Approved
OPTICS

CFP-100GBASE-LR4-A
100Gbps CFP Transceiver

Features

• Compliant with CFP MSA

• 802.3ba-2010 100GBase-LR4 compliant for single-mode fiber links up to 10km

• 100GE CAUI host interface

• Fully transparent 100GE transport

• CFP MSA compliant MDIO management interface

• ≤24 Watts Consumption

• Compatible with all major router and switch vendors

• CFP Generation 2 100GBase-LR4

Description

Approved Networks' **CFP-100GBASE-LR4-A** CFP transceivers are designed for use in 103.125 Gbps 100GE links up to 10km over single mode G.652 fiber pair. The 802.3ba-2010 100GBase-LR4 standard CFP module supports four wavelengths centered around 1300nm, each operating at 25.78125 Gbps line rates. The product is ideal for the interconnection of Ethernet Switches, IP Routers or optical cross connects optical interfaces. Digital Optical Monitoring interfaces are provided via the CFP MSA standards compliant MDIO interface.

Recommended Operating Conditions

Paramet	Symbol	Min	Typical	Max	Units
Host Native Nominal Bit Rate		10 x 10.3125 (CAUI)			Gbps
Line Interface Bit Rate		4 x 25.78125 (CAUI)			Gbps
Interface Bit Rate Deviation		+/- 100			ppm
Maximum Fiber Distance		10			km
Operating Case Temperature	T_C	0	-	70	°C
Storage Temperature	T_{st}	-40	-	85	°C

Voltage Power Supply

Parameters		Symbol	Min	Typical	Max	Unit
Absolute Maximum Power Supply Voltage		VCC			3.6	V
Operating Power Supply	Voltage	VCC	3.2	3.3	3.4	V
	Current	ICC	-	-	8	A
Total Power Dissipation		Plow			24	W
Low Power Mode Dissipation		Pw			2	W
Inrush Current		Iinrush			100	mA/μsec
Turn-off Current		Iturnoff	-100			mA/μsec
Power Supply Noise		Vrip			2% 3%	DC – 1MHz 1 - 10MH

Transmitter Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Channel Spacing	fspacing		4.5		n
Average Output Power per Lane	Pavg	-4.3		+4.5	dBm
Average Output Power Aggregate	Pagg			+10.5	dBm
OMA Output Power Difference per	Pdiff			+5	dB
Optical Modulation Amplitude	OMA	-1.3		+4.5	dBm
OMA minus TDP	OMA-TDP	-2.3			dBm
Transmitter and Dispersion	TDP			2.2	dB
Extinction Ratio	ER	6.0			dB
Side Mode Suppression Ratio	SMSR	30			dB
Relative Intensity Noise	RINOMA	-130			dBm

Receiver Specifications

Parameter	Symbol	Min	Typical	Max	Units
Optical Central Wavelength		1290		1315	nm
Sensitivity in Average Power, per	R_{in}	+4.5		-10.6	dBm
Sensitivity in OMA, per Lane	R_{oma}			-8.6	dBm
Stressed Sensitivity in OMA, per Lane	OMA_{str}			-6.8	dBm
Vertical Eye Closure for Stressed Sensitivity Test	VECP	1.8			dB
J2 Jitter for stressed sensitivity	J2	0.3			UI
Maximum Receive Overload				-4.0	dBm
Receiver Reflectance				-27	dB

Mechanical Specifications
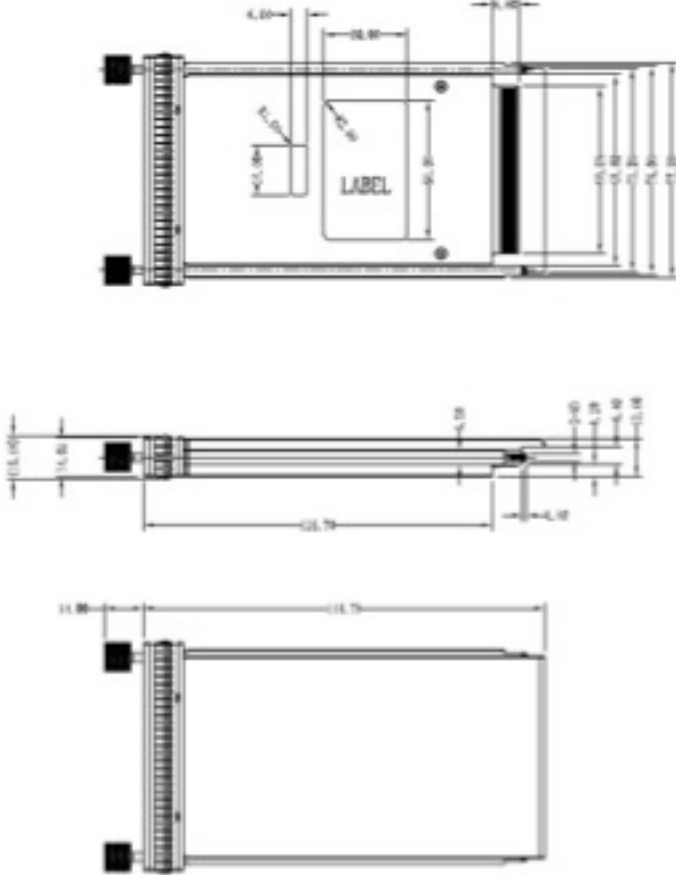
Contact Information

Approved Networks is a leading supplier of Network Transceivers and Connectivity products to Channel Partners, Resellers, and OEMs. With more than 9 years of direct industry experience, our products are resident in the most demanding and mission critical functional networks Worldwide. We serve as a Master Distributor to the largest CM's in the world and deploy the most rigorous testing and firmware management programs to bring the highest level of functional product to the market at a cost that makes sense.

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