



**WizSD**



# WSD-2/TXO and RXO

## A Wiz-Lite Product

- Fast Ethernet **single-direction** transparent converters - **Network Diodes** for data transfers from/to secured sites
- Approved by the Israeli National Information Security Authorization (**NISA**). 
- **CIP** device, **TXO** - Transmit only and **RXO** - Receive only
- Pure HW unbreakable solution for single-direction data transfer, compatible with standard 100Base-TX and 100Base-FX link partners
- Suitable for single-direction data streaming and UDP traffic as well as TCP based protocols or raw files transfers operated by any third-party unidirection SW application
- Local or remote over F/O link in the range of 0-100Km
- Fully transparent 3R conversion
- Auto-negotiation, auto MDI and force modes
- Enhanced Link Verification features:
  - > Propagation Of No Link (PONL)
  - > Far end-Fault Indication (FEFI)
- Available for indoor, outdoor and industrial environments
- Desktop, DIN rail and wall mounting options
- External wide-range power supply

The WSD-2/TXO and WSD-2/RXO are unique single-direction “Transmit Only” and “Receive Only” full featured Fast Ethernet transparent converters providing 3R (Retiming, Reshaping and Regeneration) conversion between 100Base-TX copper media and 100Base-FX fiber media in compliance with IEEE802.3u standards.

Designed and approved for Critical Infrastructure Protection (CIP) applications, the WSD-2/TXO provides fully secured copper to fiber single-direction data transfer over single or dual fiber connection to a standard 100Base-FX link partner, whereas the WSD-2/RXO provides fully secured fiber to copper single-direction data transfer over dual fiber connection to a standard 100Base-FX link partner. Protection of the two sites is achieved using a pair of WSD-2/TXO and WSD-2/RXO connected back to back over single fiber in the range of (0-100Km).

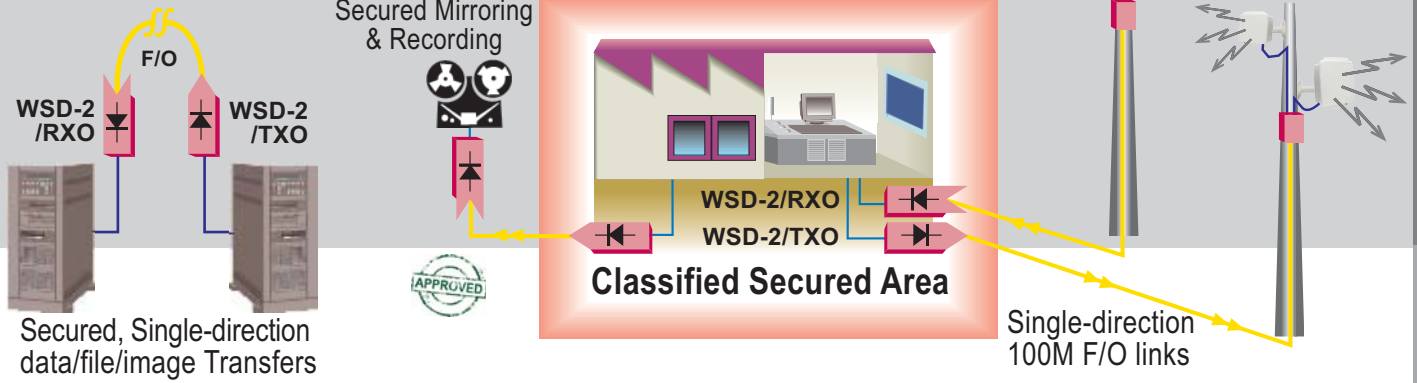
Using standard bi-directional 100Base-TX connection with their copper link partners, the WSD-2/TXO and WSD-2/RXO unique technology enables single direction transfer over the fiber link respectively. Data transfer in the opposite direction is completely blocked by both the TXO and RXO HW circuitry.

The converters support auto MDI/MDI-X, auto-negotiation (A/N) or manual selection of FDX / HDX mode on the TX and FX ports and enhanced link verification features: FEF (enable/disable) and PONL (propagation of no link). The WSD-2 is a plug & play device with simple DIP switch configuration and enhanced LED indications that assures fast & easy installation, operation and maintenance.

