



OTEN-131-H-SA

10/100 BASE-T STAND ALONE SINGLE FIBER MEDIA-CONVERTER

INSTRUCTION MANUAL

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SAFETY WARNINGS

LASER RADIATION



The laser transmitters emit invisible radiation that can cause permanent eye damage. ***AVOID DIRECT EXPOSURE TO BEAM.*** Operate only with the proper optical fiber installed in the transmitter optical connector.



1 Brief Description

Fast Ethernet is the best choice in building LAN and WAN topologies with its high performance/price ratio. But UTP transfer distance is below 100 meters, longer distance transmission requires optical fiber, so the media converter is the bridge between electric and optical signal transfer.

OTEN series optical fiber media converters include desktop series and standard 19" rack series units. Both units are fully compliant with IEEE 802.3 and IEEE 802.3u standards. The fiber port uses an SC connector and the UTP port uses a standard RJ-45 connector. Both units can work in full or half duplex mode automatically and 10Base-T or 100Base-T automatically. Single wavelength BiDi media converters can transfer a signal in two directions with only one wavelength and one fiber, thus saving fiber and wavelength resources.

2 Model Description

OTEN-131-H-SA	Stand-alone; single optical fiber (BiDi) media converter
OTEN-231-H-SA	Single; optical fiber (BiDi) plug-in module media converter
OTEN-200-CH-16A	19" Rack for OTEN-231-H-SA plug-in modules

3 Features

- Fully compliant IEEE 802.3 and IEEE 802.3u standards
- Auto-negotiation ability to select half/full duplex and 10Base-TX/100Base-TX
- Support IEEE 802.3x flow control for full duplex mode
- Support backpressure flow control for half duplex mode
- 6 diagnostic LEDs for Power, TX link/act, FX link/act, transfer speed, duplex mode and collision
- Mode switch to set the converter to any operational mode
- Supports auto MDI/MDIX
- UTP connectivity up to 100 meters
- 19" rack with up to 16 plug-in media converter modules
- Fiber connectivity up to 100km (SM)
- Wavelength: 1310nm, 1550nm and CWDM wavelengths
- MTBF >100000 hours

4 Specifications

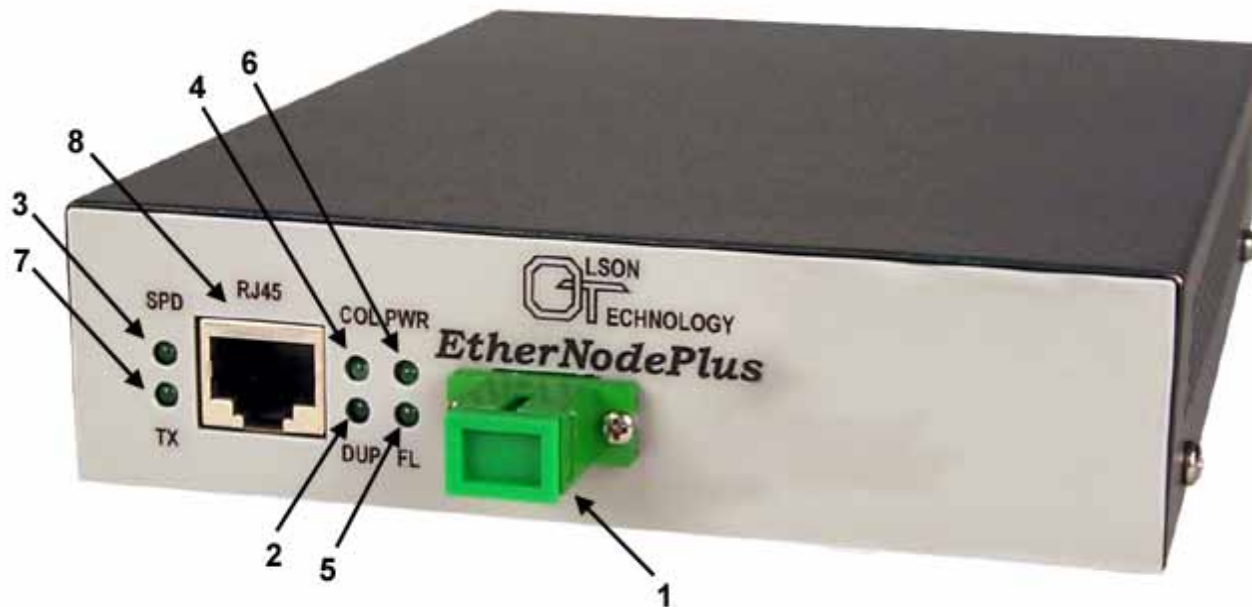
Model OTEN-	Mode	Wavelength	TX Power (dBm)		RX Sensitivity (dBm)			Transmission Distance
			Min.	Max.	Max.	Typ.	Sat.	
131-H-SA	SM	1310nm	-15	-10	-34	-35	0	0~40Km
231-H-SA	SM	1310nm	-15	-10	-34	-35	0	0~40Km

Note: Transmission distance is estimated data according to standard fiber loss

4.1 General Specifications

Items	Specifications
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 65°C
Humidity	5% ~ 95% (non-condensing)
BER	< 10 ⁻⁹
Power Requirement	< 5W
Dimension	170mm x 130mm x 34mm
MTBF	> 100000 hours
Optical Fiber Connector	SC/APC

4.2 Panel Layout



Item	Name	Description
1	Fiber Connector	Optical signal input & output port
2	DUP: FDX/HDX	Bright for FDX, Dark for HDX
3	SPD: Speed Indicator	Bright for 100Mbit, Dark for 10Mbit
4	COL: Collision Indicator	Bright for collision, Dark for no collision (Flashing when 10Mbit signal connecting with 100Mbit)
5	FL: Fiber Connection Indicator	Light for normal fiber connection, Dark for no optical signal, Flashing means data transmitting
6	PWR: Power Indicator	Bright for power-on, Dark for power-off
7	TL: Electric Connection Indicator	Bright for normal electric connection, Dark for no Electric connection, Flashing for data transmitting
8	RJ-45 UTP Connector	For connecting to switch or computer

4.3 Operation Mode Selection

The OTEN-131-H-SA Series Optical Fiber Converter’s operation mode is controlled by a set of DIP switches (Located underneath the “Mode Switch” sticker on the bottom of the unit). The configuration for these switches are as follows:



Mode	1	2	3	4
Auto-Negotiate	OFF	ON	ON	OFF
FDX 100Mbit	ON	ON	ON	OFF
FDX 10Mbit	ON	OFF	ON	OFF
HDX 100Mbit	ON	ON	OFF	OFF
HDX 10Mbit	ON	OFF	OFF	OFF

Note: Default mode is Auto-Negotiate. The operation mode adjustment will only be effective after power cycling the unit