

### 1Gbit Ethernet to Fiber Transceiver

#### Description

The OET 5501 is a 3 port Ethernet switch designed to extend the reach of electrical Ethernet signals over long distances using a constant (fixed) high speed 1Gbit optical connection.

The OET 5501 can be paired with another OET 5501, the yellobrik OET 1510 or any other IEEE compliant Ethernet switch with a fiber interface. When paired with one of these devices using two fiber cables, the OET 5501 will provide a stable, high speed 1Gbit error free optical connection between distant locations.

The OET 5501 has two standard RJ45 electrical Ethernet ports plus fiber I/O and functions as a 3 port Ethernet switch. For legacy system use; each electrical Ethernet port can be set for automatic speed detection (10/100/1000) or forced to 10Mbit,

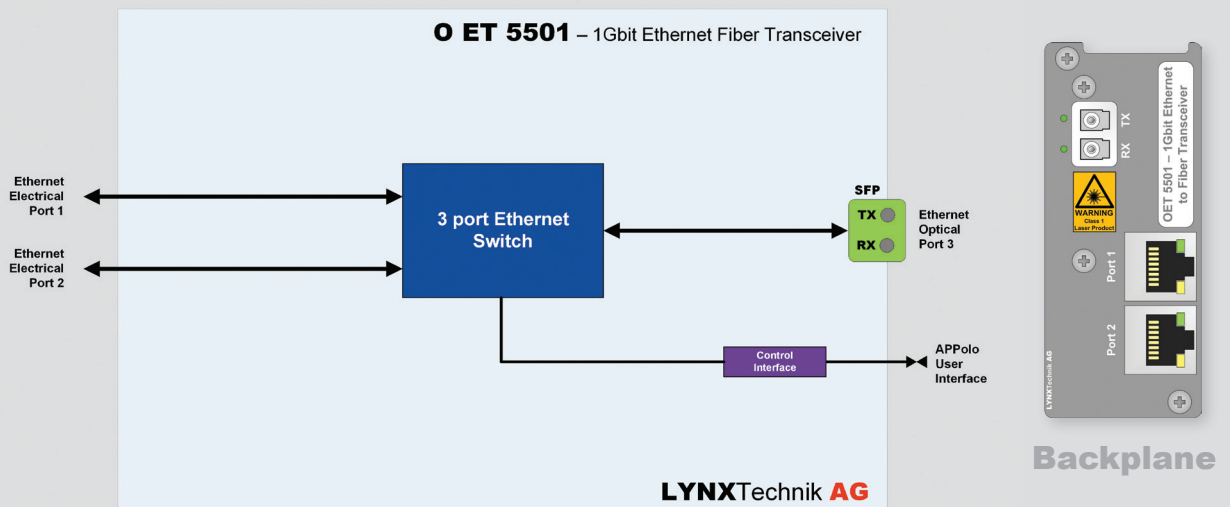
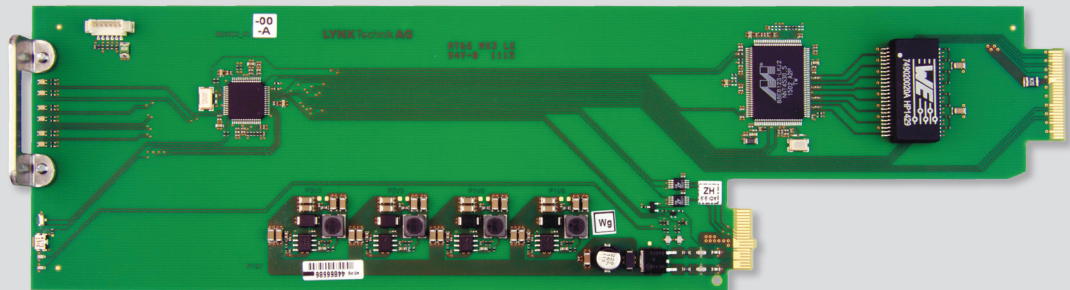
and each port can use automatic crossover detection, or be forced manually if needed. These functions are available via the APPolo control system.

A variety of optional SFP fiber sub modules are available (including singlemode and multimode fiber plus CWDM fiber with 18 wavelength selections) this allows the module to be used in multiple applications.

Full remote control and status monitoring, (including the available optical input budget) are possible when using the APPolo control system.

#### Features

- Support for standard Ethernet inputs up to 1 Gbit
- 3 port Ethernet switch (1 fiber, 2 electrical)
- Support for Jumbo Frames
- Auto (10/100/1000) electrical port speed detection
- Manually force 10 Mbit electrical speed (if needed)
- Fiber transceiver speed always 1 Gbit
- Auto or manual electrical crossover selection
- Remote control, status monitoring and error reporting possible when used with APPolo control system.
- Hot Swappable
- Variety of fiber SFP Transceiver options
  - Standard singlemode up to 10km (1310nm)
  - Standard multimode up to 550m (850nm)
  - CWDM 40km with 18 wavelength selections
  - CWDM 80km with 8 wavelength selections



