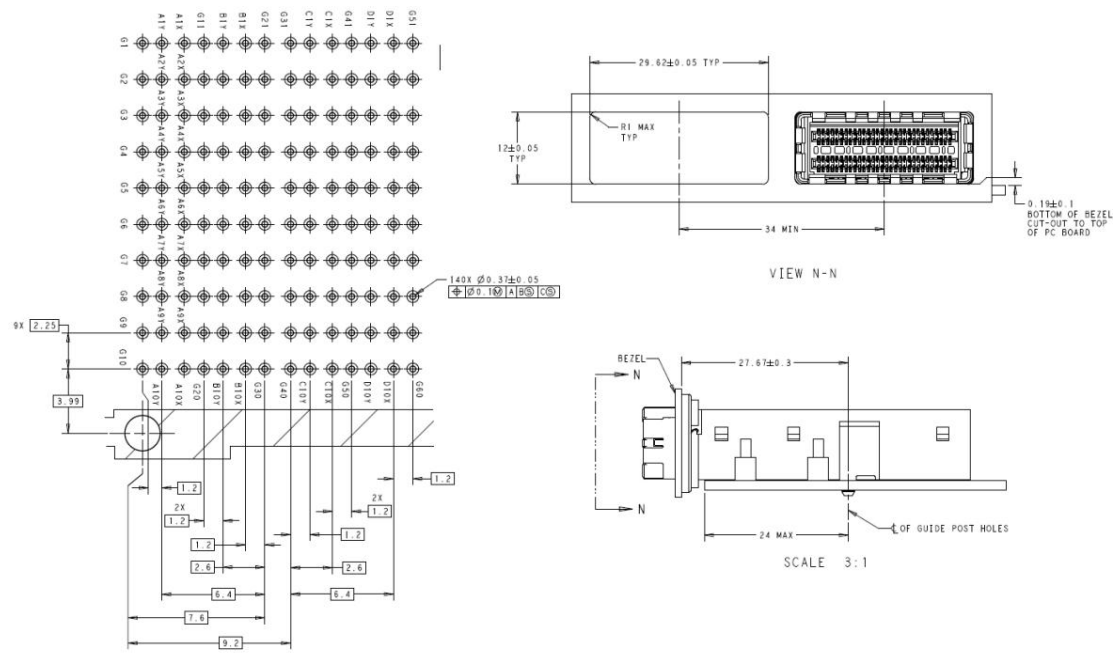
The following figure shows the connector pin designation.





2291931-6/-7 SHOWN
UNSPECIFIED DIMENSIONS ARE SAME AS 2291931-1
SCALE 3:1





3.2. CDFP Connector Pinout

The following table defines the R7638D's controller card CDFP connector pinouts.

Table 5: Connector Pinouts

Pin	Name	Pin	Name
G1	GND	G11	GND
A1X	TX14P	B1X	TX15P
A1Y	TX14N	B1Y	TX15N
G2	GND	G12	GND
A2X	TX12P	B2X	TX13P
A2Y	TX12N	B2Y	TX13N
G3	GND	G13	GND
A3X	TX10P	B3X	TX11P
A3Y	TX10N	B3Y	TX11N
G4	GND	G14	GND
A4X	TX8P	B4X	TX9P
A4Y	TX8N	B4Y	TX9N
G5	GND	G15	GND
A5X	REF0_CLK+	B5X	CDFP_ID_0
A5Y	REF0_CLK-	B5Y	CDFP_ID_1
G6	GND	G16	GND
A6X	TX06P	B6X	TX7P
A6Y	TX06N	B6Y	TX7N
G7	GND	G17	GND
A7X	TX4P	B7X	TX5P
A7Y	TX4N	B7Y	TX5N
G8	GND	G18	GND
A8X	TX2P	B8X	TX3P
A8Y	TX2N	B8Y	TX3N

G9	GND	G19	GND
A9X	TX0P	B9X	TX1P
A9Y	TX0N	B9Y	TX1N
G10	GND	G20	GND
A10X	RESET1#	B10X	PRSENT1#
A10Y	GPIO0	B10Y	PRSENT2#
G31	GND	G41	GND
C1X	RX14P	D1X	RX15P
C1Y	RX14N	D1Y	RX15N
G32	GND	G42	GND
C2X	RX12P	D2X	RX13P
C2Y	RX12N	D2Y	RX13N
G33	GND	G43	GND
C3X	RX10P	D3X	RX11P
C3Y	RX10N	D3Y	RX11N
G34	GND	G44	GND
C4X	RX8P	D4X	RX9P
C4Y	RX8N	D4Y	RX9N
G35	GND	G45	GND
C5X	I2C0_CLK	D5X	I2C1_CLK
C5Y	I2C0_SDA	D5Y	I2C1_SDA
G36	GND	G46	GND
C6X	RX6P	D6X	RX7P
C6Y	RX6N	D6Y	RX7N
G37	GND	G47	GND
C7X	RX4P	D7X	RX5P
C7Y	RX4N	D7Y	RX5N
G38	GND	G48	GND
C8X	RX2P	D8X	RX3P

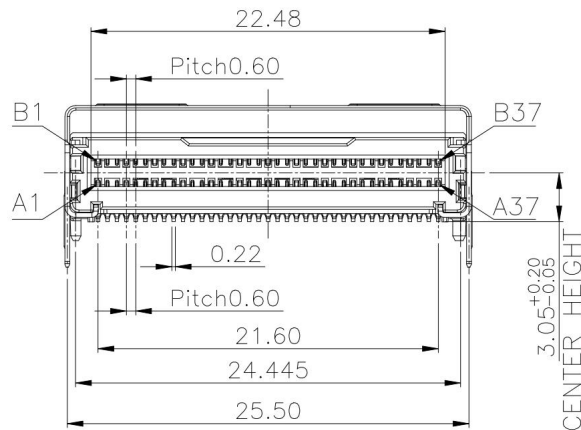
C8Y	RX2N	D8Y	RX3N
G39	GND	G49	GND
C9X	RX0P	D9X	RX1P
C9Y	RX0N	D9Y	RX1N
G40	GND	G50	GND
C10X	GPIO1	D10X	GPIO2
C10Y	RESET2#	D10Y	GPIO3
G21	GND	G51	GND
G22	GND	G52	GND
G23	GND	G53	GND
G24	GND	G54	GND
G25	GND	G55	GND
G26	GND	G56	GND
G27	GND	G57	GND
G28	GND	G58	GND
G29	GND	G59	GND
G30	GND	G60	GND

4. R7638D MCIO Connector

4.1. MCIO Connector Pin Designation

The R7638D has two x8 MCIO connectors, each designated A and B.

