

## Safety and Warning Information



Aside from the power supply module, only **one** additional module (Ethernet Switch, Ring Switch or Ethernet Switched Media Converter) may be connected to the module's Interconnection Bus.



Connect the DIN Rail via the End Clamp (2A09) to protective earth ground with low impedance. The modules are grounded to PE when they are snapped onto the DIN Rail.



When in operation, do not look directly into the transmit optical port or use magnification or focusing equipment to view optical output.

IEC 60825-1, Class 1 LED Product  
FDA 21 CFR 1040.10 & 1040.11

**CAUTION:** Use of controls and/or adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.



When used in Hazardous Locations:  
Class I, Division 2, Groups A, B, C & D, T4.  
Substitution of components may impair suitability for Class I, Division 2. Power, input and output (I/O) wiring must be in accordance with Class I, Division 2 wiring methods and in accordance with the authority having jurisdiction. Do not connect/disconnect equipment unless area is known to be non-hazardous and power is switched off. Certified components for use in a suitable enclosure. The maximum ambient temperature is 85°C.



## 2E58

EOTec 2000 Ethernet  
Switched Media Converter  
Expansion Module

## Installation Instructions



*Important Notice* - Before utilizing the product, the user should determine the suitability of the product for its intended use. The user assumes all risk and liability in connection with such use. WEED INSTRUMENT'S WRITTEN WARRANTY FOR THE PRODUCT IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. The user's exclusive remedy for breach of Weed Instrument's written warranty shall be the repair or replacement of such quantity of product which is proven to be defective. In no case shall Weed Instrument be liable for any special, incidental, or consequential damages based upon breach of contract, negligence, strict liability or other legal theory.

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<b>Ethernet Standards:</b>	IEEE 802.3(U)(X)
<b>Ethernet Protocols:</b>	All 802.3 supported
<b>Ports</b>	
<b>Fiber Port:</b>	100Base-FX, 1300nm, Single-Mode, SC
<b>RJ45 Port:</b>	10/100Base-T(X)
<b>Bus Port:</b>	100Base-TX
<b>Module Power Input:</b>	7.5Vdc @ 500mA via the integrated Interconnection Bus

## Operational Settings

Little or no user configuration and no supervisory processors are required, once connections are made, the unit will immediately begin operating. The data rates are automatically negotiated and the ports will auto-sense Full or Half duplex operation. The unit will automatically learn the addresses of the devices connected to each port (up to 1024) and will buffer and route messages accordingly. Each port has 205 buffers of 128 bytes each. Broadcasts/Multicasts will be sent out all but the source port and are limited to 25% of the available bandwidth.

The unit supports flow control frames on both transmit and receive. Illegal frames per IEEE 802.3 will be dropped. Packets experiencing 16 collisions or late collisions (after 512 bit times) will also be dropped.

## DIN Rail Mounting

### Installation on DIN rail:

Place the top lip of the module's DIN rail mounting channel onto the DIN rail. Push the lower portion of the module towards the mounting surface until it "clicks" and locks into place. Firmly slide the modules together such that the module sides are touching. This ensures a good connection of the integrated Interconnection Bus at the rear of the modules. Install End Clamps (Model 2A09) to both sides of the module stack to prevent accidental unplugging of the bus interconnections. The End Clamps also provide convenient screw terminals for connecting the DIN rail to protective earth ground.

### Removal from DIN rail:

Remove the End Clamps from the module stack. Disconnect the Interconnection Bus by sliding the modules at least 1/2" apart on the DIN rail. Insert a screwdriver into the rectangular hole in the metal mounting latch at the bottom of the module. Pushing up on the screwdriver's handle causes the latch to move downward and disengages it from the DIN rail. Tilt the module up and lift it off of the DIN rail.

## Connections

### Power:

Power to the unit is supplied from the module's integrated Interconnection Bus typically from a compatible EOTec 2000 Power Supply and/or 2104 Ring Switch Module.

### Interconnection Bus Port:

At this port, one additional EOTec Ethernet product can be connected to assist in forming star and/or daisy chain network configurations.

### Ethernet:

The front panel RJ45 connector is shielded and employs an auto-crossover circuit such that either a straight-through or cross-over cable may be connected. Shielded, data-quality, category 5 cable is recommended. The typical maximum cable length is 328ft (100m).

### Fiber:

The fiber ports, labeled TX (transmit) and RX (receive), are compatible with most single-mode fibers terminated with SC connectors. Fiber links are connected to the ports TX to RX and RX to TX. The maximum length for each fiber link is typically 9.3mi (15km).

## LED Indicators

PWR (Power): Green - On with power connected

ACT (RJ45): Green - Off with no connection  
On with proper link  
Flashes with link activity

100 (RJ45): Amber - Off at 10Mbps  
On at 100Mbps

OPT/ACT  
(Fiber Port): Green - Off with no connection  
On with proper RX link  
Flashes with link activity

BUS/ACT  
(Bus Port): Green - Off with no connection  
On with proper link  
Flashes with link activity

## Specifications/Compliances

Ethernet Standards:	IEEE 802.3(U)(X)
Ethernet Protocols:	All standard IEEE 802.3
Ethernet Isolation:	1200VRMS (1 minute)
Wire Ethernet Ports Shielded RJ45:	Auto 10/100Base-T(X), Auto full/half-duplex, Auto crossover
Interconnect Bus:	100Base-TX, Full-duplex
Wire Cable Length:	328ft/100m
Power Requirements:	Via Interconnection Bus from a compatible EOTec 2000 Power Supply Module or 2104 Ring Switch Module, 7.5Vdc at 500mA
Fiber Ethernet Ports:	
Connection:	SC Compatible
Data Rate:	100Base-FX, Full-duplex
Wavelength:	1300nm
Power Out:	-15dBm (9µm fiber)
Receive Sensitivity:	-31dBm (9µm fiber)
Distance (typical):	9.3mi/15km
Fiber Type:	Single-Mode, 5 to 10µm fiber core diameter

Operating Range  
Temperature: -40 to 85°C  
Relative Humidity: 0 to 95%  
(non-condensing)

Flammability: UL 94V-0

Hazardous Locations: Class I, Division 2,  
Groups A, B, C & D, T4