

## ND99-GBE10G

Electrical 10GBASE-T SFP+ Transceiver with AutoSFP® functionality for 10Gbit/s Ethernet

### Data Sheet



#### Description

The ND99-GBE10G is a Small Form Factor Pluggable (SFP+) 10GBASE-T electrical transceiver. The unit is specially designed to work in a pair with the ND99- range of optical SFP+ transceivers to function as a 10GBASE-T optical media converter. It is made with AutoSFP® enabled functionality to fit the miniHUB product range.

The unit offer full-duplex throughput of 10Gbit/s by transporting data over shielded twisted pair category 6A/C AT7 cables. The module performs the SerDes functions and link speed auto-negotiation needed for optical media conversion.

#### Part Number Options

Part Number	Temperature *)
ND99-GBE10G	-5°C to +55°C

\*) Rated temperature for the complete miniHUB unit.

#### Features

- AutoSFP® enabled functionality
- RJ45 with built in transformer
- Compliant to IEEE STD 802.3an, 802.3ab and 802.3au.
- Link lengths up to 30m
- Compliant to MSA-SFP pinning specification
- SFF-8472 diagnostic features
- Hot-pluggable
- Pb-free and RoHS compliant

#### XGMII/SGMII

The ND99-GBE10G supports the Media Independent Interface (XGMII/SGMII). This enables the SFP to handle 10GBASE-T/1000BASE-T links while maintaining a 10Gbps serial speed on the optical signaling side. The connected host unit must support the XGMII interface to automatically utilize the module 10GBASE-T/1000BASE-T functionality. If the host does not support the XGMII, bit rate settings must be performed from the OC-2T-ETH motherboard.

### Absolute Maximum Ratings

Absolute maximum ratings are those values beyond which functional performance is not intended, device reliability is not implied, and damage to the device may occur.

Parameter	Minimum	Maximum	Unit
Storage temperature (non-operating)	-40	+85	°C
Relative Humidity (non-condensing)	5	95	%
Supply voltage (Vcc)	-0.5	3.6	V
Control input voltage	-0.5	Vcc	V

### Recommended Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Case operating temperature:	-5		+70	°C
Relative Humidity (non-condensing)	5		90	%
Supply voltage (Vcc)	3.14	3.3	3.46	V

### Electrical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Supply current			800	mA
Power dissipation			2600	mW
Data rate	1		10	Gbps

Norwia AS  
Kilgata 12  
3217 Sandefjord  
Norway

Contact:  
phone: +47 33 45 20 90  
e-mail: [info@norwia.no](mailto:info@norwia.no)  
web: [norwia.com](http://norwia.com)