The following figure shows the MCIO connector pin designation.



4.2. MCIO Connector Pinout

The following table defines the R7638D's MCIO connector pinouts.

Table 6: MCIO Connector Pinouts

Pin	Name	Pin	Name
A1	GND	B1	GND
A2	PERp0	B2	PETp0
A3	PERn0	B3	PETn0
A4	GND	B4	GND
A5	PERp1	B5	PETp1
A6	PERn1	B6	PETn1
A7	GND	B7	GND
A8	BP_TYPEA(VSPA)	B8	2W-CLKA
A9	CWAKEA#,OBFFA(VSPA)	B9	2W-DATAA
A10	Sideband2	B10	Sideband1
A11	REFCLKA+(VSPA+)	B11	PERSTA#(VSPA)
A12	REFCLKA-(VSPA-)	B12	CPRSNTA#(VSPA)

A13	GND	B13	GND
A14	PERp2	B14	PETp2
A15	PERn2	B15	PETn2
A16	GND	B16	GND
A17	PERp3	B17	PETp3
A18	PERn3	B18	PETn3
A19	GND	B19	GND
A20	PERp4	B20	PETp4
A21	PERn4	B21	PETn4
A22	GND	B22	GND
A23	PERp5	B23	PETp5
A24	PERn5	B24	PETn5
A25	GND	B25	GND
A26	BP_TYPEB(VSPB)	B26	2W-CLKB(VSPB)
A27	CWAKEB#,OBFFB(VSPB)	B27	2W-DATAB(VSPB)
A28	Sideband4	B28	Sideband3
A29	REFCLKB+(VSPB+)	B29	PERSTB#(VSPB)
A30	REFCLKB-(VSPB-)	B30	CPRSNTB#(VSPB)
A31	GND	B31	GND
A32	PERp6	B32	PETp6
A33	PERn6	B33	PETn6
A34	GND	B34	GND
A35	PERp7	B35	PETp7
A36	PERn7	B36	PETn7
A37	GND	B37	GND

5. Accessory

The R7638D offers a variety of flexible cabling options, enabling mixed configurations of NVMe SSDs through the SFF-8639, SFF-8654, and MCIO connectors, as well as connecting to the Enclosure through the CDFP connector.

The following sections indicate the cable pinout and connection diagram for supported cable accessories and supported Enclosure.

5.1. CDFP-CDFP-1M Gen5 (Cooprlink) Cable

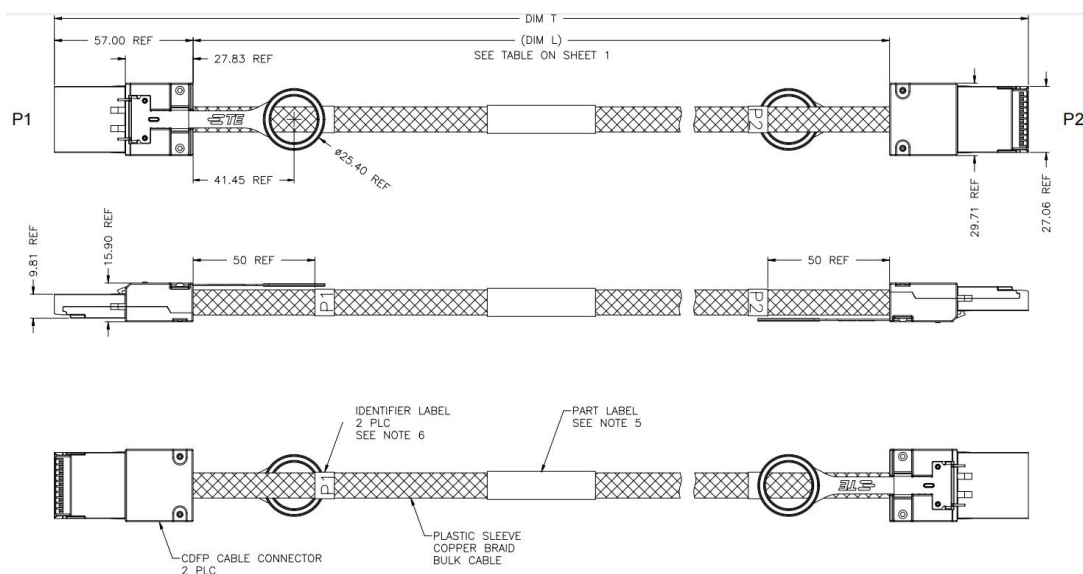
CDFP Host to CDFP Device cable. Length 1M.

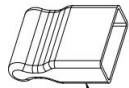
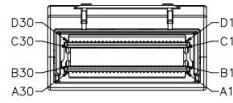
5.1.1. Cable Diagram



