



R0M46A-1-OPC

Aruba Networks® R0M46A-1 Compatible TAA 50GBase-CU SFP56 to SFP56 Direct Attach Cable (Passive Twinax, 1m)

Features

- Compliant with SFP56 MSA Specification
- Electrical interface specifications per SFF-8431
- Management interface specifications per SFF-8472
- Supports 56Gbps
- PAM4 modulation
- Cable Color: Black
- I2C for EEPROM communication
- RoHS Compliant and Lead-Free



Applications:

- Servers, Switches, Routers, Data Centers
- High Performance Computing

Product Description

This is an Aruba Networks® R0M46A-1 compatible 50GBase-CU SFP56 to SFP56 direct attach cable that operates over passive copper with a maximum reach of 1.0m (3.3ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

OptioConnect's transceivers are RoHS compliant and lead-free.

Characteristics

Parameter	Specifications
Data Rate	56Gbps
Assembly Color	Black
Number of Pluggable I/O Cable Assembly Positions	2-Pair
Number of Signal Positions	4
Cable Assembly Category	High-Speed

Cable Specifications

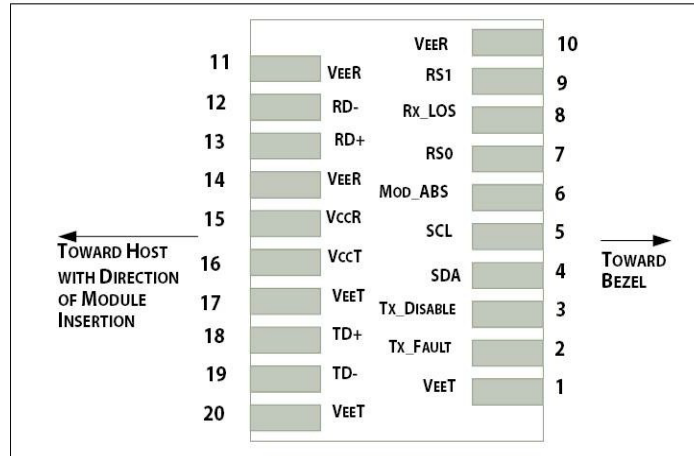
Length	Tolerance	Wire Gauge
1m (3.3ft)	±30mm	30AWG

SFP56 Pin Definitions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground.	1
2	Tx_Fault	Transmitter Fault. LVTTTL-O. "High" indicates a fault condition.	2
3	Tx_Disable	Transmitter Disable. LVTTTL-I. "High" or "open" disables the transmitter.	3
4	SDA	2-Wire Serial Interface Data. LVCMOS-I/O. MOD-DEF2.	4
5	SCL	2-Wire Serial Interface Clock. LVCMOS-I/O. MOD-DEF1.	4
6	MOD_ABS	Module Absent (Output). Connected to the VeeT or VeeR in the module.	5
7	RS0	N/A.	6
8	Rx_LOS	Receiver Loss of Signal. LVTTTL-O.	2
9	RS1	N/A.	6
10	VeeR	Receiver Ground.	1
11	VeeR	Receiver Ground.	1
12	RD-	Inverse Received Data Out. CML-O.	
13	RD+	Received Data Out. CML-O.	
14	VeeR	Receiver Ground.	
15	VccR	+3.3V Receiver Power.	
16	VccT	+3.3V Transmitter Power.	
17	VeeT	Transmitter Ground.	1
18	TD+	Transmitter Data In. CML-I.	
19	TD-	Inverse Transmitter Data In. CML-I.	
20	VeeT	Transmitter Ground.	1

