

## Product Datasheet

### MCP2104-X001B-C

#### Mellanox Compatible 10Gb/s SFP+ Direct Attach Cable Copper, Passive, 1m

##### FEATURES

- Available lengths 0.5m to 10m
- Supports multi-gigabit data rates up to 10.5Gbps
- Supports 1x, 2x, 4x and 8x Fiber Channel data rates
- Hot-pluggable SFP 20PIN footprint
- Serial ID module on MOD (0-2)
- AC coupling of PECL signals
- EMI/EMC performance
- Low Power Consumption < 0.5W
- Power Supply:+3.3V
- Compliant to SFP+ MSA
- Temperature Range: 0~ 70 °C
- ROHS

##### APPLICATIONS

- Storage Area Networks (SAN), Network Attached Storage and Storage Servers
- 1G/2G/4G/8G Fiber Channel
- Switched fabric I/O such as ultra-high bandwidth switches and routers
- Data center cabling infrastructure
- High density connections among network equipment

##### STANDARDS

- Compliant with SFP MSA (INF-8074i)

##### DESCRIPTION

ATGBICS Compatible MCP2104-X001B-C SFP+ cable is a high-performance, cost effective I/O solution for 10Gb Ethernet and 10G Fiber Channel applications. SFP+ copper modules allow hardware manufacturers to achieve high port density, configurability and utilization at a very low cost and to reduce power budget. The high-speed cable assemblies meet and exceed the performance and reliability requirements stipulated by Gigabit Ethernet and Fiber Channel industry standard.

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### Recommended Operating Environment:

Parameter	Symbol	Min	Typical	Max	Unit
Storage Ambient Temperature		-40		+85	° C
Operating Case Temperature	T <sub>c</sub>	0		+70	° C
Power Supply Voltage	VCC	3.14	3.3	3.47	V
Power Dissipation	PD			0.5	W

### Systems

Performance	Media
10.5 Gbps line speed, full duplex  Bit error rate: better than 10E-12	Hot-pluggable, industry-standard Small Form-Factor

### Specifications (Tested under recommended operating conditions, unless otherwise noted)

Parameter	Symbol	Min	Type	Max	Units	Notes
<b>Electrical Characteristics</b>						
Supply Current	I <sub>cc</sub>	-	-	100	mA	1
Transmitter Differential Input Voltage (PECL)	V <sub>IN</sub>	250	-	1200	mVpp	
Receiver Differential Output Voltage (PECL)	V <sub>O</sub>	185	-	1000	mVpp	
Impedance	Z <sub>cable</sub>	90	100	110	Ohms	
MOD-DEF1, 2	V <sub>IH</sub>	2.0	-	V <sub>cc</sub>	V	

#### Note:

1. The supply current includes SFP Module's supply current and test board working current.

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### Physical Data

Parameter	Description	30AWG	24AWG	Units
Cable Diameter	OD	4.5	6.5	mm
Bend Radius	Minimum Sustained Bend	25	35	mm

### AWG Information

Reach @ 10Gb/s (m)	AWG
0.5	30
1	30
3	30
5	24
7	24
10	24

### Mechanical Information