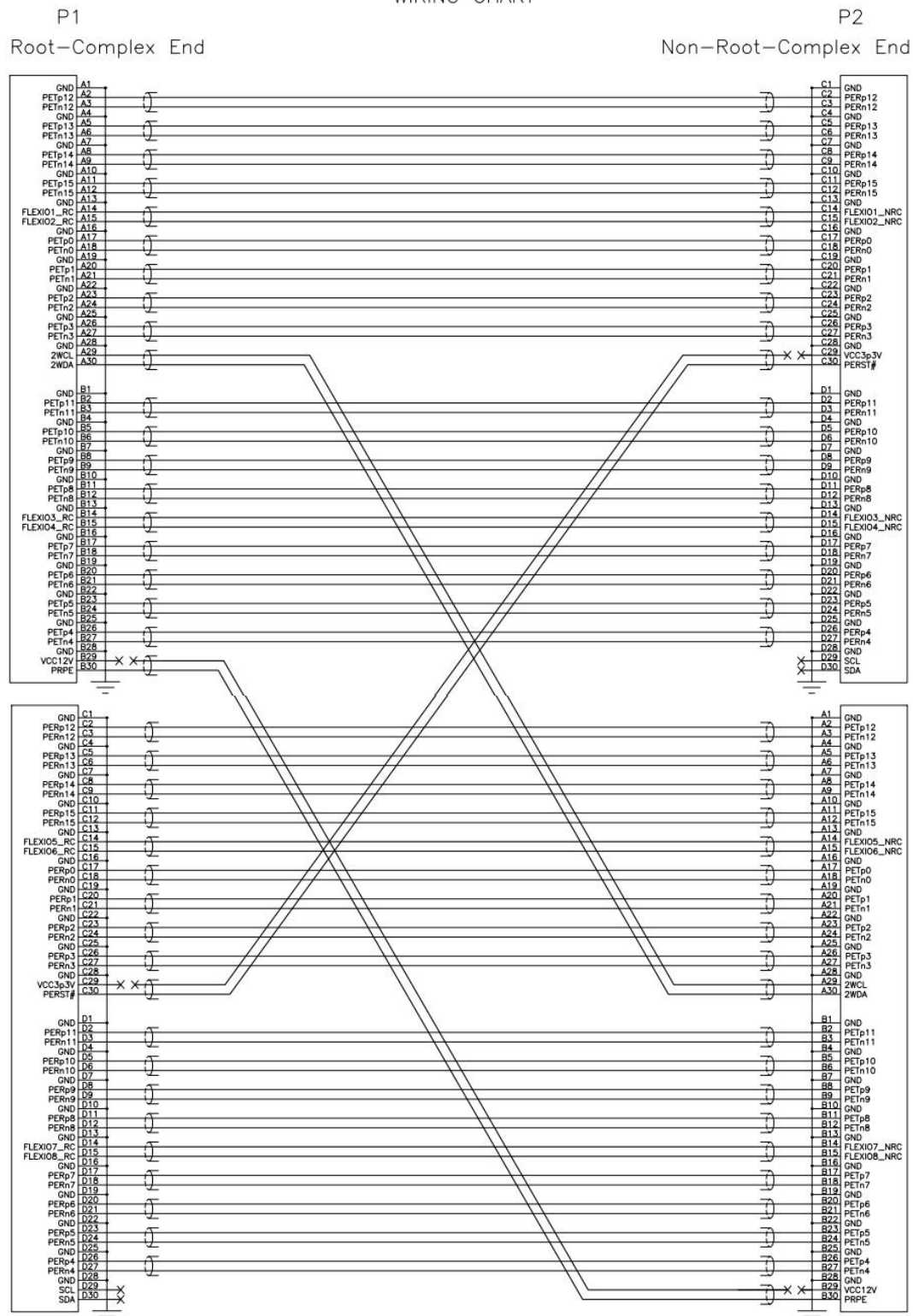
5.1.2. Cable Drawings and Pinouts

The following figure shows the pinout for the HighPoint CDFP-CDFP-1M Gen5 (Cooprlink) cable, one x8 CDFP to one x8 CDFP connection.



DUST CAP
2 PLCPIN ASSIGNMENT
ODFP CABLE CONNECTOR
SCALE 2:1

WIRING CHART



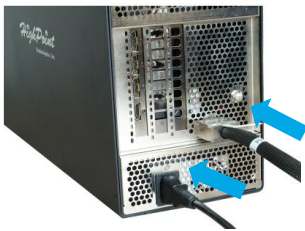
5.1.3. Cable Connection

The following steps show the connection of a Enclosure to the R7638D using the CDFP-CDFP-1M Gen5 (Cooplink) cable.

1. Connect the CDFP cable to the R7638D's CDFP port.



2. Connect the CDFP cable to the Enclosure's CDFP port and the UL power cord to the Enclosure for AC power connection.



5.2. CDFP-CDFP-1M Gen4 Cable

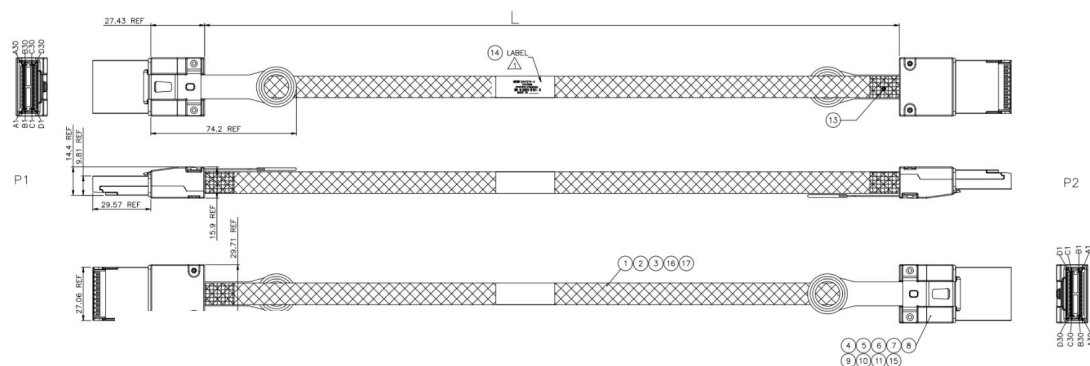
CDFP Host to CDFP Device cable. Length 1M.