The fiber ports are available for multimode (MM) or singlemode (SM) fibers and SC or ST connectors with distance support up to 100Km. The WSD-2 is available for indoor, outdoor (/ETR) and industrial (/IND) environments and desktop, DIN rail or wall-mount installations.



## Typical Configuration



## Technical Specifications

### WSD-2/TXO or RXO Single-Direction Enhanced 100M Converter

#### 100Base-TX Copper TP port (RJ45)

100Base-TX, auto-negotiation or manual (speed, duplex)  
Auto MDI/MDIX and polarity  
100meter (330 ft) distance over CAT5 or above TP cables

#### 100Base-FX Fiber Optic Port

Dual fiber type (MM range 0-2Km; SM rang 0-100Km):  
Multimode (MM) 1310nm Connectors: SC, ST  
Singlemode (SM) 1310/1550nm Connectors: SC, ST

#### LED Indicators

POWER - Power "ON" indication  
LINK/ACT - Link/Activity indication, LED per port  
FDX - Full duplex operation, LED per port  
COL - Collision indication, LED per port  
A/N - Operation in A/N mode, only for copper port

#### Setup Options (via external DIP switch)

Copper (TX) port: A/N or Manual (force) mode  
FDX(full duplex) or HDX(half duplex) if in Manual mode  
Link Verification: FEF On or Off (not applicable in this model)  
PONL Off or F2C (fiber to copper)  
PONL Off or C2F (copper to fiber)  
Reset: RESET or NORMAL (reset to activate setup change)

#### Technology

Pure HW based single direction physical layer 3R transparent repeater (Retiming, Reshaping and Regeneration)  
Fully transparent, supports any frame length

#### Standard Compliance

IEEE802.3u

#### Environment



	Standard	ETR	IND
Operating Temp (°C):	0 to +45	0 to +60	-20 to +70
Operating Temp (°F):	32 to 113	32 to 140	-4 to 158

Storage: -40 to +85°C (-40 to 185°F)  
Humidity: 10% to 90% non-condensing

#### Safety and Emission

CE, FCC part 15, EN60950

#### Power

DC input: 5VDC, 0.5A max. consumption, polarity:   
External wide-range switching power adaptor (EPS)  
AC input: 90 - 264 VAC 50/60Hz (14 Watts max.)  
DC output: 5VDC 1-2 Amp regulated, polarity: 

#### Module Dimension

WSD-2

#### Height

94.5mm(3.8")

#### Width

78.5mm(3.1")

#### Depth

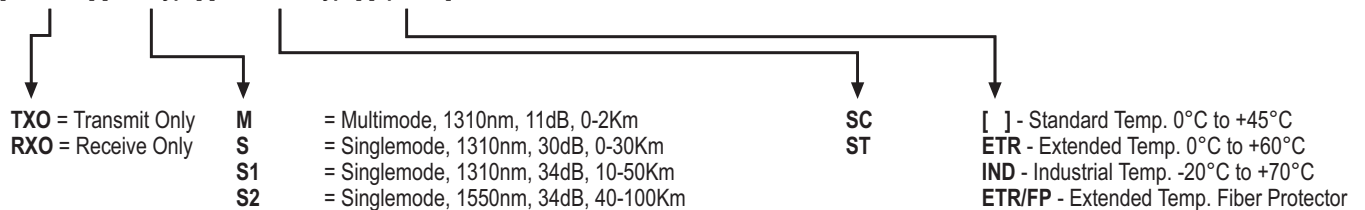
27mm(1.06")

## Ordering Information

WSD-2/\_\_\_/\_\_\_/\_\_\_ 100Base-TX to 100Base-FX [direction] transparent A/N converter [fiber type], [connector type], [option], inc. EPS

## Ordering terminology

WSD-2/[direction]/[fiber type]/[connector type]/[options]



Note: for other fiberoptic distances and/or connectors please contact WizLAN representative

Example: **WSD-2/TXO/S/ST** 100Base-TX to 100Base-FX transmit only transparent A/N converter (SM, 1310nm, 30dB, 0-30Km, ST) inc. EPS

All specifications are subject to change without notice. Neither manufacturer nor seller shall be liable for any loss, damage or injury, direct or consequential, arising from the inability to use the product.