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#### Specifications

| Ethernet (electrical)     |  |
|---------------------------|--|
| Signal Type               | 10 BaseTUTP category 3, 4 or 5 cable up to 328ft/100m (2 pairs)<br>100 BaseTUTP category 5 cable up to 328ft/100m (2 pairs)<br>1000 BaseTUTP category 5 cable up to 328ft/100m (4 pairs) |
| Number of Ports           | 2  |
| Connector                 | RJ45   |
| Bit Rates                 | Auto detect bit rate (10/100/1000), or force to 10Mbit for each port (selectable)  |
| Crossover                 | Automatic crossover detection or force manually for each port (selectable)   |
| Indicators                | Port speed / activity LED indication next to Ethernet port and on board edge   |
| Optical I/O               |  |
| Inputs / Outputs          | 1x fiber optic input (RX)<br>1x fiber optic output (TX)  |
| Connection                | LC connector (Duplex)  |
| Compatibility             | IEEE 802.3z<br>1000BASE-X Gbit/s Ethernet over Fiber at 1 Gbit/s (125 Mb/s)  |
| Indicators                | Fiber TX active and RX active LEDs next to fiber connections and on board edge   |
| Fiber Options             | Refer to table   |
| Electrical Specifications |  |
| Operating Voltage         | 12 VDC   |
| Power Consumption         | 5.5W   |
| Safety                    | IEC 60950 / EN 60950 / VDE 0805  |
| Mechanical                |  |
| Size                      | 283mm x 78mm (11.14" x 3.07")  |
| Weight                    | Each CardModule 120g, (4.2oz) connector plate 80g (1.8oz)  |
| Ambient                   |  |
| Temperature               | 5°C to 40°C (41°F to 104°F) Maintaining specifications   |
| Humidity                  | 90% Max non condensing   |

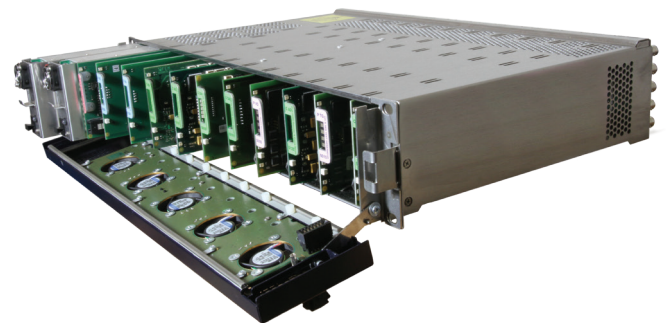
Specifications subject to change

#### Settings and Control

| APPolo Control System |  |
|-----------------------|--|
| GUI Controls          | - Manual speed force to 10Mbit per electrical port<br>- Manual crossover per electrical port<br>- Ethernet activity and speed indication per electrical port<br>- Optical input power indication                             |
| LEDs                  | - General Status LED (indicates the general status of the I/O signals (visible through the rack frame front cover)<br>- TX and RX fiber activity<br>- Ethernet activity and speed for each individual port<br>- Power status |

#### Fiber Options

| APPolo Control System |   |
|-----------------------|---|
| OH-TR-51              | <b>Singlemode non CWDM:</b> Optical Ethernet Transceiver.<br>TX wavelength 1310nm, power -3dBm.<br>RX input range 1260nm to 1620nm, sensitivity -3dBm to -21 dBm<br>Max distance 10km (6.2 miles)   |
| OH-TR-50-850-MM       | <b>Multimode non CWDM:</b> Optical Ethernet Transceiver.<br>TX wavelength 850nm, power -2dBm to -7dBm<br>RX input 850nm, sensitivity 0dBm to -15 dBm<br>Max distance 550m (1804 feet)   |
| OH-TR-54-XXXX         | <b>Singlemode CWDM:</b> Optical Ethernet Transceiver.<br>XXXX designates wavelength. Select from 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610nm.<br>TX power -1dBm.<br>RX input range 1260nm to 1620nm, sensitivity 0dBm to -21 dBm<br>Max distance 40km (12.4 miles) |
| OH-TR-58-XXXX         | <b>Singlemode CWDM:</b> Optical Ethernet Transceiver.<br>XXXX designates wavelength. Select from 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610nm.<br>TX power -1dBm.<br>RX input range 1260nm to 1620nm, sensitivity 0dBm to -24 dBm<br>Max distance 80km (24.8 miles)   |



#### Ordering Information

| Model #         | Description   | Includes   |
|-----------------|---|--|
| O ET 5501       | 1Gbit Ethernet to Fiber Transceiver                                   | CardModule, rear termination panel, mounting screws + reference manual on CD |
| OH-TR-51        | <b>Option:</b> Fiber Data Transceiver singlemode 1310nm / 10km        | SFP module   |
| OH-TR-50-850-MM | <b>Option:</b> Fiber Data Transceiver multimode 850nm / 550m          | SFP module   |
| OH-TR-54-XXXX   | <b>Option:</b> Fiber Data Transceiver CWDM (XXXX = wavelength) / 40km | SFP module   |
| OH-TR-54-XXXX   | <b>Option:</b> Fiber Data Transceiver CWDM (XXXX = wavelength) / 80km | SFP module   |