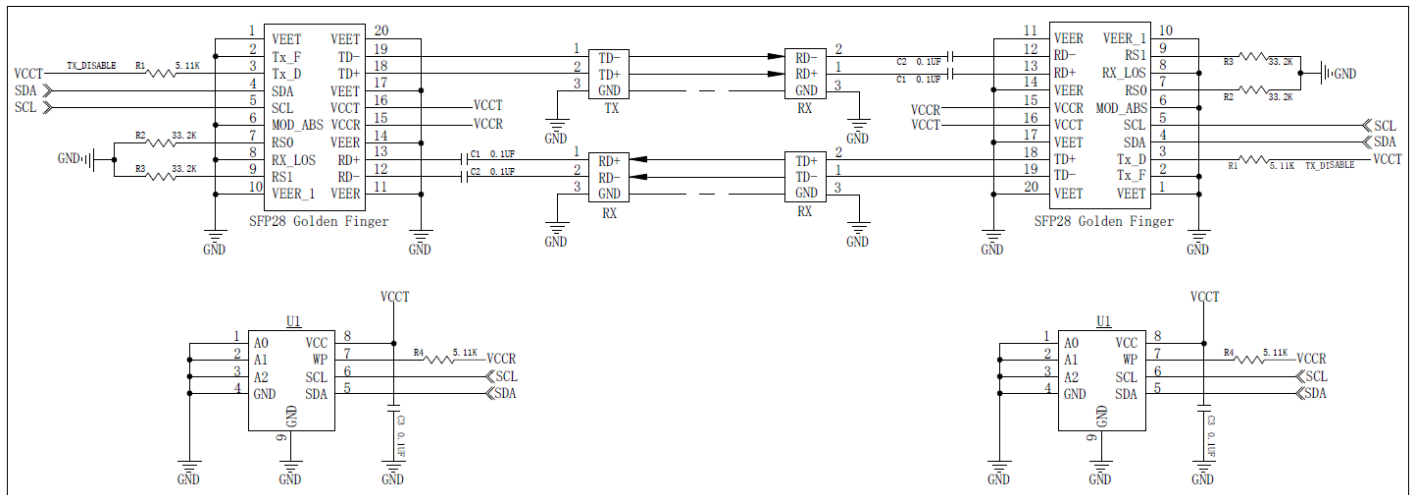
Notes:

1. The module signal grounds are isolated from the module case.
2. This is an open collector/drain output that, on the host board, requires a 4.7k Ω to 10k Ω pull-up resistor to the Host_Vcc.
3. This input is internally biased "high" with a 4.7k Ω to 10k Ω pull-up resistor to the VccT.
4. 2-Wire Serial Interface Clock and Data lines require an external pull-up resistor.
5. This is a ground return that, on the host board, requires a 4.7k Ω to 10k Ω pull-up resistor to the Host_Vcc.
6. Rate Select is not available.

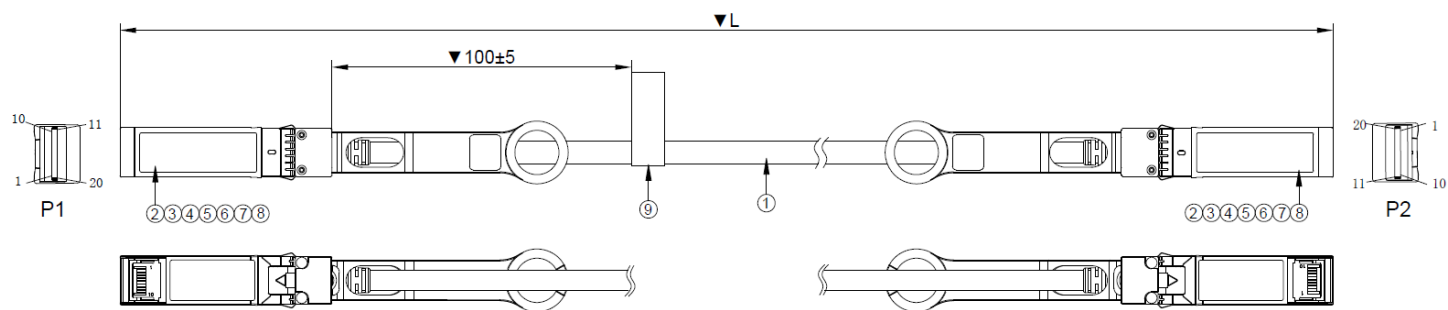


Host PCB SFP56 Pad Assignment Top View

Wiring Schematic



Mechanical Specifications



No.	Description	Quantity	Unit
1	SFP56 Cable, 30AWG, Black, RoHS	A/R	M
2	SFP56 Connector Shell	2	PCS
3	SFP28 25G PCBA, MCU	2	PCS
4	Pull Tab: Black	2	PCS
5	SR: Black, PVC	A/R	KG
6	Resin, Black	A/R	KG
7	Heat-Resistant Tape	A/R	M
8	W=5mm Copper Foil	A/R	M
9	Label	1	PCS

OptioConnect

Innovation for the Future of High-Speed Networking

Who We Are

OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do

At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design

Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team

Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission

To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect

Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.

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