EG99000 Series

Hardened Managed 24-port 10/100/1000BASE-T (8-port combo SFP) and 4-port 10G SFP+ Layer 3 Ethernet Switch

Spotlight

+ Hardened Grade

Wide operating temperature range for extreme environments
Robust construction with ruggedized housing
High impact and electrical noise resistance

+ Intelligent Management & Remote Secure Access

Optimized network performance with QoS, VLAN, ACL and RADIUS support

+ L3 Scalability

Routing protocols such as RIP and OSPF for Layer 3 switching

Overview

EtherWAN's EG99000 is a gigabit Layer 3 switch designed for high bandwidth uplink or interconnection. In addition to full wire-speed Layer 2 switching capability and support for a robust set of Layer 2 features, it is capable of Layer 3 IP routing and switching across VLANs and subnetworks with no compromise in performance. The EG99000 supports comprehensive internetwork IP routings that can operate simultaneously with redistributions to each other and route control tools, including IP prefix-list and route-map.

With its hardened specifications, the EG99000 provides high reliability and nonstop operation in harsh environments, and can operate stably in temperatures from -40 to 75°C (-40 to 167°F), as well as in areas with high electromagnetic interference (EMI). The EG99000 is also equipped with sophisticated network and system failure recovery features including VRRP and dual redundant power supplies. This makes it an ideal choice for both industrial and mission critical applications where sustained connectivity is crucial.

EtherWAN — "**When Connectivity is Crucial.**"

Features

Management

» Interface
  • CLI, Telnet and Web Browser
  • SNMP v1/v2c/v3
» Firmware and configuration upgrade and backup via TFTP
» Supports DHCP Server/Client
» RMON (Remote monitoring)
» Port mirroring: TX/RX and both
» NTP (Network Time Protocol) time synchronization
» IEEE 802.1ab LLDP (Link Layer Discovery Protocol)
» IPv4/IPv6

Security

» MAC address filtering
» Enable/disable port
» Storm control (broadcast and multicast types)
» IEEE 802.1x LAN access control
» Remote authentication through RADIUS
» SSH for CLI and Telnet security
» SSL for web security
» ACL (Up to 4096 entries)

Quality of Service (QoS)

» Priority Queues: 8 queues per port
» Traffic classification based on IEEE 802.1p CoS, DSCP, WRR (Weighted round robin) and strict mode
» Rate Limiting (Ingress/Egress)

Layer 2 Features

» Auto-negotiation for port speed and duplex mode
» Flow Control
  • IEEE 802.3x full duplex mode
  • Back-Pressure half duplex mode
» Redundant Protocols
  • IEEE 802.1D Spanning Tree Protocol (STP)
  • IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
  • IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
» VLANs
  • IEEE 802.1Q Tag VLANs
  • GVRP (GARP VLAN Registration Protocol)
  • GMRP (GARP Multicast Registration Protocol)
» Link Aggregation
  • Static Trunk
  • IEEE 802.3ad Link Aggregation Control Protocol
» IGMP Snooping

- IGMP Snooping v1/v2/v3

Layer 3 Features IPv4

» Unicast Routing
- Static Routing (1K)
- RIP v1/v2
- OSPF v2

» Multicast Routing
- PIM-DM
- PIM-SM

» Routing Redundancy
- VRRP

Layer 3 Features IPv6

» IPv6 Unicast Routing*
- RIPng
- OSPF v3

* Available in Q4 2019

» IPv6 Multicast Routing*
- PIM-DM
- PIM-SM

* Available in Q4 2019

» IPv6 Routing Redundancy*
- VRRP v3

* Available in Q4 2019

Performance

» 128Gbps switching fabric
» Forwarding rate: 95.23Mpps
» 4GB DDR3 SDRAM and 2GB Flash Memory
» Total VLAN entry size: 4K
» With a maximum Ethernet frame size of 12Kbytes (Jumbo Frames)
» Configurable up to 24,000 unicast routes and up to 1,000 multicast routes at L2 managed level
» Configurable up to 8,000 unicast routes and up to 8,000 multicast routes at L3 (IPv4) managed level
» Configurable up to 2,000 unicast routes at L3 (IPv6) managed level

Specifications

Technology

Standards

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX/100BASE-FX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-SX/1000BASE-LX
- IEEE 802.3x Full duplex and flow control
- IEEE 802.1p QoS
- IEEE 802.1Q Tag VLANs
- IEEE 802.1w RSTP
- IEEE 802.1x Port-based Network Access Control

Forward and Filtering Rate

- 14,880pps for 10Mbps
- 148,810pps for 100Mbps
- 1,488,100pps for 1000Mbps
- 14,880,952pps for 10Gbps

Packet Buffer Memory

- 32M bits

Processing Type

- Store-and-Forward
- Auto-Negotiation
- IEEE 802.3x full-duplex flow control
- Auto MDI/MDIX

Address Table Size

- 24K

Power

Input

- ±48VDC Redundant (Terminal Block)
- 100-240VAC Redundant (Terminal Block)
- 100-240VAC Redundant (AC Inlet)

Power Consumption

- 75W Max.

