MiniSAS 12G Active Optical Cable

Description

The BlueOptics© BL484803NXM MINISAS Active Optical Cable is a high performance, cost effective module supporting a datarate up to 12Gbps with 100 Meter link length on multi mode fiber.

BlueOptics© Active Optical Cable are 100% compliant with MINISAS Multi-Source Agreement (MSA).

Features

- ✓ Support SAS 3.0 application
- ✓ Compliant to Electrical MSA SFF-8436
- ✓ VCSEL laser technology
- ✓ Up to 100 Meters
- ✓ Green Data center: low power dissipation
- ✓ Metal enclosure, for lower EMI
- ✓ RoHS compliant and lead-free
- ✓ Single +3.3V power supply

Applications

- ✓ SAS 3.0 at 12Gb/s per lane
- ✓ SAS 2.1 at 6Gb/s per lane
- ✓ Other optical links

Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended.

Laser Safety: Even small radiation emitted by laser devices can be dangerous to human eyes and lead to permanent eye injuries. Be sure to avoid eye contact with direct or indirect radiation.

Warranty

Every BlueOptics© Active Optical Cable comes with a 5 year replacement warranty and lifetime support.
For a warranty inquiry, please contact your CBO sales representative.
This warranty only covers the first user of the equipment.

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by CBO before they become applicable to any particular order or contract. In accordance with the CBO policy of continuous improvement specifications may change without notice.

The publication of information in this data sheet does not imply freedom from patent or other protective rights of CBO or others.

Further details are available from any CBO sales representative.

Installation

Before installation attach an ESD-preventive wrist to ensure not to damage the Active Optical Cable or hardware.

BlueOptics© BL484803NXM can be installed in any MINISAS port. You can install the BL484803NXM regardless if the system is powered on or off, because it is hot-swappable.

Insert both ends of the Active Optical Cable into the MINISAS ports.

You can now use your connection.

Order Information

Part No.	Length
BL484803N1M	1 Meter
BL484803N3M	3 Meter
BL484803N5M	5 Meter
BL484803N10M	10 Meter
BL484803N20M	20 Meter
BL484803N30M	30 Meter
BL484803N50M	50 Meter
BL484803N100M	100 Meter

Regulatory Compliance

Feature	Standard	Co.
Electrostatic Discharge (ESD)	- IEC/EN 61000-4- 2	✓
Electromagnetic Interference (EMI)	- FCC Part 15 Class B EN 55022 - Class B (CISPR 22A)	✓
Laser Eye Safety	- FDA 21CFR 1040.10, 1040.11 - IEC/EN 60825-1, 2	Class 1 ✓
Component Recognition	- IEC/EN 60950, UL	✓
RoHS	- 2002/95/EC	✓
EMC	- EN61000-3	✓

1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40		85	ºC
Storage Ambient Humidity	HA	5		95	%

2. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0		70		BL484803NXM
Ambient Humidity	HA	5		70	%	
Transmission Distance				100	M	
Coupled Fiber	Multi mode fiber					50/125µm MMF

3. Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Power Dissipation	Pd	-	-	-	W	1
Transmit turn-on time	TON	2000	-	-	Ms	
Transmitter						
Input differential impedance	Rin		100		Ω	1
Differential data input swing	Vin,pp	200		1200	mV	
Average Launch power Tx_off	POFF	-	-	-30	dBm	
Receiver						
Differential data output swing	Vout,pp	200		1100	mV	2
Output Differential Impedance	ZD	90	100	110	V	

Notes:

1. Per terminal
2. AC coupled with 100Ω differential termination.

4. Pin arrangement

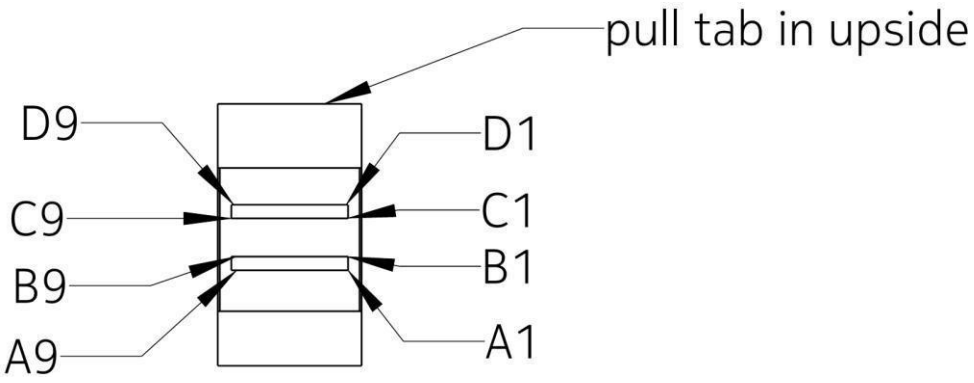
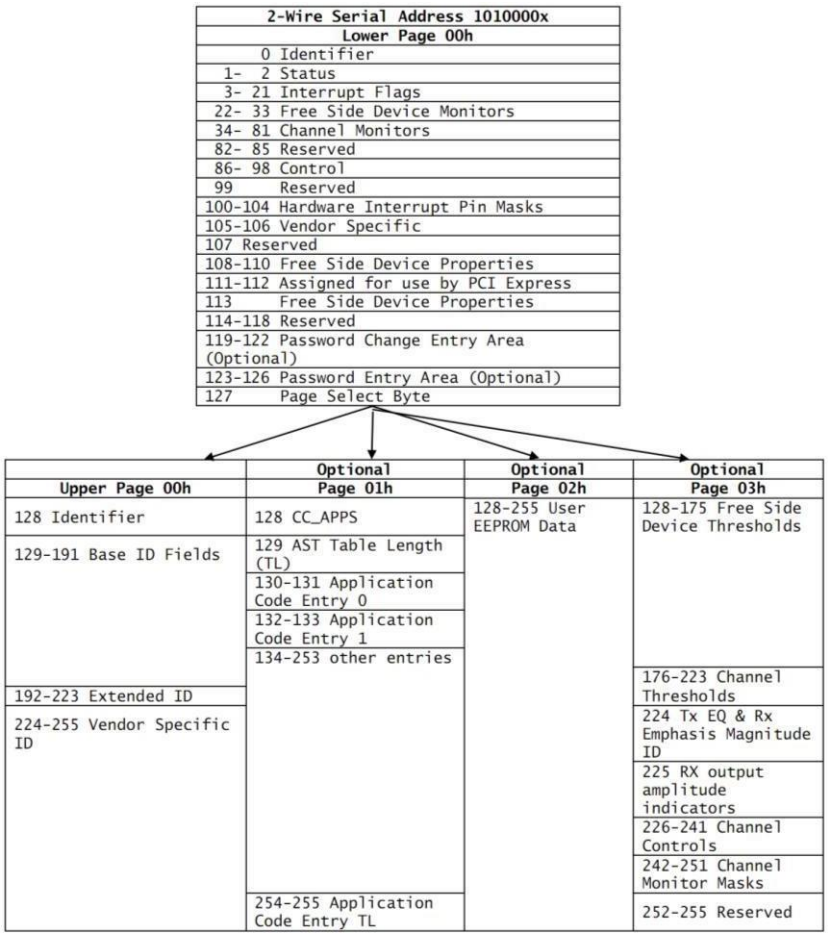


