Industrial Managed PoE Switch with PoE Injector

CME-822
CME-822E

Features

High Performance Network Switching Technology
✔ Complies with IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.1p, IEEE 802.1q, IEEE 802.1d, IEEE 802.1w, IEEE 802.1x, IEEE 802.3ad, IEEE 802.3z
✔ Provides 8 x 10/100 Mbps Ethernet ports with RJ-45 connector
✔ Provides 2 x combo ports
✔ Embedded 8 ports PoE injector function classified as PSE
✔ Supplies 15.4 watts of power per port full load with PoE
✔ RJ-45 Port support auto MDI/MDI-X crossover
✔ Provides broadcast storm protection
✔ Redundant X-Ring recovery time < 10 ms on full load
✔ Supports Dual Homing – RSTP over X-Ring
✔ Supports Ring Coupling
✔ SNMP for network management
✔ IGMP snooping for multicast traffic
✔ QoS / ToS for network packet determinism
✔ VLAN for easy network planning
✔ Event notification by e-mail, SNMP trap, Syslog & Relay output

✔ Online Port Mirroring for online debugging
✔ Supports IP security
✔ Configurable by WEB browser
✔ IntraVUE Network Management software compatible

Robust Industrial Design
✔ Robust aluminum case complying to IP-30 housing standard
✔ Supports operating temperature -10 to 70°C & extended temperature -40 to 80°C
✔ DIN-Rail, panel mount or desktop installation
✔ High level of immunity to electromagnetic interference & power supply surges typically found in industrial plant environments or external curb side enclosures

Reliable Power Design
✔ Equipped with redundant power inputs
✔ Supports 48VDC redundant power with polarity reverse protection
✔ Removable terminal block

Overview

The Cobra CME-822 is a highly reliable and fault-tolerant Industrial 10-port Managed Power over Ethernet Switch. It supports eight PoE injector ports classified as power source equipment (PSE). CME-822 offers state of the art design with eight 10/100 Mbps Ethernet ports and two small form pluggable (SFP) ports that supports Gigabit SX or LC depending on your existing network structure. The innovative SFP fiber slot design provides user the flexibility to insert different fiber modules, either multi-mode or single-mode at various distances, whether you require typical 10km or overhaul 40 km, 80 km and 120 km distances. With its high performance switching device, CME-822 provides redundant self-recovery mechanism in less than 10ms on full load which allows you to establish a redundant Ethernet network to build a back-up ring topology. Dual Homing and Ring Coupling are supported to add reliability by allowing a device to be connected to be network by way of two independent connection points. CME-822 offers powerful network management functions including SNMP, SMTP, SNTP, QoS, Class of Service, IGMP, Snooping, LACP, DHCP, VLAN, RMON, Port Trunk, Port Mirror, User Authentication (Radius) and IP Security. The CME-822 is equipped with a terminal block to provide dual power inputs with reverse polarity protection. Its IP-30 housing protection, wide operating temperature of -10 to 70°C, the E version has wider temperature range of -40 to 80°C and DIN-Rail mounting is suitable for an industrial environment. The CME-822 is a plug-and-play solution for your Power over Ethernet applications.

Hardware Specifications

Interface
RJ-45 Ports: 8 10/100Base-TX auto-negotiation speed, Full/Half duplex, auto MDI/MDI-X

Fiber Ports: 2 combo ports

LEDs: Per unit - Power (Green), Power 1 (Green), Power 2 (Green), Fault (Yellow), Master (Green)
8 port 10/100: Link/Activity (Green), Full duplex/Collision (Yellow)
Mini GBIC: Link/Activity (Green)
Giga Copper: Link/Activity (Green), speed (1000 Green)

Alarm: Relay output for port break and power failure

Power Input: VDC 48V
Redundant power with removable terminal block

Power Protection: ESD (Ethernet): 3000VDC
Surge: 1500VDC
Power reverse polarity

Power Consumption: 132.8 watts (full load)

Dimensions: IP-30 standard, 72 mm (W) x 152 mm (H) x 105 mm (D)

Installation: DIN-Rail, panel mounting or desktop

Environmental
Operating Temp: Regular: -10 to 70°C
Extended: -40 to 80°C

Storage Temp: -40 to 85°C (-40 to 185°F)