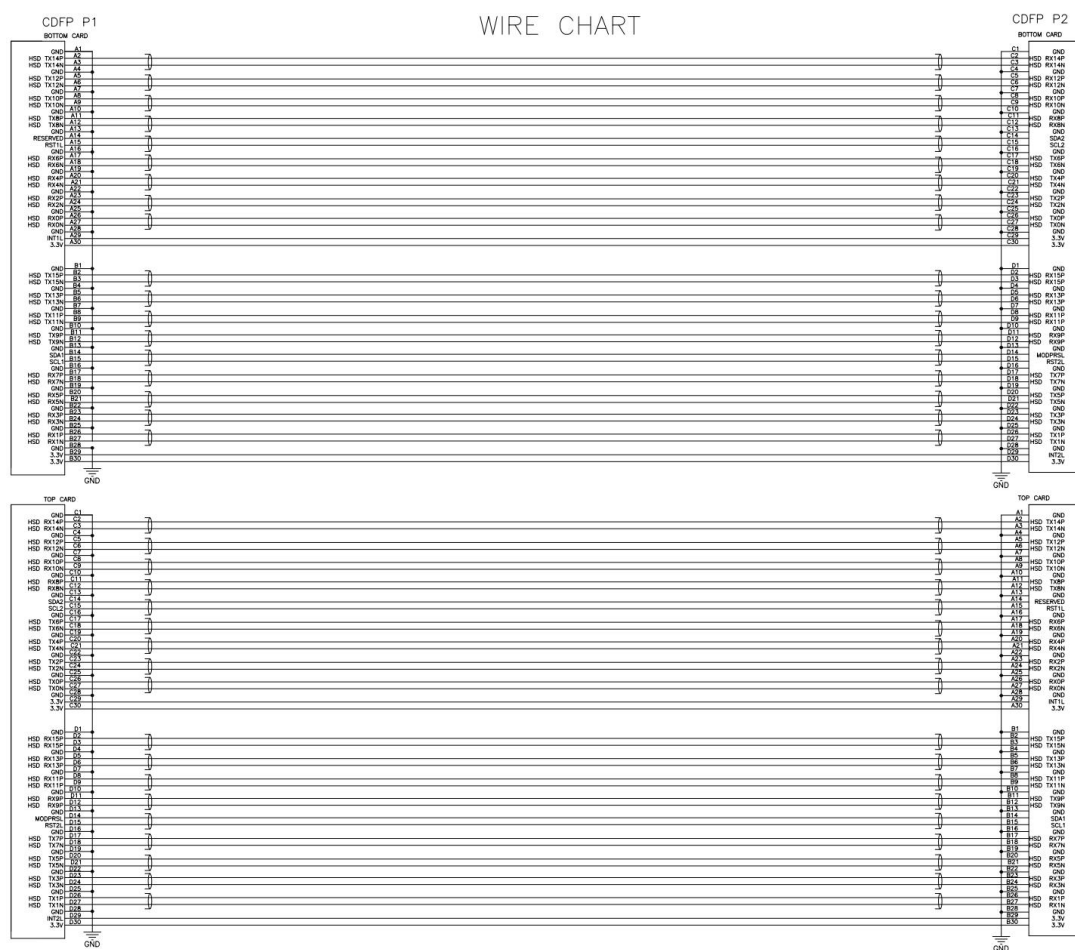
5.2.1. Cable Diagram



5.2.2. Cable Drawings and Pinouts

The following figure shows the pinout for the HighPoint CDFP-CDFP-1M Gen4 cable, one x8 CDFP to one x8 CDFP connection.

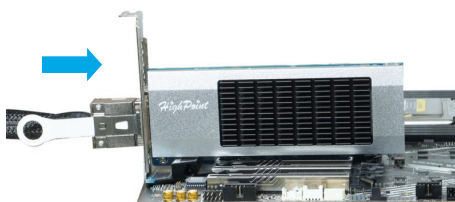




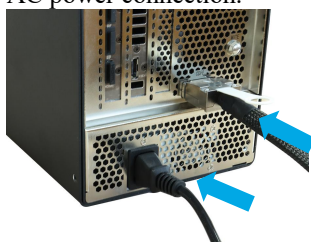
5.2.3. Cable Connection

The following steps show the connection of a Enclosure to the R7638D using the CDFP-CDFP-1M Gen4 cable.

1. Connect the CDFP cable to the R7638D's CDFP port.



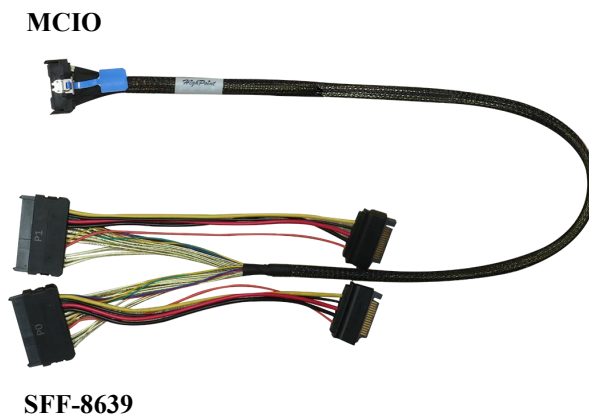
2. Connect the CDFP cable to the Enclosure's CDFP port and the UL power cord to the Enclosure for AC power connection.



5.3. CIO8-8639-110 Cable

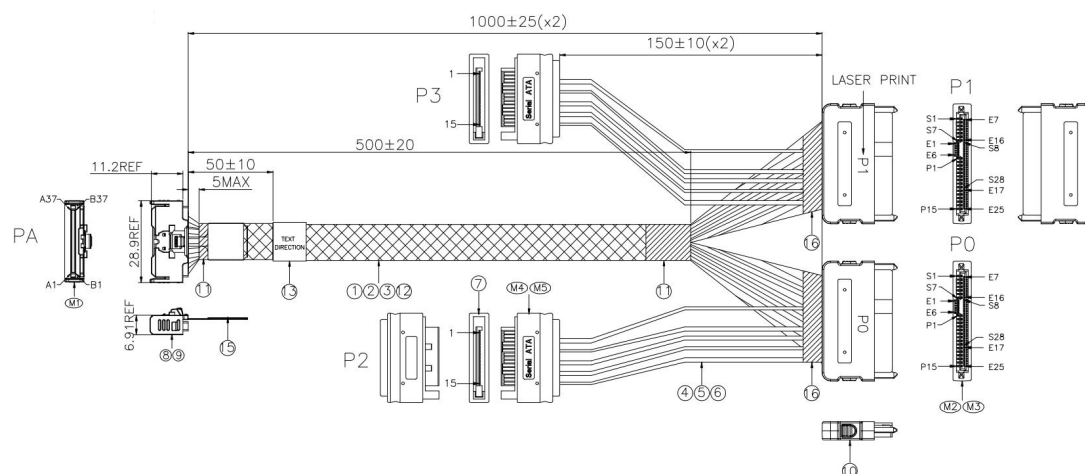
MCIO (x8) Host to SFF-8639 Device cable with a 15-pin SATA power connector. Each cable supports two NVMe SSDs. Length 1M.

