

# SFP10G-BX23-20-I

10GBASE, SFP+, LR20, SMF TRANSCEIVER

Tx: 1270nm / Rx: 1330nm, 20km REACH, SIMPLEX LC CONNECTOR

## Features

- Supports up to 10.7Gbps bit rates
- Hot-pluggable SFP+ footprint
- 1270nm DFB laser and PIN photodiode, Up to 20km for SMF transmission
- Compliant with SFP+ MSA and SFF-8472 with duplex LC receptacle
- Compatible with RoHS
- Single +3.3V power supply
- Real Time Digital Diagnostic Monitoring
- Industrial case operating temperature range: -40°C to +85°C



## Applications

- 10Gbps Optical systems
- 10GBASE-LR at 10.3125Gbps
- 10GBASE-LW at 9.953Gbps
- LTE systems
- Other Optical links

## 1. Absolute Maximum Ratings

Any stress beyond the maximum ratings can result in permanent damage. The device specifications are guaranteed only under the recommended operating conditions.

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.5	4.5	V
Storage Temperature	Ts	-40	+85	°C
Operating Humidity	-	5	85	%

## 2. Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit
Case Operating Temperature	TC	-40		+85	
Power Supply Voltage @3.3V	Vcc	3.135	3.30	3.465	V
Power Supply Current	Icc			350	mA
Data Rate	1.0	10.3	10.7		Gbps

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### 3. Optical and Electrical Characteristics

Transmitter						
Parameter	Symbol	Min	Typ	Max	Unit	Notes
Centre Wavelength	$\lambda_c$	1260	1270	1280	nm	
Spectral Width (-20dB)	$\Delta\lambda$			1	nm	
Side-Mode Suppression Ratio	SMSR	30			dB	
Average Output Power	Pout	-3		+2	dBm	1
Extinction Ratio	ER	3.5			dB	
Data Input Swing Differential	VIN	180		850	mV	2
Input Differential Impedance	ZIN	90	100	110	$\Omega$	
TX Disable	Disable		2.0	Vcc	V	
	Enable		0	0.8	V	
TX Fault	Fault		2.0	Vcc		
	Normal		0	0.8		
Receiver						
Parameter	Symbol	Min	Typ	Max	Unit	Notes
Centre Wavelength	$\lambda_c$	1320	1330	1340	nm	
Receiver Sensitivity				-14.4	dBm	3
Receiver Overload		0.5			dBm	3
LOS De-Assert	LOSD			-15.5	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5			dB	
Data Output Swing Differential	Vout	300		900	mV	4
LOS	High	2.0		Vcc	V	
	Low			0.8	V	

#### Notes:

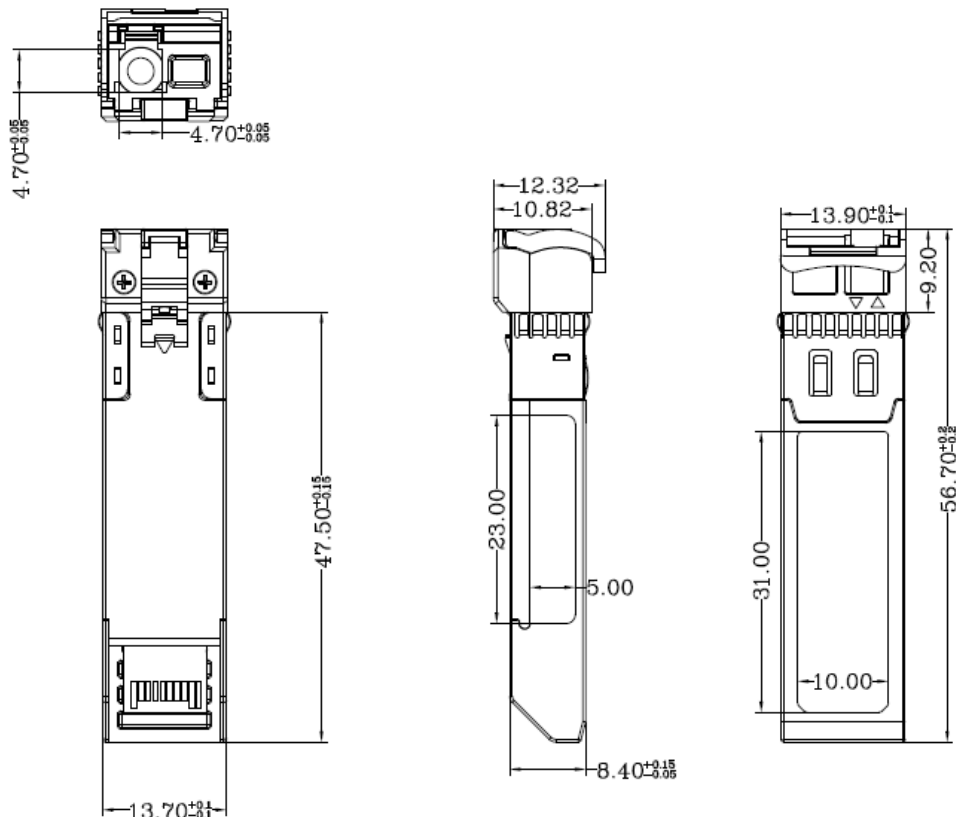
1. The optical power is launched into SMF.
2. PECL input, internally AC-coupled and terminated.
3. Measured with a PRBS 231-1 test pattern @10312 Mbps, BER  $\leq 1 \times 10^{-12}$ .
4. Internally AC-coupled.

