NETernity GBX24
IPv6 Enabled, 6U VME, Conduction Cooled, 24-port Gigabit Ethernet Switch

Features
- 6U VMEbus form factor
- 24-ports of Gigabit Ethernet
  - 24 ports to rear connectors
  - 20 ports to rear connectors plus 4 ports optical to front panel
- Hardware enabled IPv6 and IPv4 support
- Fully managed solution
- Layer 2/3 switching with advanced support for VLANs, QoS, and IPv6
- 48 Gbit/s non-blocking switch fabric with full wire speed performance
- Unmanaged version also available
- Configuration through web interface
- Supports IPv6 switching and routing
- Support of Jumbo frames up to 10kB
- Remote management support (Telnet, HTTP, and SNMP)
- Built-in-Test (BIT) software
- Ruggedization Levels 1-6

NETernity GBX24 is a fully managed (Layer 2/3) Gigabit Ethernet switch designed to meet the most demanding requirements for network switching in tactical applications. This Gigabit switch is available in both air- and conduction-cooled formats and features a non-blocking shared memory architecture. This provides 48 Gbits/s core offering full wire speed performance with minimal latency on all ports simultaneously.

The GBX24 has comprehensive network management capabilities that includes VLANs, link aggregation, spanning tree, IPv4, IPv6, IGMP, traffic policing, Quality of Service (QoS), guaranteed bandwidth and SNMP.

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

GBX24 provides optional optical expansion through a mix of onboard optics and a separate Optical Expansion Board. All twenty-four ports can be converted to optical outputs to give twenty-four ports of Gigabit, either 1000 BaseSX or 1000 BaseLX. Onboard built-in test (BIT) ensures the GBX24 can be easily linked with other GE Intelligent Platforms boards to provide integrated system level health monitoring and diagnostics.

Key Specifications
- IEEE 802.3-2005
  - IEEE 802.3ad (Link Aggregation)
- IEEE 802.1P (Prioritization)
- IEEE 802.1Q (VLAN tagging)
- IEEE 802.1D (Spanning tree Protocol)
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Specifications

Physical Interface
- 24 Gigabit Ethernet ports
  - 24 routed to rear
  - Optionally, 4 ports may be factory selected as SX or LX optical to the front panel
- Fiber Gigabit Ethernet ports support either 1000BaseLX or 1000BaseSX transceivers and have LC connectors
- Copper ports support automatic Media Dependent Interface (MDI) crossover eliminating need for cross-over cables or cross-wired (MDIX) ports

IPv6
- IPv6 addressing and specification (RFC 2460)
- Neighbor discovery for IPv6 (RFC2461)
- Stateless address auto configuration (RFC 2462)
- ICMPv6 (RFC 2463)
- IPv6 over Ethernet (RFC 2464)

802D MAC Address Table
- Automatically learns network connections

User Controllable Built-in-Test (BIT)

Bandwidth Provisioning
- Guaranteed bandwidth for real-time services

Levels of Ruggedization
- Air cooled, extended temperature, rugged air cooled, rugged conduction cooled, and spray cooled

Dimensions
- 6U VME single slot Eurocard form factor
- Height: 9.2 in. (233.4mm)
- Depth: 6.3 in. (160mm)
- Thickness:
  - 0.8 in. (20.3mm) single slot
  - 1.6 in. (40.6mm) dual slot
- Weight:
  - Levels 1-3: 1.47 lbs (0.82 Kg) 24-port version
  - Levels 4-5: TBD

Power Requirements
- 50 watts (24 ports)
- 5 V @ 9.2 A (max)

Environmental
- Temperature (Level 1)
  - Operating: 0°C to +55°C with 300 linear ft/min airflow
  - Storage: -50°C to +100°C
- Relative Humidity (Level 1)
  - Operating: 5% to 95%, noncondensing
  - Storage: 5% to 95%, noncondensing

MTBF
- 101,746 hours per Ground Fixed 40°C

Example Configuration:
GBX24-40311 - VME switch, Build Level 4, no 10 GigE expansion, 24 copper ports, P0 fitted, BIT and management software
GBX24-50110 - VME switch, Build Level 5, no 10 GigE expansion, 20 copper + 4 onboard optics, P0 fitted, BIT (unmanaged version)

About GE Intelligent Platforms
GE Intelligent Platforms is a division of GE that offers software, control systems, services, and expertise in automation and embedded computing. We offer a unique foundation of agile and reliable technology providing customers a sustainable competitive advantage in the industries they serve, including energy, water, consumer packaged goods, oil and gas, government and defense, and telecommunications. GE Intelligent Platforms is headquartered in Charlottesville, VA. For more information, visit www.ge-ip.com.

GE Intelligent Platforms Contact Information
Americas: 1 800 433 2682 or 1 434 978 5100.
Global regional phone numbers are listed by location on our web site at www.ge-ip.com/contact.

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