5.3.1. Cable Diagram

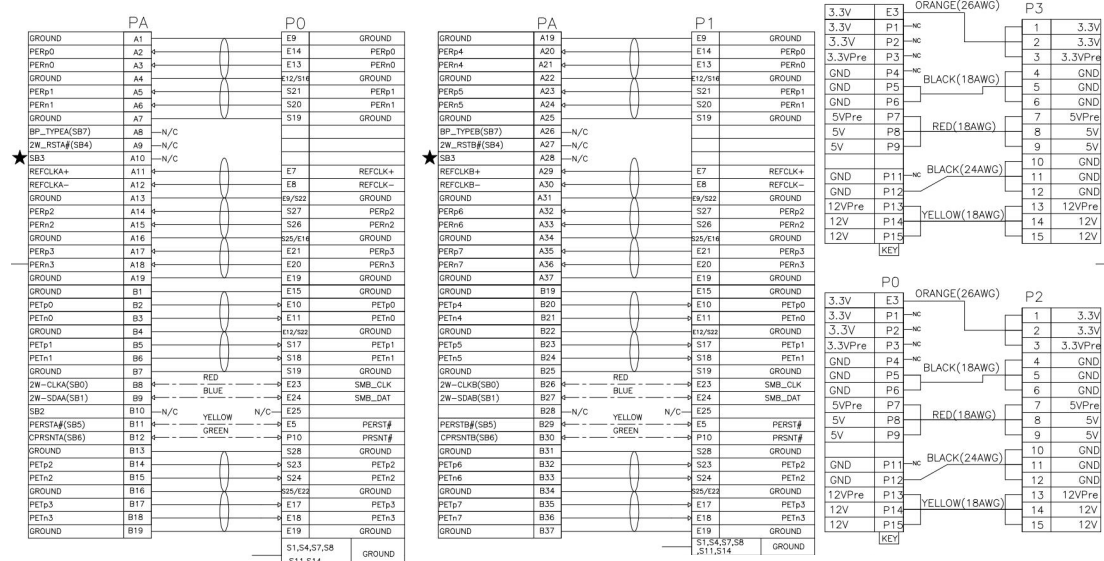


5.3.2. Cable Drawings and Pinouts

The following figure shows the pinout for the HighPoint CIO8-8639-110 cable, one x8 MCIO to two x4 SFF-8639 connection.



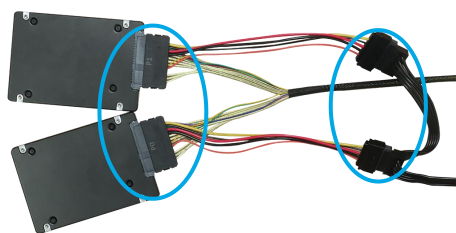
WIRING TABLE



5.3.3. Cable Connection

The following steps show the connection of a U.2 SSD to the R7638D using the CIO8-8639-110 cable.

1. Connect the SFF-8639 connector of the CIO8-8639-110 cable to the NVMe SSD, and connect the 15-pin SATA power connector to the power supply.



2. Connect the MCIO connector of the CIO8-8639-110 cable to the R7638D.



5.4. CIO8-CIO8-110 Cable

MCIO Host to MCIO Device cable. Each cable can host up to two NVMe SSDs. Length 1M.

5.4.1. Cable Diagram

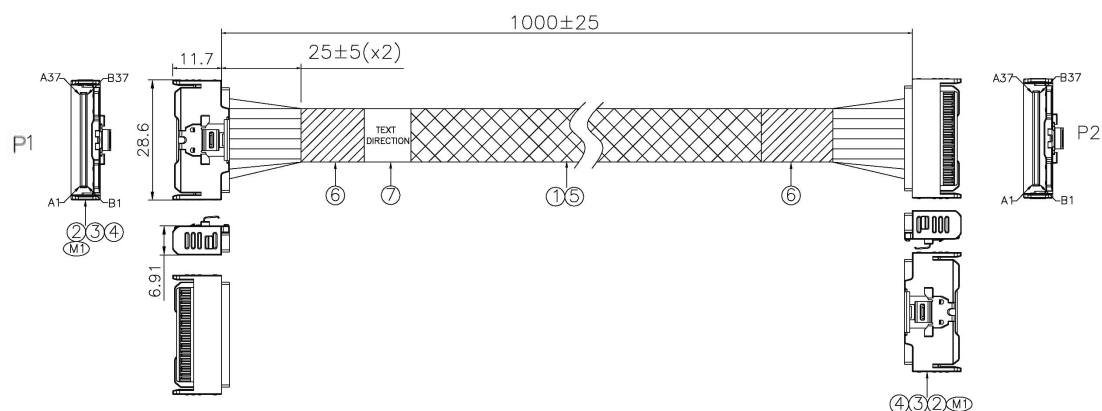
MCIO



MCIO

5.4.2. Cable Drawings and Pinouts

The following figure shows the pinout for the HighPoint CIO8-CIO8-110 cable, one x8 MCIO to one x8 MCIO connection.



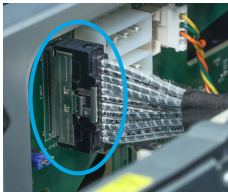
WIRING TABLE

P1		P2		P1		P2	
GROUND	B37		A37	GROUND	A37		B37
TX7-	B36		A36	RX7-	A36		B36
TX7+	B35		A35	RX7+	A35		B35
GROUND	B34		A34	GROUND	A34		B34
TX6-	B33		A33	RX6-	A33		B33
TX6+	B32		A32	RX6+	A32		B32
GROUND	B31		A31	GROUND	A31		B31
SB4-	B30		A30	SB8-	A30		B30
SB4+	B29		A29	SB8+	A29		B29
GROUND	B28		A28	GROUND	A28		B28
SB3-	B27		A27	SB7-	A27		B27
SB3+	B26		A26	SB7+	A26		B26
GROUND	B25		A25	GROUND	A25		B25
TX5-	B24		A24	RX5-	A24		B24
TX5+	B23		A23	RX5+	A23		B23
GROUND	B22		A22	GROUND	A22		B22
TX4-	B21		A21	RX4-	A21		B21
TX4+	B20		A20	RX4+	A20		B20
GROUND	B19		A19	GROUND	A19		B19
TX3-	B18		A18	RX3-	A18		B18
TX3+	B17		A17	RX3+	A17		B17
GROUND	B16		A16	GROUND	A16		B16
TX2-	B15		A15	RX2-	A15		B15
TX2+	B14		A14	RX2+	A14		B14
GROUND	B13		A13	GROUND	A13		B13
SB2-	B12		A12	SB6-	A12		B12
SB2+	B11		A11	SB6+	A11		B11
GROUND	B10		A10	GROUND	A10		B10
SB1-	B9		A9	SB5-	A9		B9
SB1+	B8		A8	SB5+	A8		B8
GROUND	B7		A7	GROUND	A7		B7
TX1-	B6		A6	RX1-	A6		B6
TX1+	B5		A5	RX1+	A5		B5
GROUND	B4		A4	GROUND	A4		B4
TX0-	B3		A3	RX0-	A3		B3
TX0+	B2		A2	RX0+	A2		B2
GROUND	B1		A1	GROUND	A1		B1

5.4.3. Cable Connection

The following steps show the connection of the backplane to the R7638D using the CIO8-CIO8-110 cable.