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## 4. Mechanical Diagram



**Note:** External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

## 5. Ordering Information

OEM	Part Number	OEM	Part Number
Accedian	7SN-500-BXU-L	F5 Networks	F5UPGSFP+LRR-BXU-L
Adtran	1442412F2-L	Juniper	EX-SFP-10GE-BXU-L
Adtran	1442422F2-L	Juniper	EX-SFP-10GE-BXU-10-L
Adva	1061701887-01-L	Juniper	EX-SFP-10GE-BXU-20-L
Alcatel	3HE05037AA-L	Juniper	JNP-SFP-10G-BX10U-L
Alcatel	3HE05037AA-20-L	Juniper	JNP-SFP-10G-BX20U-L
Arista	SFP-10G-BX10U-AN-L	Juniper	JNP-SFP-10GE-BX10U-L
Arista	SFP-10G-BX20U-AN-L	Juniper	JNP-SFP-10GE-BX20U-L
Avaya	AA1403011-BXU-L	Juniper	QFX-SFP-10GE-BXU-10-L

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Avaya	AA1403169-E6-L	Juniper	QFX-SFP-10GE-BXU-20-L
Brocade	10G-SFPP-BXU-L	Juniper	SFPP-10GE-BXU-L
Brocade	XBR-000153-BXU-L	Juniper	SRX-SFP-10GE-BXU10-L
Calix	100-02168-L	Juniper	JNP-SFP-10GBX10U-L
Calix	100-03498-L	Meraki	MA-SFP-10GB-BXU-L
Ciena	XCVR-S10U27-L	Meraki	MA-SFP-10GB-BXU-20-L
Cisco	SFP-10G-BX20U-C-L	MikroTik	S+23LC10U-L
Cisco	SFP-10G-BXU-I-L	MikroTk	S+23LC10U-L
Cisco	SFP-10G-BX20U-I-L	MikroTk	S+23LC20U-L
Corning	1LAN-SFPP-10G-BXU-I-L	MRV	SFP-10GDBX23-L
Cyan	280-0336-00-L	MSA	L-SFP10G-BXU-10-I
Dell	407-BBOP-23-10-L	MSA	L-SFP10G-BXU-20-I
Dell	407-BBOP-23-20-L	OnePort	SFP10G-BX23-20-L
Ericsson	RDH10270/1-L	Palo Alto	PAN-SFP-PLUS-BXU-L
Extreme	10GB-BX10-U-L	Samsung	SLS-BB1150ELEX-L
Extreme	10302-BXU-10-L	Samsung	SLS-BB1150EMEX-L
Extreme	10302-BXU-20-L	Ubiquiti Networks	UF-SM-10G-BX23-20K-L