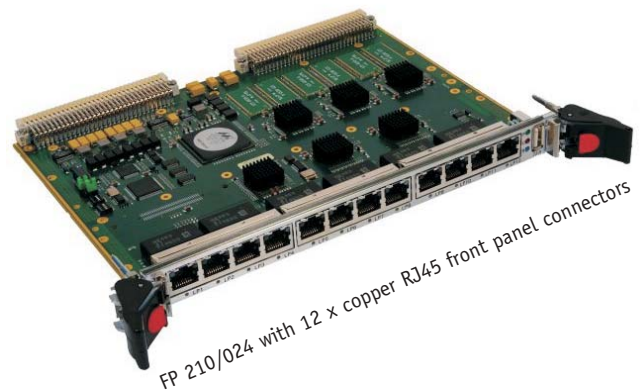


10/100/1000 Unmanaged Ethernet Switch Board



APPLICATIONS

The FP 210/024 is an entry-level 24-port 10/100/1000Mbps Ethernet Switch Board for use in a standard VME backplane. It supports up to twelve front panel connections and twelve connections to the rear. It offers high speed, full line rate Layer 2 switching fabric on all Ethernet ports. Quality of Service (QoS) operation is supported with four priority queues and a variety of traffic classes for time-critical and multimedia

traffic. Switch configuration and control is provided via a front panel RS232 port. The FP 210/024 is an excellent choice for a range of applications. Typical applications include networking equipment, voice over IP (VoIP) telephony systems and blade-based servers. Options to operate in temperatures ranging from -40°C to +85°C are available. Ruggedized conduction-cooled and ruggedized air-cooled versions are planned.

HIGHLIGHTS

- 24-port 10/100/1000Mbps Ethernet Switch Board:
 - 12 rear ports
 - supplied with either 12 front panel Ethernet ports via RJ45 connectors, or 8 RJ45 connectors and 2 front panel Gigabit Ethernet LC optical fiber connectors
- Low cost, low power, high performance switched fabric:
 - full line rate Layer 2 switching engine
 - supports up to 8K MAC addresses with automatic learning and aging
- Auto-negotiation on all Ethernet ports:
 - 1000Mbps full-duplex
 - 10/100Mbps full-duplex and half-duplex
- 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
- Configuration controlled via front panel RS232 port:
 - command-driven selections
- Extended temperature versions planned:
 - -25°C to +70°C (E-Series)
 - -40°C to +85°C (K-Series)
- Ruggedized versions planned:
 - conduction cooled and air cooled
- Single slot, VME64x form factor

Ethernet Switched Fabric

- 24-port or 22-port 10/100/1000Mbps Ethernet switch board:-
→ for use with VME64x compliant backplane and Rear transition module AD FP2/001
- high performance Ethernet 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
- auto-negotiation on all ports:-
→ 1000Mbps full-duplex
→ 10/100Mbps full-duplex and half-duplex

Ethernet Interfaces

- option for front panel Ethernet user ports:-
→ 12 x RJ45 connectors @ 10/100/1000Mbps
→ 8 x RJ45 connectors and 2 x SFP LC optical connectors @ 1000Base-SX with multimode optical fiber
- 12 x 10/100/1000Mbps Ethernet ports via P2
- Option to fit rear Ethernet magnetic interfaces onboard or on rear transition module
- 1 user LED
- 1 power indication LED
- reset switch (recessed)

Switch Management

- controlled via operator command interface:-
→ via front panel RS232 port (cable supplied)
→ configuration maintained in Flash EPROM
- Geographical Address (GA) available for slot position decoding

Quality of Service (QoS)

- supports 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 (+5%/-3%) @ 3.5A (typical, with 12 x RJ45 front panel connectors)
- +5V (+5%/-3%) @ 3.0A (typical, with 8 x RJ45 and 2 fiber LC front panel connectors)
- +12V, +3.3V and -12V supplies are not required