1. Connect the MCIO connector of the CIO8-CIO8-110 cable to the backplane.



2. Connect the other MCIO connector of the CIO8-CIO8-110 cable to the R7638D.



5.5. 8654-CIO8-110 Cable

MCIO Host to SFF-8654 Device cable. Each cable can host up to two NVMe SSDs. Length: 1M.

5.5.1. Cable Diagram

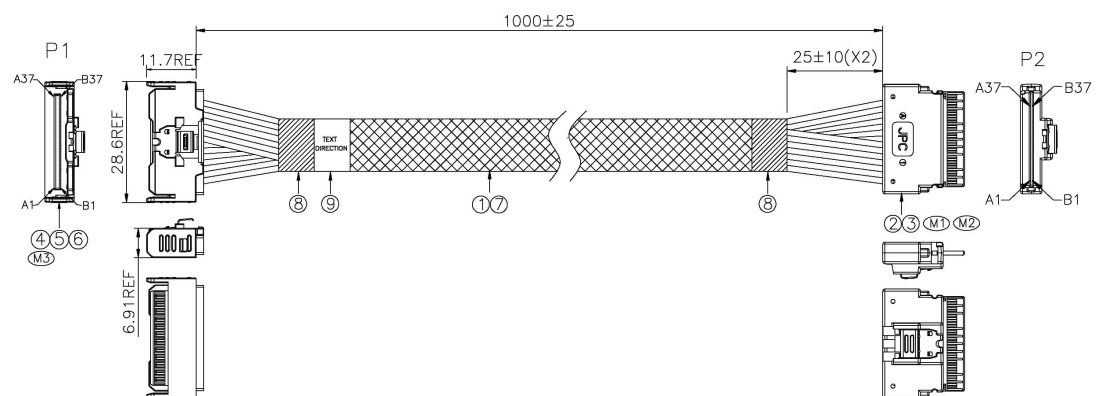
SFF-8654



MCIO

5.5.2. Cable Drawings and Pinouts

The following figure shows the HighPoint 8654- CIO8-110 cable pinout, one x8 MCIO to one x8 SFF-8654 connection.



WIRING TABLE

P1			P2			P1			P2		
GROUND	B37	B37	A37	A37	GROUND	GROUND	A37	A37	B37	B37	GROUND
TX7-	B36	B36	A36	A36	RX7-	RX7-	A36	A36	B36	B36	TX7-
TX7+	B35	B35	A35	A35	RX7+	RX7+	A35	A35	B35	B35	TX7+
GROUND	B34	B34	A34	A34	GROUND	GROUND	A34	A34	B34	B34	GROUND
TX6-	B33	B33	A33	A33	RX6-	RX6-	A33	A33	B33	B33	TX6-
TX6+	B32	B32	A32	A32	RX6+	RX6+	A32	A32	B32	B32	TX6+
GROUND	B31	B31	A31	A31	GROUND	GROUND	A31	A31	B31	B31	GROUND
SIDEBAND	B30	B30	A30	A30	SIDEBAND	SIDEBAND	A30	A30	B30	B30	SIDEBAND
SIDEBAND	B29	B29	A29	A29	SIDEBAND	SIDEBAND	A29	A29	B29	B29	SIDEBAND
GROUND	B28	B28	A28	A28	GROUND	GROUND	A28	A28	B28	B28	GROUND
SIDEBAND	B27	B27	A27	A27	SIDEBAND	SIDEBAND	A27	A27	B27	B27	SIDEBAND
SIDEBAND	B26	B26	A26	A26	SIDEBAND	SIDEBAND	A26	A26	B26	B26	SIDEBAND
GROUND	B25	B25	A25	A25	GROUND	GROUND	A25	A25	B25	B25	GROUND
TX5-	B24	B24	A24	A24	RX5-	RX5-	A24	A24	B24	B24	TX5-
TX5+	B23	B23	A23	A23	RX5+	RX5+	A23	A23	B23	B23	TX5+
GROUND	B22	B22	A22	A22	GROUND	GROUND	A22	A22	B22	B22	GROUND
TX4-	B21	B21	A21	A21	RX4-	RX4-	A21	A21	B21	B21	TX4-
TX4+	B20	B20	A20	A20	RX4+	RX4+	A20	A20	B20	B20	TX4+
GROUND	B19	B19	A19	A19	GROUND	GROUND	A19	A19	B19	B19	GROUND
TX3-	B18	B18	A18	A18	RX3-	RX3-	A18	A18	B18	B18	TX3-
TX3+	B17	B17	A17	A17	RX3+	RX3+	A17	A17	B17	B17	TX3+
GROUND	B16	B16	A16	A16	GROUND	GROUND	A16	A16	B16	B16	GROUND
TX2-	B15	B15	A15	A15	RX2-	RX2-	A15	A15	B15	B15	TX2-
TX2+	B14	B14	A14	A14	RX2+	RX2+	A14	A14	B14	B14	TX2+
GROUND	B13	B13	A13	A13	GROUND	GROUND	A13	A13	B13	B13	GROUND
SIDEBAND	B12	B12	A12	A12	SIDEBAND	SIDEBAND	A12	A12	B12	B12	SIDEBAND
SIDEBAND	B11	B11	A11	A11	SIDEBAND	SIDEBAND	A11	A11	B11	B11	SIDEBAND
GROUND	B10	B10	A10	A10	GROUND	GROUND	A10	A10	B10	B10	GROUND
SIDEBAND	B9	B9	A9	A9	SIDEBAND	SIDEBAND	A9	A9	B9	B9	SIDEBAND
SIDEBAND	B8	B8	A8	A8	SIDEBAND	SIDEBAND	A8	A8	B8	B8	SIDEBAND
GROUND	B7	B7	A7	A7	GROUND	GROUND	A7	A7	B7	B7	GROUND
TX1-	B6	B6	A6	A6	RX1-	RX1-	A6	A6	B6	B6	TX1-
TX1+	B5	B5	A5	A5	RX1+	RX1+	A5	A5	B5	B5	TX1+
GROUND	B4	B4	A4	A4	GROUND	GROUND	A4	A4	B4	B4	GROUND
TX0-	B3	B3	A3	A3	RX0-	RX0-	A3	A3	B3	B3	TX0-
TX0+	B2	B2	A2	A2	RX0+	RX0+	A2	A2	B2	B2	TX0+
GROUND	B1	B1	A1	A1	GROUND	GROUND	A1	A1	B1	B1	GROUND

5.5.3. Cable Connection

The following steps show the connection of the backplane to the R7638D using the 8654-CIO8-110 cable.