Figure 1, Pin View From Mating Side

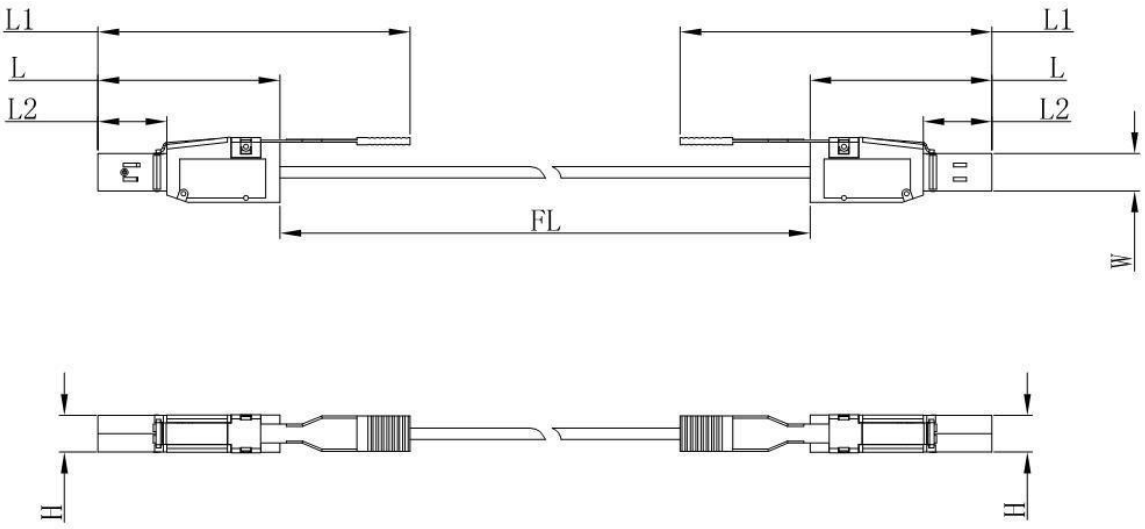
Pin	Symbol	Name/Description	Notes
A1	Reserved	Must be unconnected	
A2	IntL	Interrupt	
A3	GND	Ground	1
A4	RX1p	Receiver Non-Inverted Data Input	
A5	RX1n	Receiver Inverted Data Input	
A6	GND	Ground	1
A7	RX3p	Receiver Non-Inverted Data Input	
A8	RX3n	Receiver Inverted Data Input	
A9	GND	Ground	1
B1	Vact	+3.3V Power Supply	
B2	ModPrsL	Module Present	
B3	GND	Ground	1
B4	RX0p	Receiver Non-Inverted Data Input	
B5	RX0n	Receiver Inverted Data Input	
B6	GND	Ground	1
B7	RX2p	Receiver Non-Inverted Data Input	
B8	RX2n	Receiver Inverted Data Input	
B9	GND	Ground	1
C1	SCL	2-wire serial interface clock	
C2	SDA	2-wire serial interface data	
C3	GND	Ground	1
C4	TX1p	Transmitter Non-Inverted Data Input	
C5	TX1n	Transmitter Inverted Data Input	
C6	GND	Ground	1
C7	TX3p	Transmitter Non-Inverted Data Input	
C8	TX3n	Transmitter Inverted Data Input	
C9	GND	Ground	1
D1	Vact	+3.3V Power Supply	
D2	Vman	Management interface power	
D3	GND	Ground	1
D4	TX0p	Transmitter Non-Inverted Data Input	
D5	TX0n	Transmitter Inverted Data Input	
D6	GND	Ground	1
D7	TX2p	Transmitter Non-Inverted Data Input	
D8	TX2n	Transmitter Inverted Data Input	
D9	GND	Ground	1

Note: 1. Circuit ground is internally isolated from chassis ground.

5. Monitoring Specification



6. Mechanical Specifications (Unit: mm)



	L	L1	L2	W	H
MAX	51.8	—	—	10.70	10.50
TYPE	—	88.3	19.5	—	—
MIN	51.2	—	—	10.50	10.30