GS24

Standalone Fully Managed Gigabit Ethernet Switch

Features

- Fully, rugged standalone Gigabit Ethernet Switch
- 24-port fully managed Gigabit Ethernet switch with option for two 10GigE SR/LR Fiber ports

Gigabit ports can be all 10/100/1000BaseT or a combination of copper and up to twelve (12) fiber ports

- 1x 10/100-Base-T management port
- Layer 2/3 switching with advanced support for VLANs, QoS and IPv6
- 88 Gbits/sec non-blocking switch fabric with full wirespeed performance
- Configuration through Web interface
- Unmanaged version also available
- Conduction-cooled
- Supports IPv6 switching / routing
- Remote management support, (Telnet, SSH and SNMP)
- 2x RS232 communication ports
- Onboard Built-in-Test
- MIL-D38999 series 3 connectors
- -50°C to +100°C storage temperature (all)
- -40°C to +75°C operating temperature (level 5)
- -40°C to +65°C operating temperature (level 4)
- Enclosure 300mm (W), 100mm (H), 235mm (D) including connectors
- Weight: approx. 6.5Kg (12 lbs.) 28VDC @ 75 Watts maximum

Key Specifications

- IEEE 802.3-2005
  - IEEE 802.3ad (Link aggregation)
- IEEE 802.1D (Prioritization)
- IEEE 802.1Q (VLAN tagging)
- IEEE 802.1D (Spanning Tree Protocol)

The GS24 is a rugged, fully managed, stand-alone Gigabit Ethernet switch provides twenty-four Gigabit ports with an option for two 10GigE fiber ports. The twenty-four Gigabit ports can be all copper or a combination of copper and up to twleve fiber ports. Aimed at out-of-the-chassis applications – the networking of multiple subsystems, for example – the GS24 has comprehensive management capabilities that include VLANs, Link Aggregation, Spanning Tree, IPv4, IPv6, Traffic Policing, Quality of Service (QoS) functionality such as guaranteed Bandwidth allocation and prioritization.

Connection to the light weight, space-efficient, conduction-cooled GS24 is via the rugged front panel connectors, which meet MIL-STD-810F requirements for humidity, salt spray and dust.

Featuring non-blocking shared memory architecture, all the Gigabit ports support both full- and half duplex operation offering full wire speed performance with minimal latency on all twelve ports simultaneously.

Onboard built-in test (BIT) ensures the GS24 can be easily linked with other boards to provide integrated system level health monitoring and diagnostics.

The switch management may be accessed via in-band management through the 1G ports, or via out-of-band management. Out-of-band management of the switch is accessible via 10/100 BaseT Ethernet port or a RS232 serial port, available on the front panel D38999 connectors.

The GS24 has comprehensive network management capabilities based on FAST-PATH® software .

Configuration of the switch is via a comprehensive and intuitive web interface, command line interface or SNMP.

GS24 Standalone Fully Managed Gigabit Ethernet Switch

Specifications

Ethernet

24 Gigabit Ethernet ports
- IEEE 1000-BaseT connection
- IEEE 10/100-BaseT connection

PowerPC Management Processor
- Enables GS24 to be set up for specific customer configurations

Full 88 Gbps non-blocking switch with full wire speed performance
- Switch does not 'bottleneck' Network Performance

Store and forward switching architecture
- Lowest possible latency

8000 MAC address table
- Automatically learns network connections

Bandwidth Provisioning
- Guaranteed bandwidth for real-time services

Compliance
- IEEE 802.3-2000

Architecture
- Shared memory, store-and-forward

Ports
- 24 10/100/ 1000-BaseT
- One 10/100-BaseT Management port.
- Two RS232
- JTAG + UTIL (for firmware update)
- Option for up to twelve 1000BaseSX or 1000BaseLX ports
- Option for two 10GigE SR/LR fiber ports

Management Features
- IEEE 802.1 Multiple Spanning Tree, IGMP snooping, port mirroring, IEEE 802.3 VLAN tagging, Link Aggregation.
- Advanced QoS features including bandwidth provisioning and 802.1Q VLAN, SNMP v1/v2/v3 and web-based browser

Front Panel Connectors
- Minimum 6 X D38999 connectors which include:
  - 3 x D38999's for 24 10/100/1000BaseT ports
  - 1 x D38999 for serial communications
  - 1 x D38999 for 10/100BaseT management port
  - 1 x D38999 for power
- Optionally there are up to 3 x D38999 for 1000BaseSR or LR, and 2 x D38999 for 10GBaseSR or LR
- Mechanically keyed to be unique (on request)
- Chassis Ground Stud