1. Connect the SFF-8654 connector of the 8654-CIO8-110 cable to the backplane.



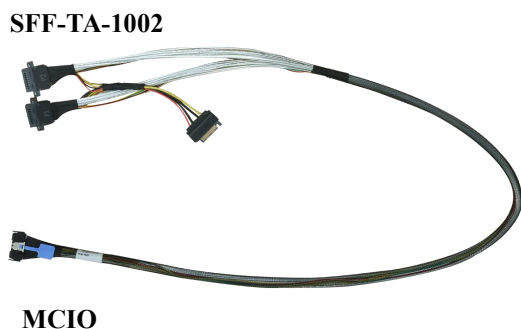
2. Connect the MCIO connector of the 8654-CIO8-110 cable to the R7638D.



5.6. CIO8-1002-110 Cable

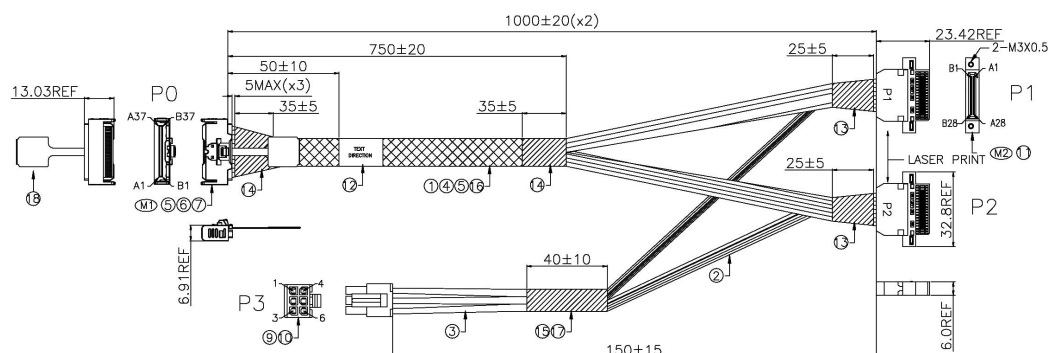
MCIO Host to SFF-TA-1002 Device cable. Each cable can host up to two NVMe SSDs. Length 1M.

