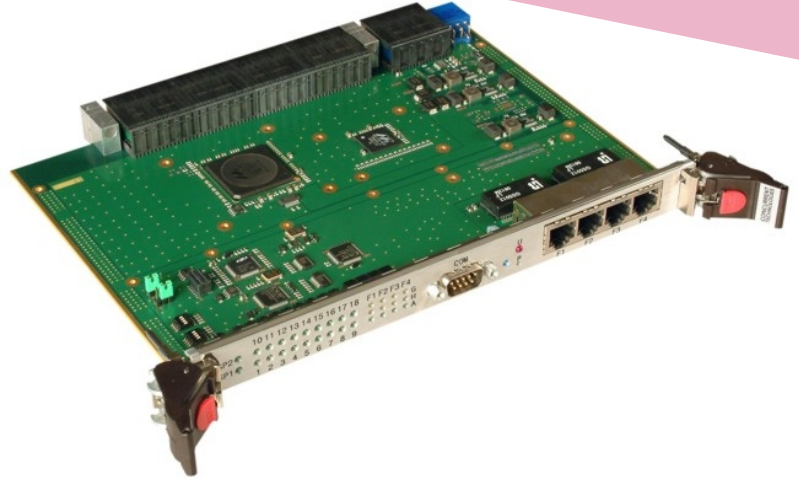


## 1000Mbps (IEEE 802.3) VITA 41.3 Ethernet Switch Board



### APPLICATIONS

The FX 210/01x is an entry-level 1000Mbps baseband IEEE 802.3 Switch Board for use in VXS VITA 41.3 Switched Serial Backplane environments. It supports up to eighteen payload boards, an inter-switch port for linking to a second switch, and for user connections, up to four front panel Ethernet interfaces. It offers high speed, full line rate Layer 2 switching fabric on all ports. Quality of Service (QoS) operation is

supported with four priority queues and a variety of traffic classes for time-critical and multimedia traffic. Typical applications include networking equipment, voice over IP (VoIP) telephony systems, data management and blade-based servers in vertical markets such as defense, communications, medical and automation.

### HIGHLIGHTS

- 22 or 24-port VITA 41.3 switch board:
  - compatible with VXS Switched Serial Backplane
  - 18 x 1000Mbps baseband IEEE 802.3 backplane ports for payload boards
  - inter-switch port for switch board interconnect
  - 2 or 4 front panel interfaces
- Front panel interface options for either:
  - 4 x front panel 10/100/1000Mbps Ethernet ports
  - or:
  - 2 x front panel optical fiber ports
- Low cost, low power, high performance switch:
  - full line rate Layer 2 switching engine
  - supports up to 8K MAC addresses with automatic learning and ageing
- Link/Activity status LEDs on all ports
- Terminal interface for operator setup
- Fabric Switch Configuration software
- Non-volatile EEPROM storage for:
  - board configuration data
  - Ethernet switch configuration data
- Hardware support for Quality of Service (QoS):
  - 4 priority queues per port
  - variety of classification services
  - fixed priority or weighed packet streams
- Extended temperature versions available:
  - -25°C to +70°C (E-Series)
  - -40°C to +85°C (K-Series)

## Ethernet Switch

- 22 or 24-port VITA 41.3 switch board:-  
→ for use with VXS Switched Serial Backplanes
- high performance IEEE 802.1 switch:-  
→ implemented by Marvell® Prestera™ 98DX240 single-chip switch  
→ full line rate Layer 2 switching engine  
→ 8K MAC address cache with automatic learning and aging
- EEPROM storage for user configuration data

## Backplane Interfaces

- compatible with VXS 1000Mbps Switched Serial Backplanes:-  
→ conforms to the relevant sections of VITA 41.3  
→ supports geographic address (GA) on P1
- 18 x 1000Mbps baseband IEEE 802.3 backplane links for payload boards
- inter-switch port for linking between two switch boards:-  
→ using 2 x 1000Mbps baseband IEEE 802.3 links

## Front Panel Interfaces

- option for Ethernet user ports:-  
→ 4 x RJ45 connectors @ 10/100/1000Mbps  
→ 2 x SFP LC optical connectors @ 1000Base-SX with multimode optical fiber
- Link/Activity LEDs for all VXS backplane IEEE 802.3 ports
- Speed and Link/Activity LEDs for all user Ethernet ports
- reset switch (recessed)
- RS232 serial port for configuration and setup

## System Management

- configuration and setup interface:-  
→ implemented by microcontroller  
→ operator controlled via front panel serial port  
→ configuration data retained in EEPROM
- Fabric Switch Configuration software:-  
→ see separate SW FSC/001 datasheet

