

1000BASE-T Copper

Gigabit Interface Converters (GBIC), Auto-switching 3.3/5V

1.25 Gbps Gigabit Ethernet

❖ Features

- ❖ Compliant with Gigabit Interface Converter Specification 5.4
- ❖ Compliant with IEEE Std 802.3z and 802.3ab
- ❖ Auto-sense MDI-X
- ❖ SCA-2 Host connector
- ❖ Standard RJ-45 connector
- ❖ Differential PECL inputs and outputs
- ❖ Auto-switching power supply 3.3V / 5V
- ❖ TTL signal detect indicator
- ❖ Hot Pluggable



❖ Application

- ❖ Distributed multi-processing
- ❖ Switch to switch interface
- ❖ High speed I/O for file server or high-end workstation

The 1000Base-T Gigabit Interface Converter (GBIC) is an ideal solution for current gigabit Ethernet switch with GBIC interfaces to provide 1000Base-T full-duplex interconnection over existing UTP-5 copper infrastructures. Based on the GBIC specification 5.5, 1000BASE-T GBIC provides full compatibility with the existing Ethernet switch system on the market.

With the full GBIC/SFP product line from (including TX, SX, MLX, LX, LHX, XD, ZX, EZX and CWDM modules), we provide our customer the most flexible choice on gigabit Ethernet network connecting..

❖ Ordering Information

PART NUMBER	INPUT/OUTPUT	SIGNAL DETECT	VOLTAGE	TEMPERATURE
GBIC-TX	AC/AC	TTL	3.3V/5V	0°C to 70 °C

❖ Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTE
Storage Temperature	T_S	-40		85	°C	
Supply Voltage	V_{CC}	-0.5		6.0	V	
Input Voltage	V_{IN}	-0.5		V_{CC}	V	
Operating Current	I_{OP}	---		300	mA	

❖ Recommended Operating Conditions

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTE
Ambient Operating Temperature	T_{AMB}	0		70	°C	
Supply Voltage	V_{CC}	4.75		5.25	V	
Supply Current	I_{OP}	---		300	mA	
Surge Current	I_{OP}			500	mA	Hot plug
POWER CONSUMPTION	P			1.5	W	

❖ General Specifications

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTE
DATA RATE	BR			1.25	Gb/sec	IEEE 802.3 compatible
CABLE LENGHT	L			100	M	UTP-5

❖ High Speed Electrical Signal

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTE
Differential Input Voltage	V_{INDIFF}	0.50		2.00	V	Differential peak-peak
Differential Output Voltage	$V_{OUTDIFF}$	1.00		1.70	V	Differential peak-peak
Rise/fall time	T R-F		250		psec	20%-80%Differential
Bit Error Rate	BER			10^{-12}		PRBS 2^7-1 test data pattern
Tx input impedance	Z_{IN}		75		ohm	
Rx Output impedance	Z_{OUT}		75		ohm	

Notes: All high speed signals are AC-coupled internally