

Broadstick Transceiver 1G BIDI **SFP 1310/1550nm for Mikrotik**

BS1GBDUBROLX2 Tx1310nm / Rx1550nm 10Km
BS1GBDDBROLX2: Tx1550nm / Rx1310nm 10Km



Broadstick provides TP Link compatible transceivers that meet the industry standards. All transceivers are **standards-based and comply with the MSA.**



Form Type	BIDI SFP	Max Distance	20km
Wavelength	1310/1550	Type	Standard
Interface	LC Simplex	Speed	1Gbps
Compatible	MIKROTIK	Temp Range	0 to 70 °C

These transceivers are manufactured using the best quality components available. Our commitment to quality means we produce a consistent, standardized product, purpose-built for compatibility with today's top Original Equipment Manufacturer (OEM) specifications.

Our factory has the ISO 9001 certification and our devices are tested in fabric.



The installation a Broadstick transceiver does not affect your network equipment warranty. The equipment manufacturers have all the guidelines stating that warranty support on their products and it will not be affected.

Remember that Installing an OEM transceiver does not affect your network equipment warranty. The equipment manufacturers have all the guidelines stating that warranty support on their products and it will not be affected. This transceivers are compatible the use of it do not affect the CPU of the equipment and will not affect the Network performance.

For more information please contact sales@broadstick.com



Broadstick provides common distance ranges within each transceiver model:

- SX/SR Short hauls with a range up to 2km.
- LX/LR Long hauls with a range up to 10km. We are also able to provide long haul with enhanced lasers capable of 40km.
EX/ER Extended reaches with range up to 40km with GBIC/SFP as well as with 10Gb/s transceivers.
- ZX/ZR/EZX Extended reach with range up to 120km with GBIC/SFP and 80km with 10Gb/s transceivers

Our devices and factories have passed many quality system verifications, like CE, RoHS, FCC, that compliant with international quality standards that assure the production. We strictly implement the standardized management to control the design, production, and service.



Broadstick provides custom SFP fully compatible transceivers that meet the industry standards. All transceivers are standards based and comply with the MSA. The part number of one SFP transceiver can be constructed with the next table. Use as reference the part number **BS1GSFPCISLX2** to request a 1G SFP 1310nm 20Km for a CISCO equipment transceiver.

Broadstick	
BS	Broadstick

Bandwidth	
1M	100M
1G	1G

Form	
SFP	SFP
BDU	BIDI UP
BDD	BIDI DOWN

Brand	
CIS	Cisco
JUN	Juniper
HPE	HP
FGT	Fortigate
HWI	Huawei
DEL	Dell
ALC	Alcatel
XXX	CUSTOM

Type	
SX	850nm 550mts
LH	1310nm 10Km SM and MM
LX	1310nm 10Km
LX2	20Km
EX	40Km
ZX	80Km
ZX2	100Km
RJ	RJ45 100mts
Custom	XXX



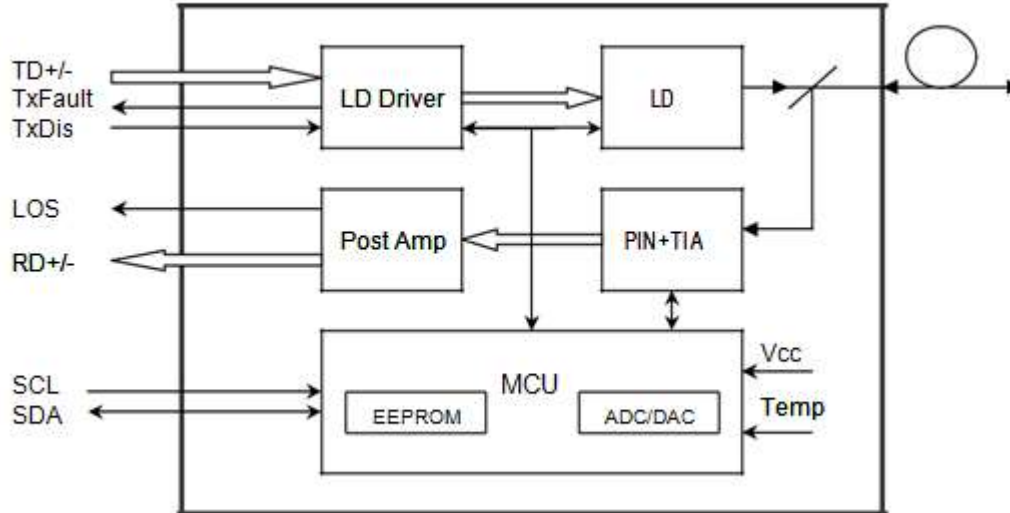
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The SFP transceivers are high performance modules supporting dual data-rate of 1.25Gbps/1.0625Gbps and 20km transmission distance with SMF.

The transceiver consists of three sections: a FP laser transmitter, a PIN photodiode integrated with a trans-impedance preamplifier (TIA) and MCU control unit. All modules satisfy class I laser safety requirements.

The transceivers are compatible with SFP Multi-Source Agreement (MSA) and SFF-8472.



Absolute Maximum Ratings

Absolute Maximum Ratings

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

Recommended Operating Conditions

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	TC	0		+70	°C
Power Supply Voltage	Vcc	3.13	3.3	3.47	V
Power Supply Current	Icc			300	mA
Data Rate		1.063	1.25		Gbps

Optical and Electrical Characteristics

For more information please contact sales@broadstick.com



Parameter	Symbol	Min	Typical	Max	Unit	NOTES
Transmitter						
Centre Wavelength	λ_c	1470	1490	1510	nm	
Spectral Width (RMS)	$\Delta\lambda$			1	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Average Output Power	P _{out}	-9		0	dBm	1
Extinction Ratio	ER	9			dB	
Optical Rise/Fall Time (20%~80%)	tr/tf			0.26	ns	
Data Input Swing Differential	V _{in}	400		1800	MV	2
Input Differential Impedance	Z _n	90	100	110	Ω	
Tx Disable	Disable		2		V _{cc}	V
Tx Fault	Enable		0		0.8	V
Tx Disable	Fault		2		V _{cc}	V
Tx Fault	Normal		0		0.8	V
Receiver						
Centre Wavelength	λ_c	1260	1310	1360	nm	
Receiver Sensitivity				-23	dBm	3
Receiver Overload		-3			dBm	3
LOS De-Assert	LOS _o			-24	dBm	
LOS Assert	LOS _a	-30				
LOS Hysteresis		1		4	dBm	
Data Output Swing Differential	V _{out}	400		1800	mV	4
LOS	High	2		V _{cc}	Ω	
	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 2⁷-1 test pattern @1250Mbps, BER $\leq 1 \times 10^{-12}$.
4. Internally AC-coupled.

Diagnostics

Diagnostics Specification

Parameter	Range	Unit	Accuracy	Calibration
Temperature	0 to +70	°C	±3°C	Internal / External
Voltage	3.0 to 3.6	V	±3%	Internal / External
Bias Current	0 to 100	mA	±10%	Internal / External
TX Power	-9 to 0	dBm	±3dB	Internal / External
RX Power	-23 to -3	dBm	±3dB	Internal / External

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