

Features

- Ideally suited for backhauling Ethernet data from remote locations
- Works out of the box with no configuration required
- Most compact Ethernet switch in the industry
- Four auto-negotiating 10/100BaseT ports provide direct interface to the CX3001 for remote hub monitoring
- Two 100BaseFX optical ports (enabled with SFP plug-in transceivers) provide flexibility for daisy-chaining over long distances
- Occupies one half-depth slot
- Hot plug in/out

Ethernet Switch



Aurora's EX3005 managed Ethernet Switch is a five-port, single-width, half-depth module for the CH3000 Chassis. With an enhanced operating temperature range, this module is ideally suited for backhauling Ethernet data from non-temperature controlled locations such as an OTN. Four auto-negotiating 10/100BaseT interfaces (via RJ-45 ports) provide a direct interface to the CX3001 Communications Module for remote hub monitoring as well as other third party monitoring equipment. Two 100 Mbps optical links (via plug-in transceivers) provide flexibility for daisy-chaining over long distances. (The fourth Fast Ethernet RJ-45 port is disabled whenever the first of the two optical ports is populated with a plug-in transceiver.)

One application of the EX3005 is for backhauling Ethernet management traffic from a remote hub site to the headend location for complete network visibility. Additional benefits include an Ethernet point of presence at each EX3005 location, providing the capability of a 5-port Fast Ethernet managed switch as well as possible long haul extension using the secondary fiber port. Utilizing Aurora's extensive optical WDM product line, it is possible to share an existing fiber to transport this Ethernet traffic.

To simplify installation, the EX3005 will work immediately out of the box with no configuration required. Additional configuration may be applied to unlock the advanced management features of the module.

Physical:

- Dimensions: 6.5" D x 4.3" H x 1.0" W (3RU) (16.5 cm x 10.9 cm x 2.5 cm)
- Weight: 1.0 lb (0.45 kg)

Environmental:

- Operating temperature range: -20° to +65°C (-4° to 149°F)
- Storage temperature range: -40° to +85°C (-40° to 185°F)
- Humidity: 5% to 95% non-condensing

Power Requirements:

- Input voltage (from chassis mid-plane): 12 V_{DC} (450 mA)
- Power consumption: 5.4 W

General:

- Hot plug-in/out
- Optical interface: LC duplex (on pluggable SFP transceivers)
- Optical transmission bit rate: 125 Mbps

Switch Ports:

- Ports 1 – 3: Auto-negotiating 10/100BaseT or 10/100 configurable, full duplex, with RJ-45 connectors
- Port 5: Forced 100BaseFX with SFP plug-in transceiver
- Port 4: Same as Ports 1–3 if no plug-in transceiver populates first optical port; same as Port 5 if plug-in transceiver populates first optical port

Note

"Port 4" is logically or'd between the last of the four RJ-45 ports and the first of two plug-in transceiver optical ports. Detection of the presence of a transceiver will normally cause allocation of this port to the optical transceiver, although the assignment can be manually forced to either a 10/100BaseT connection at the fourth RJ-45 connector or a 100BaseFX connection at the first transceiver location.

Optical:

The two optical ports can be populated with a variety of 125 Mbps (Fast Ethernet SFP (plug-in) transceivers depending on the network application. Please refer to the appropriate data sheets for the

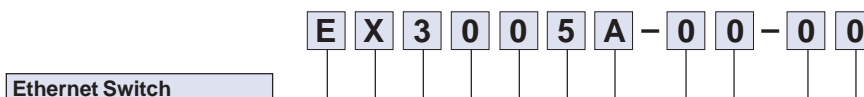
selected transceivers for detailed specifications. Following is a summary of available transceiver options (model numbers and brief descriptions) for these ports.

- TFA1310-TL29 (transmit at 1310nm, 29 dB link budget, duplex LC connector)
- TFA1310-TF17 (transmit at 1310nm, 17 dB link budget for links up to 20 km over SMF or up to 4 km over MMF, simplex SC/UPC connector)
- TFB1550-TF17 (transmit at 1550nm, 17 dB link budget for links up to 20 km over SMF or up to 4 km over MMF, simplex SC/UPC connector)
- TFCxxxx-TL29 (transmit at CWDM wavelength of xxxx = 1430, 1450, 1470, . . . , 1610 nm; 29 dB link budget; duplex LC connector)

Front Panel Status Indicators and Controls:

- "Status" LEDs:
 - Green = OK
 - Yellow = non-service-affecting alarm (or alarm history present)
 - Red = service-affecting alarm
- Blue "Access" LED: Communications with chassis mid-plane
- RJ-45 port status indicators (2 green LEDs per port):
 - 10M / Activity: Illuminated if active link, blinks on activity
 - 100M / Activity: Illuminated if active link, blinks on activity
- Plug-in transceiver port status indicators (separate TX and RX LEDs for each port):
 - TX: Illuminated if valid SFP ID detected and transmission OK
Blinks if invalid SFP
Off if transmission fails
 - RX: Illuminated if local and remote reception OK
Blinks if remote reception fails
Off if LOS condition occurs
- Recessed RESET pushbutton: Resets the module if depressed 8–15 seconds; restores default factory configuration if depressed >15 seconds

Ordering Information

**Transceiver Plug-in Modules**

SFP modules must be ordered separately. Please refer to the above list of available transceivers and appropriate data sheets for specific complete model numbers and ordering information.

**Corporate Headquarters**

5400 Betsy Ross Drive
Santa Clara, CA 95054
Tel 408.235.7000
Fax 408.845.9045