5.6.1. Cable Diagram

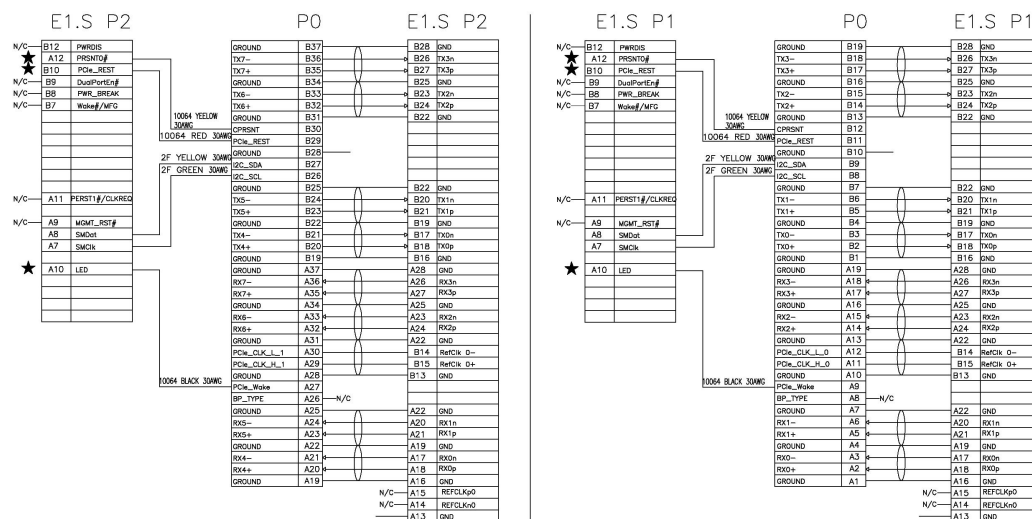


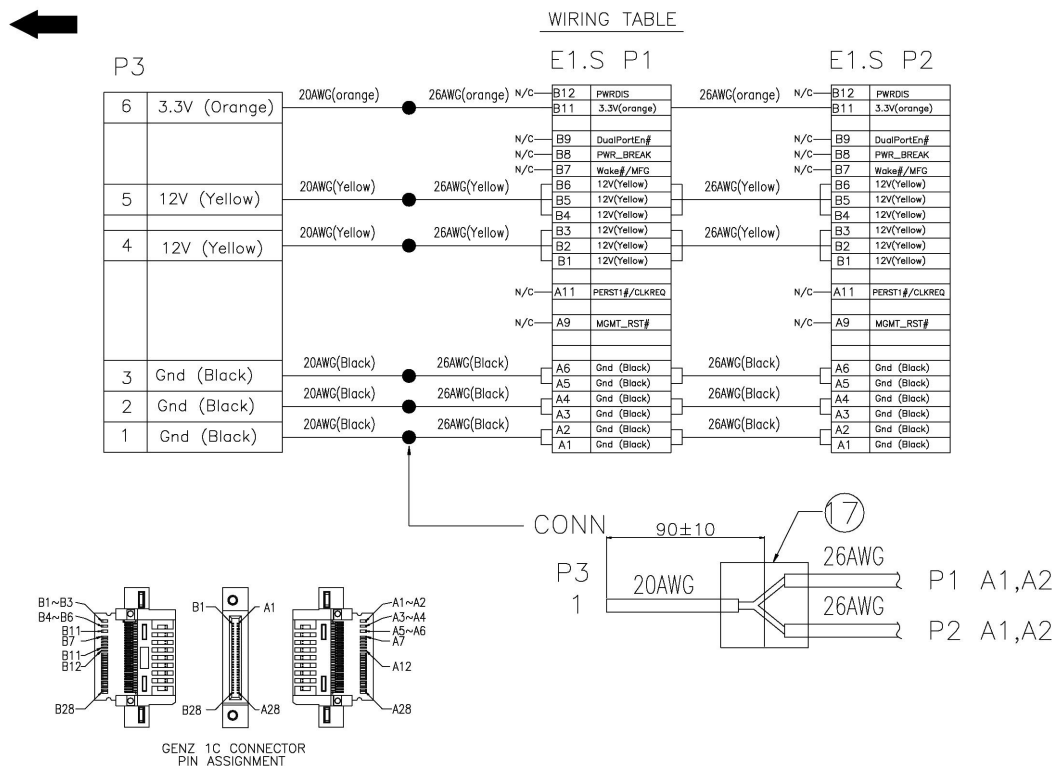
5.6.2. Cable Drawings and Pinouts

The following figure shows the pinout for the HighPoint CIO8-1002-110 cable, one x8 MCIO to two x4 SFF-TA-1002 connection.



★ WIRING TABLE

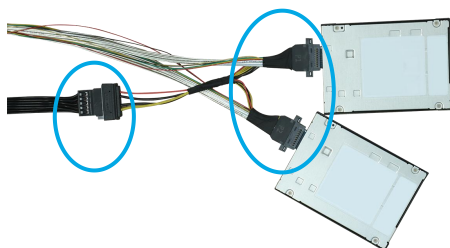




5.6.3. Cable Connection

The following steps show the connection of an NVMe SSD to the R7638D using the CIO8-1002-110 cable.

1. Connect the SFF-TA-1002 connector of the CIO8-1002-110 cable to the NVMe SSD, and connect the 15-pin SATA power connector to the power supply.



2. Connect the MCIO connector of the CIO8-1002-110 cable to the R7638D.



5.7. RS8531A External Enclosure Device

The Enclosure is designed specifically for Gen4 (PCIe 4.0) GPU (Graphics Processing Unit).

5.7.1. Enclosure View



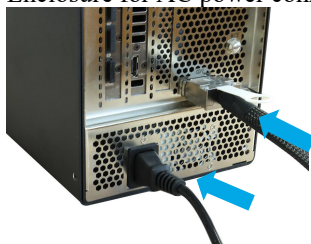
5.7.2. Enclosure Connection

The following steps show the connection of the RS8531A to the R7638D using the CDFP-CDFP-1M Gen4 cable.

1. Connect the CDFP cable to the R7638D's CDFP port.



2. Connect the CDFP cable to the Enclosure's CDFP port and the UL power cord to the RS8531A Enclosure for AC power connection.



5.8. RS8631C External Enclosure Device

The Enclosure is designed specifically for Gen5 (PCIe 5.0) GPU (Graphics Processing Unit).

5.8.1. Enclosure View



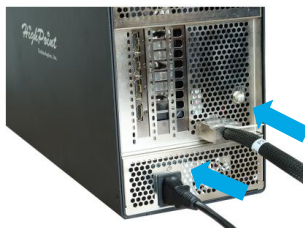
5.8.2. Enclosure Connection

The following steps show the connection of the RS8631C to the R7638D using the CDFP-CDFP-1M Gen5 (Cooplink) cable.

1. Connect the CDFP cable to the R7638D's CDFP port.



2. Connect the CDFP cable to the Enclosure's CDFP port and the UL power cord to the RS8631C Enclosure for AC power connection.



5.9. RS8631D External Enclosure Device

The Enclosure is designed specifically for Gen5 (PCIe 5.0) GPU (Graphics Processing Unit).

5.9.1. Enclosure View



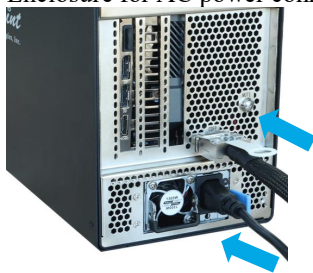
5.9.2. Enclosure Connection

The following steps show the connection of the RS8631D to the R7638D using the CDFP-CDFP-1M Gen5 (Cooplink) cable.

1. Connect the CDFP cable to the R7638D's CDFP port.



2. Connect the CDFP cable to the Enclosure's CDFP port and the UL power cord to the RS8631D Enclosure for AC power connection.



6. R7638D Installation Instructions

The R7638D provides one CDFP connector and two MCIO connectors compatible with HighPoint's certified cable accessories. The following steps show how to connect NVMe SSDs and Enclosure directly to the R7638D.

1. Use a wired ESD wrist strap that is properly grounded.
2. Unpack and remove the R7638D and check it for damage. If it appears damaged, please get in touch with HighPoint Technical Support.
3. Shut down the system and disconnect the AC power cord.
4. Press down gently but firmly to seat the R7638D correctly in the available slot.



5. Connect the CDFP cable to the R7638D's CDFP port.

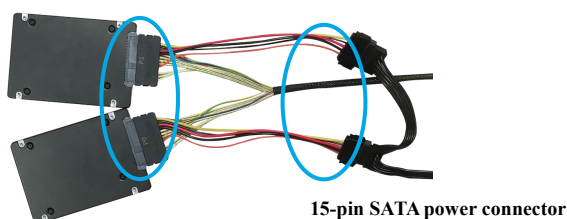


6. Connect the CDFP cable to the Enclosure's CDFP port and the UL power cord to the Enclosure for AC power connection.



7. Connect the SFF-8639 connector to the NVMe SSD, and connect the 15-pin SATA power connector to the power supply.

SFF-8639 Connector



15-pin SATA power connector

8. Connect the MCIO connector of the CIO8-8639-110 cable to the R7638D.



9. Power up the Enclosure, then power up the motherboard.
Note: When powering off the system, the Enclosure must be powered off at the same time.
10. Turn on the power to the system.

7. Revision History

7.1. Version 1.00, September 12, 2025

Initial version.

7.2. Version 1.01, November 24, 2025

Add [RS8631D External Enclosure Device](#) support.