Operating Humidity: 5% to 90% RH (non-condensing)

Technical Specifications

Standard:
IEEE 802.3 10Base-T
IEEE 802.3u 100Base-TX
IEEE802.3ab 1000Base-T
IEEE802.3z Gigabit fiber
IEEE802.3x Flow Control and Back Pressure
IEEE802.3ad Port trunk with LACP
IEEE802.3af Power over Ethernet
IEEE802.1d Spanning Tree
IEEE802.1w Rapid Spanning Tree
IEEE802.1p Class of Service
IEEE802.1q VLAN Tag
IEEE 802.1x User Authentication (Radius)

Network Media:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/5e cable
EIA/TIA-568 100-ohm (100m)
100Base-TX: 2-pair UTP/STP Cat. 5/5e cable
EIA/TIA-568 100-ohm (100m)
1000Base-TX: 2-pair UTP/STP Cat. 5/5e cable
EIA/TIA-568 100-ohm (100m)

Protocol Technology: CSMA/CD

Switching Architecture: Store and Forward

Performance

Data Transfer Rate:
14,880 pps for Ethernet port
148,800 pps for Fast Ethernet port
1,488,000pps for Gigabit Fiber Ethernet port

MAC Address: 8k

Memory Buffer: 4Mbytes

Port Statistics: Supported

Back-plane: 5.6 Gbps

Flow Control: Full-duplex and Back Pressure for Half-duplex

Packet Filter: Broadcast/Multi-cast/Unknown Broadcast storm packet filter

Transfer Packet Throughput: 8.3Mpps @ 64 bytes

Regulatory Approvals

EMI: FCC Class A

EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,
EN61000-4-6, EN61000-4-8, EN61000-4-11

Safety: UL, cUL, CE/EN60950

Shock: IEC60068-2-27

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

Class 1 DIV 2: Pending*

DNV: Pending*

Environmental: WEEE, RoHS

MTBF: 325,000 hrs based on Mil-Hdbk-217F, GB

Warranty: 5 years

Management Specifications

Redundancy:
STP, RSTP
Dual Homing, Ring Coupling, Dual Ring*
X-Ring with recovery time < 10 ms

Management Protocols:
SNMP v1/v2c/v3*, RMON, SMTP, SNTP,
IGMP v1/v2 & Query mode, DHCP/Client, TFTP

MIB: MIB-II, Bridge MIB, Ethernet like MIB, VLAN MIB, Private MIB

Configuration:
Web interface management
Default button is available to restore default settings

VLAN:
Supports port-based VLAN/Tag VLAN (256 entries)
VLAN ID (Up to 4K)
GVRP(256 Groups)
Static VLAN groups up to 256, the VLAN ID can be assigned from 1 to 4094

Quality of Service: Hardware supports 4 queues per port

Port Mirroring: Broadcast/Multi-cast/Unknown Broadcast storm packet filter

IGMP Snooping: v1 and v2, query mode, multicast group with 256 entries

MAC IP Security:
Supports ingress and egress MAC address filter and
static source MAC address lock, Dumping MAC address Table,
Ingress/Egress MAC address security

IP Security:
10 IP address accounts for system management security for Web, SNMP and
Telnet management security to prevent intruder

LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members

Port Mirror:
Global system supports 3 mirroring types: "RX, TX and Both packet".
Maximum of 8 entries

Class of Service: Per port 4 queues

E-mail Warning: Pre-defined events

SNMP Trap: Cold start, link down, link up, authorization fail,
X-ring topology Change, Power alarm trap, Trap station up to 3

SMTP: Supports up to 6 e-mail accounts

Firmware Upgrade: By TFTP

PoE Specifications

PoE Compliance: 100% IEEE 802.3af compliant

PoE Classification: Power Sourcing Equipment (PSE)

PoE Voltage: 48 VDC

PoE Power: Up to 15.4 watts per port

PoE Protection:
Over-temperature, over-current, over/under-voltage and transient

PoE Pin Assignment:
RJ-45 port # 1~# 8 support IEEE 802.3af End-point, Alternative B mode
Per port provides 15.4W ability
Positive (VCC+): RJ-45 pin 4,5
Negative (VCC-): RJ-45 pin 7,8