Weight
- Approx. 6.5Kg (12 lbs)

### Power Supply
- 28 Volt VDC

Power
- 75 Watts Maximum

Environmental
- Level 4 or Level 5 Ruggedization
- Shock : 40g peak sawtooth, 11mS duration
- Vibration : Random, 0.1g2/Hz from 15 to 2000Hz per MIL-STD-810E Fig 514.4 - 8 for high performance aircraft. ~12g RMS
- Humidity: Up to 95% RH with varying temperature : 10 cycles, 240 hours

Dimensions
- Enclosure 300mm (W), 100mm (H), 235mm (D) including connectors

Block Diagram
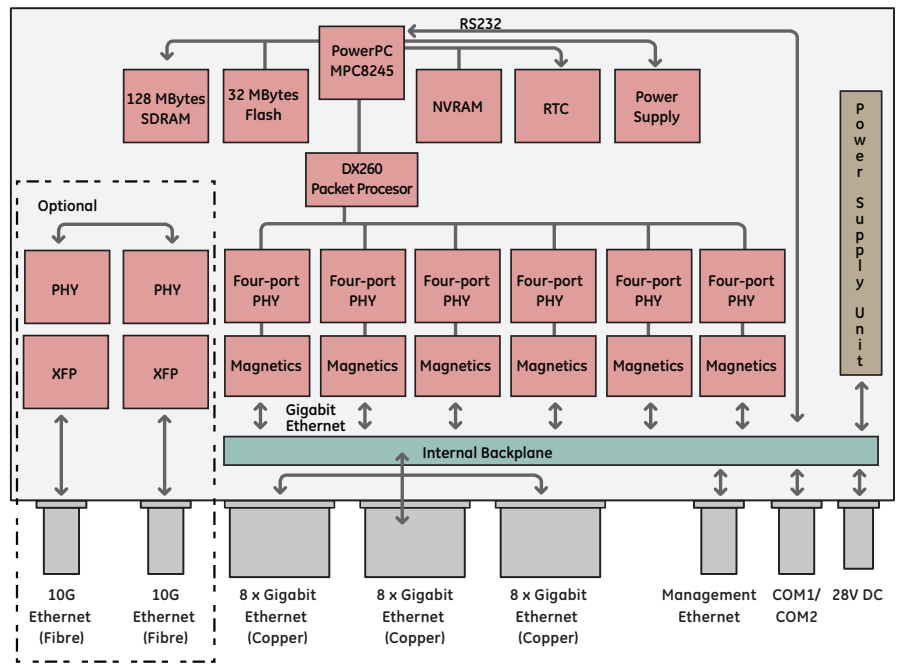
Ordering Information

GS24-XXXXXX	Where first X refers to level of ruggediation: x= 4 or x= 5
	Where second X refers to port options: 0=24 copper; 2=20 copper+4 1000SX; 3=16 copper+8 1000SX; 4=12 copper+ 12 1000SX; A=20 copper+4 1000LX; B=16 copper + 8 1000LX; C=12 copper + 12 1000LX
	Where third X refers to GigE Optic Standard: 0 =None; 1 = 62.5/125 Fiber; 2 = 50/125 Fiber; c = 9/125 Fiber
	Where fourth X refers to 10GigE Option: 0 = None: 1 = 2 ports 10GigE SR (62.5/125); 2 = 2 ports 10GigESR (50/125); 3 = 2 ports 10GigE LR (9/125)
	Where fith X refers to Power Supply: 1 = 28VDC
	Where sixth X refers to Management: 0 = Unmanaged, BIT Only; 1 = Managed plus BIT
GS24-1COM	Serial cable in a development environment. D38999 to 2x 9-way D-type.
GS24-1E02	2M GigE interface cables in a development environment. D38999 to 8x RJ45, 2 meter cable length.
GS24-1MNG	Management port interface in a development environment. D38999 to RJ45
GS24-1PSU	Power supply to be used in a development environment. 110-230 Vac input 24 Vdc output to D38999
CPX24SWBIT-1M	BIT Software first year maintenance
CPX24SWLVL7-1M	Management Software first year maintenance
CPX24SWBIT-1MS	BIT maintenance renewal
CPX24SWLVL7-1MS	LVL7 maintenance renewal

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