Mechanical

Casing

- Metal Case

• IP30

Dimensions
• Redundant Power:
442 x 375.5 x 44.2mm (W x D x H)
(17.4" x 14.8" x 1.74")

Weight
• 5.6kg (12.3lbs)

Installation
• Rack mounting

Interface

Ethernet Port
• 10/100/1000BASE-T: 24 or 16 ports
• 1000BASE-SFP: 8 ports
• 10G SFP+: 4 ports

Console Port
• One DB-9 RS-232 port
• One RJ45 managed port

USB port
• One USB port (Type A connector)

Alarm Contact
• One relay output with current 0.6A/30VDC

Digital Inputs
• Two Digital inputs
• +13 to +30V for state "1"
• 0 to +3V for state "0"
• Max. Input Current: 8 mA

LED Indicators
• Per Unit: Power1, Power2, Alarm
• Per Port: Link/Act (Green)

Environment

Operating Temperature
• -40 to 75°C (-40 to 167°F)

Storage Temperature
• -45 to 85°C (-49 to 185°F)

Ambient Relative Humidity

• 5% to 95% (non-condensing)

Regulatory Approvals

ISO

• Manufactured in an ISO 9001 facility

EMI

FCC Part 15B Class A
VCCI Class A
EN 61000-6-4

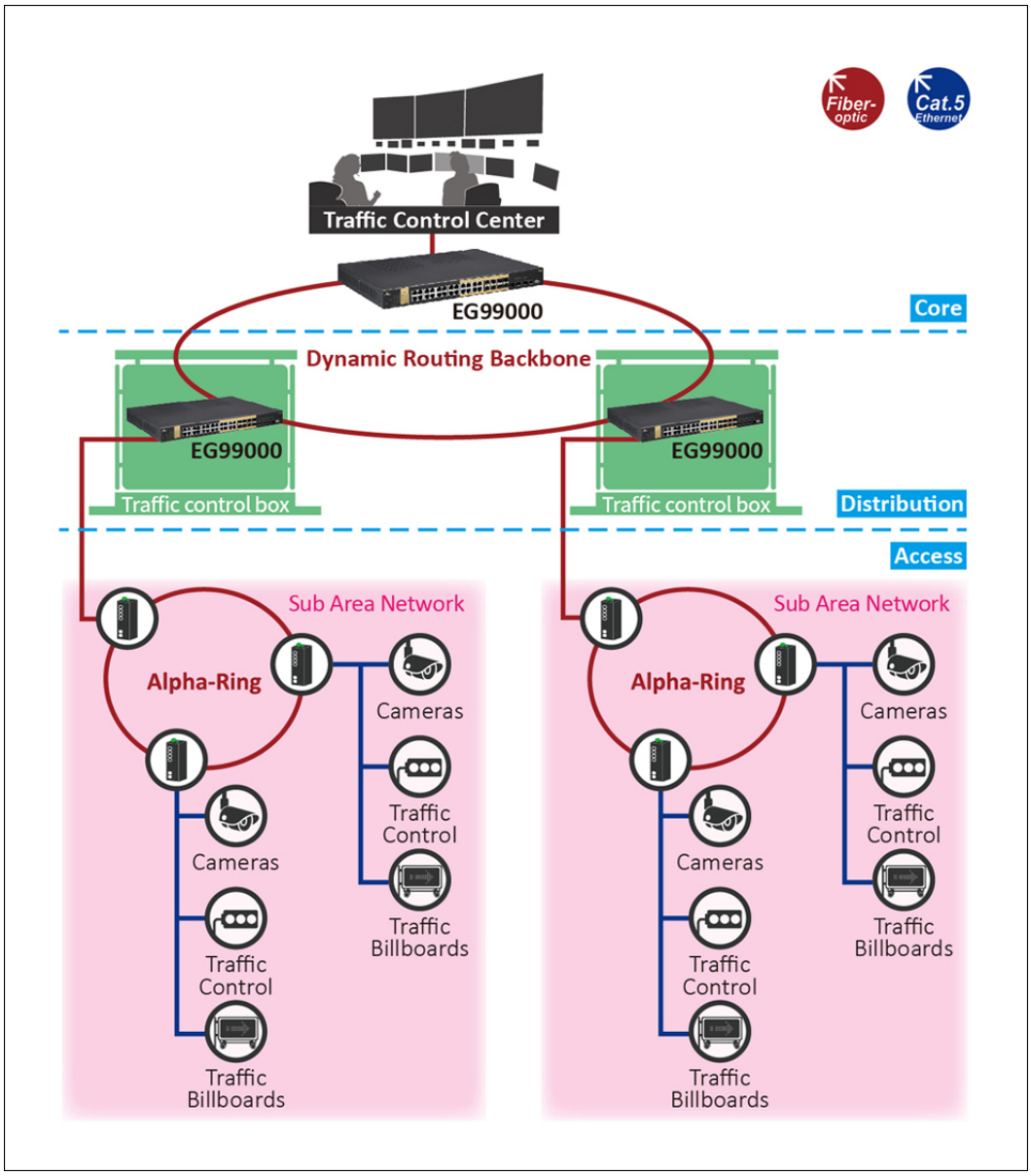
EMS

EN 61000-6-2
• EN 61000-4-2 (ESD Standards)
• EN 61000-4-3 (Radiated RFI Standards)
• EN 61000-4-4 (Burst Standards)
• EN 61000-4-5 (Surge Standards)
• EN 61000-4-6 (Induced RFI Standards)
• EN 61000-4-8 (Magnetic Field Standards)

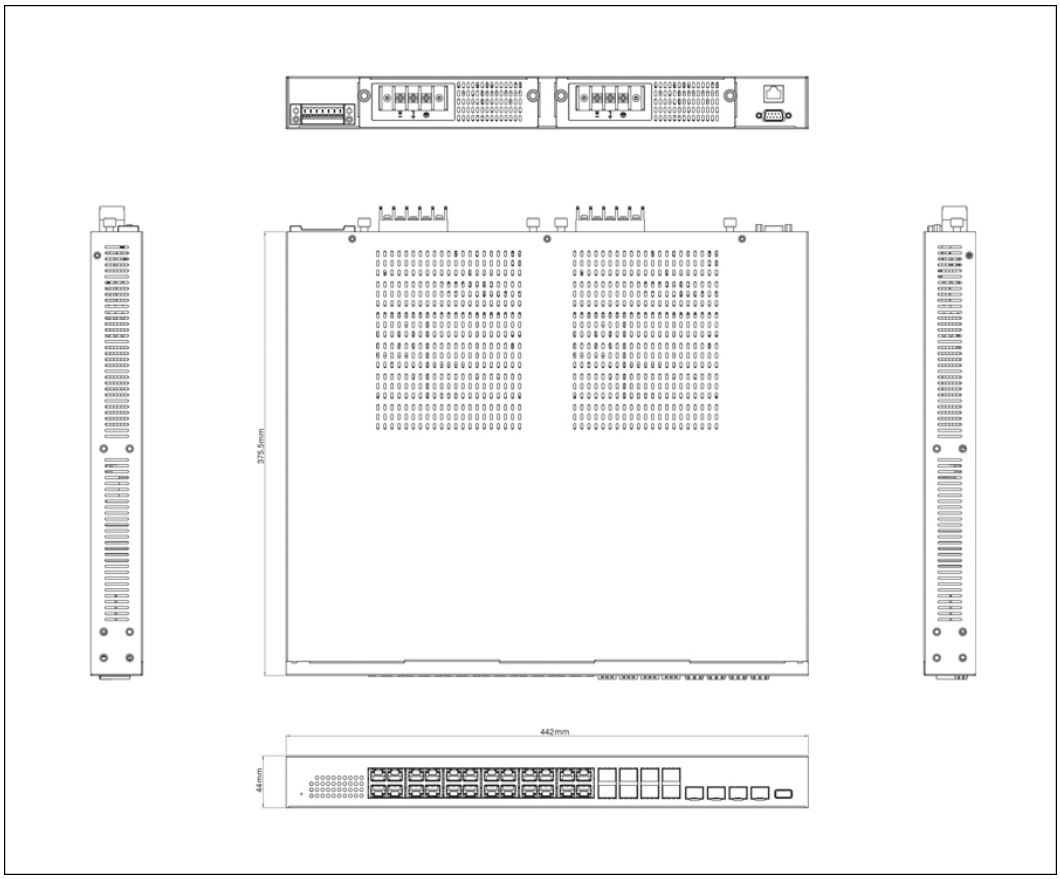
Environmental Test Compliance

IEC 60068-2-6 Fc (Vibration Resistance)
IEC 60068-2-27 Ea (Shock)
FED STD 101C Method 5007.1 (Free fall w/package)

Application



Dimensions



Ordering Info

Model

EG99424-8VZ	16-port 10/100/1000BASE-TX +8-port 1000BASE SFP Combo +4-port 10G SFP+ Hardened Layer 3 Managed Ethernet Switch

* Rack mounting kit included.

Power Input Interface (Z)

TR	±48VDC Redundant (Terminal Block)
WR	100-240VAC Redundant (Terminal Block)
CR	100-240VAC Redundant (AC Inlet)