## Quality of Service (QoS)

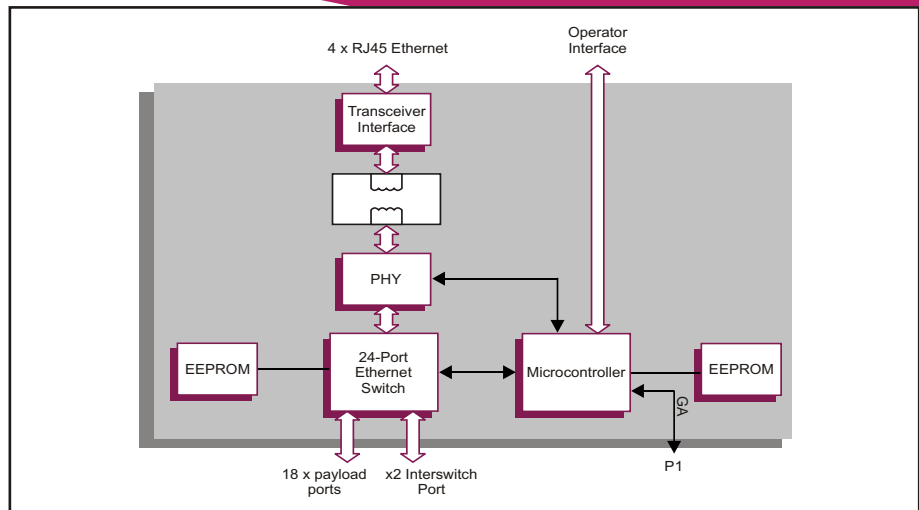
- prioritized packet streams for management of voice, video and data
- 4 hardware priority queues per port
- fixed priority or weighted fair queuing
- QoS traffic classification, determined by:-  
→ port ID  
→ IEEE 802.1p multimedia traffic tags  
→ IPv6 Traffic Class

## Electrical Specification

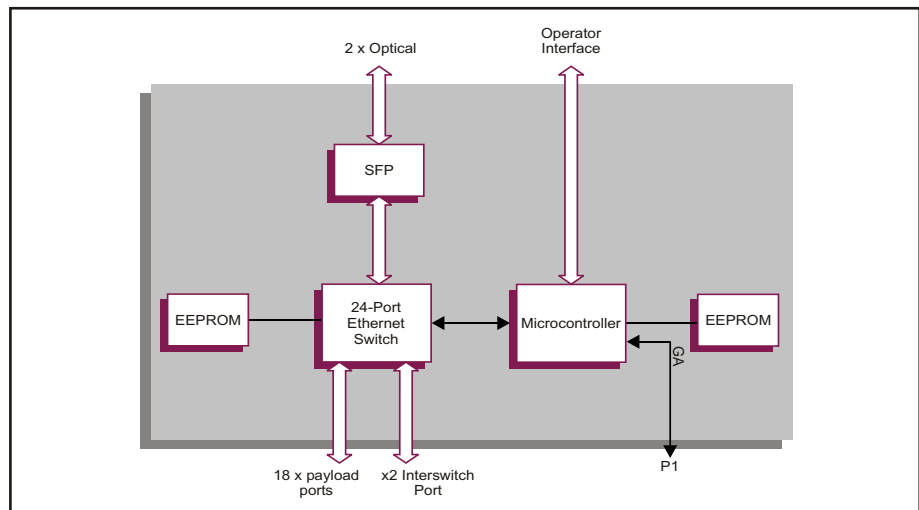
- +5V@1.9A (maximum, with 4 x RJ45 front panel connectors)
- +5V@1.3A (maximum, with 2 x SFP LC front panel connectors)
- voltage +5%/-3%
- +3.3V, +12V and -12V supplies are not required

## Safety

- PCB (PWB) manufactured with flammability rating of 94V-0



FX 210/018 with 4 x copper RJ45 front panel connectors



FX 210/018 with 2 x fiber LC front panel connectors

## Environmental Specification

- operating temperature:-  
→ 0°C to +55°C (N-Series)  
→ -25°C to +70°C (E-Series)  
→ -40°C to +85°C (K-Series, copper only)
- 5% to 95% Relative Humidity, non-condensing (operating):-  
→ K-Series includes humidity sealant
- -40°C to +85°C (storage)
- 5% to 95% Relative Humidity, non-condensing (storage)

## Mechanical Specification

- 6U form factor: 9.2 inches x 6.3 inches (233mm x 160mm)
- single slot: 0.8 inches (20.3mm)
- operating shock: 20g, 11ms, ½ sine
- operating vibration: 5Hz-2000Hz at 2g, 0.38mm peak displacement (operating);

## ORDERING INFORMATION

### Order Number Product Description (Hardware and Software)

FX 210/018-00	24-port 1000Mbps IEEE 802.3 Switch Board (18 backplane ports) with 4 copper 10/100/1000 Mbps Ethernet RJ45 front panel connectors
FX 210/018-10	22-port 1000Mbps IEEE 802.3 Switch Board (18 backplane ports) with 2 fiber 1000Base-SX SFP LC front panel connectors

SW FSC/001-L0 Fabric Switch Configuration Tool

For extended temperature, E or K-Series, please contact your local sales office