Safety

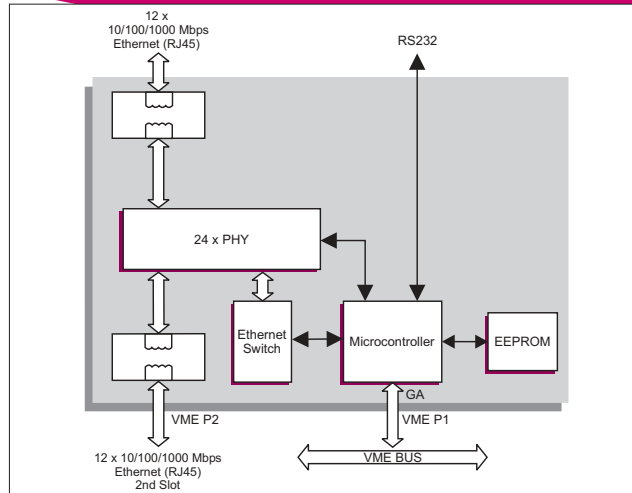
- PCB (PWB) manufactured with flammability rating of 94V-0

Environmental Specification

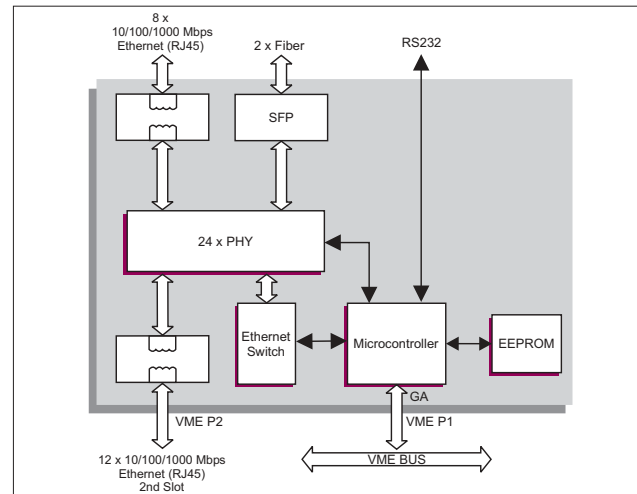
- operating temperature:-
→ 0°C to +55°C (N-Series)
→ -25°C to +70°C (E-Series)
→ -40°C to +85°C (K-Series)
- 5% to 95% Relative Humidity, non-condensing (operating or storage):-
→ K-Series includes humidity sealant
- -40°C to +85°C (storage)
- ruggedized versions planned:-
→ conduction cooled (RC-Series)
→ air cooled (RA-Series)

Mechanical Specification

- 6U form factor: 9.2 inches x 6.3 inches (233mm x 160mm)
- single slot: 0.8 inches (20.3mm)
- IEEE 1101.10 handles
- shock:
20g, 11ms, ½ sine (operating);
30g, 11ms, ½ sine (non-operating)
- vibration:
5Hz-2000Hz at 2g, 0.38mm peak displacement (operating);
5Hz-2000Hz at 5g, 0.76mm peak displacement (non-operating)



FP 210/024 with 12 x copper RJ45 front panel connectors



FP 210/024 with 8 x copper RJ45 and 2 x fiber LC front panel connectors

ORDERING INFORMATION

Order Number Product Description (Hardware)

FP 210/024-00	VME, 24-port Gigabit Ethernet Switch, 12 RJ45 front panel ports, 12 Ethernet ports via P2 (with magnetics)
FP 210/024-01	VME, 24-port Gigabit Ethernet Switch, 12 RJ45 front panel ports, 12 Ethernet ports via P2 (without magnetics)
FP 210/024-10	VME, 22-port Gigabit Ethernet Switch, 8 RJ45 and 2 fiber 1000 Base-SX SFP LC front panel ports, 12 Ethernet ports via P2 (with magnetics)
FP 210/024-11	VME, 22-port Gigabit Ethernet Switch, 8 RJ45 and 2 fiber 1000 Base-SX SFP LC front panel ports, 12 Ethernet ports via P2 (without magnetics)

AD FP2/001-23 VME RTM: 12 RJ45 front panel connectors (with magnetics), use with either FP 210/024-01 or FP 210/024-11

AD FP2/001-24 VME RTM: 12 RJ45 front panel connectors (without magnetics), use with either FP 210/024-00 or FP 210/024-10

CB 232/101-10 spare RS232 adaptor cable - USB style connector to 9-pin D-connector (this cable is included with the FP 210/024)

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