# **Sixnet** 10 PORT INDUSTRIAL ETHERNET MANAGED SWITCH

The SLX-10MG is a 10 port industrial Ethernet managed switch with 7 fast and 3 Gigabit ports of which two are combination ports that support both copper and fiber optic connections. This switch is designed to be rugged, reliable, real-time and secure. It combines compact DIN rail packaging, protected circuitry and powerful software to keep your system going even under the toughest conditions.

# **PRODUCT HIGHLIGHTS**

- 10 ports including
  - 7 fast Ethernet 10/100 RJ45 ports
  - I Gigabit Ethernet 10/100/1000 RJ45 port
  - 2 Gigabit combo ports for copper or fiber
- High port count in a small footprint
- Truly rugged design with -40 to 75°C operation
- Easy to configure management functions

# REAL-TIME SECURE PERFORMANCE

- Real-Time-Ring<sup>™</sup> or Rapid Spanning Tree (RSTP) for fast redundant ring or mesh networks
- SNMPv1 and v2 network management
- SNMPv3 authentication & encryption for security
- SNMP notifications (traps) for report on event
- Priority Queuing (QoS/CoS) for real-time operation
- IGMP for Multicast filtering (snooping & querying)
- VLAN for convenient traffic segregation
- Broadcast & multicast storm protection
- RMON & port mirroring for advanced diagnostics
- Security with HTTPS, SSL, SSH, SNMPv3 & more
- Easy configuration via Web, Telnet or CLI
- Free field-installable firmware upgrades forever

# TROUBLE FREE OPERATION

- -40 to +75 °C operating range
- UL/CSA (CUL), CE and Hazloc (Zone 2) rated (PENDING)
- Dual (redundant) power inputs
- Industrial surge and spike protection
- Self-test/alarm output contact
- DIN rail or direct panel mounting



## **Two Flexible Combination Gigabit Ports**

Your choice – Just connect to the RJ45 for a 10/100/1000Mbps auto-detecting copper link or plug in a fiber transceiver for a 100 or 1000Mbps noise-immune fiber link. These advanced ports give you the flexibility you need and make your job easier!



Fast Redundancy with Rapid Spanning Tree or Real-Time-Ring™

## ETHERNET PERFORMANCE

- 10 Ethernet ports including 3 Gigabit
- Managed, store & forward, wire-speed
- All IEEE 802.3 Ethernet protocols supported
- RJ45 ports 1 7 (shielded) 10/100BaseTX
- RJ45 ports 8 10 (shielded) 10/100/1000BaseTX
- RJ45 port speed auto-negotiation
- RJ45 MDI/MDIX auto-crossover
- RJ45 TD and RD auto-polarity
- Ports 9 and 10 are combination gigabit ports that have both a RJ45 connector and SFP fiber connector. For each of these ports, only one of the connectors can be used at a time.
- SFP (pluggable) ports 9 10 accept mini-GBIC transceivers
- Fiber optic port speed: 100 Mbps or 1000 Mbps
- Fiber typical specs (see separate datasheet for details)
  - Multimode, 0.55 km, 850 nm, 50-62.5/125 µm
  - Singlemode, 10 km, 1310 nm, 9-10/125 μm
  - Long haul, up to 120+ km, 1550 nm, 9-10/125 μm
- Typical latency (varies on load & settings)
- @ 10 Mbps: 16 us + frame time
  - @ 100 Mbps: 5 us + frame time
- Full or half duplex operation configurable per port
- MAC addresses supported 8192
- Memory bandwidth 32 Gbps
- Ethernet isolation 1500 VRMS 1 minute
- Console ports USB and RS232 (RJ45)

### ETHERNET COMPLIANCE

- IEEE 802.3z (Gigabit 1000 Mbps Ethernet connections)
- IEEE 802.3u (Fast Ethernet 100Mbps for newer devices)
- IEEE 802.3 (10Mbps Ethernet supports legacy devices)
- IEEE 802.3x (Full-Duplex with Flow Control)
- IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability)
- IEEE 802.1p (Priority Queuing QoS, CoS, ToS/DS)
- IEEE 802.1Q (VLAN for traffic segregation)

#### REAL-TIME-RING™

- Link loss recovery: 30 mS plus 5 mS per hop
- Switches in a ring: <50 for best performance</p>
- Multiple rings supported (configurable)

### "OK" ALARM OUTPUT

- Indicates power & operational status
- Voltage same as switch input voltage
- Maximum current output 0.5 Amp

### POWER INPUT

- Redundant input terminals
- Reverse polarity protection
- Input power (typical with all ports active)
  5 W (w/ no fiber plugged in)
  - 7 W (w/ 2 fiber plugged in)
  - Power input voltage 10-30 VDC
- Transient protection 15,000 watts peak
- Spike protection 5,000 watts (10x for 10 uS)

### ENVIRONMENTAL

- Operating temperature:
- -40 to +75 °C (cold startup at -40 °C)
- Storage temperature -40 to +85 °C
- Humidity (non-condensing) 5 to 95% RH (optional conformal coating is available)
- Vibration and shock IEC60068-2-6, -27

### STANDARDS COMPLIANCE

- Electrical safety UL508 / CSA C22.2/14; EN61010-1, CE
- EMC FCC part 15, ICES-003; EN61000-6-4, EN61000-6-2, CE
- Hazardous locations UL1604 / CSA C22.2/213 (Class I, Div. 2) EN60079-15 (Zone 2, Category 3), CE (ATEX)
- Maritime designed for marine and offshore per ABS
- RoHS and WEEE compliant
- ISO9001:2000 certified company

#### PHYSICAL

- DIN rail or direct panel mounting
- Case Corrosion-resistant aluminum
- Ingress protection IP30
- Weight 0.34 kg (12 oz.)
- Dimensions see mechanical diagram

## MECHANICAL DRAWING 4.30"



### See the User Manual for a More Detailed Diagram

All specifications are subject to change. Consult factory for latest info.

#### **ORDERING GUIDE**

| S | SLX-10MG-1      | 10 port industrial Ethernet switch  |
|---|-----------------|---|
| G | SMFIBER-SFP-500 | Gigabit SFP fiber transceiver, mm, 550 m                                    |
| G | GMFIBER-SFP-2K  | Gigabit SFP fiber transceiver, mm, 2 km                                     |
| G | SSFIBER-SFP-10K | Gigabit SFP fiber transceiver, sm, 10 km                                    |
| G | SSFIBER-SFP-30K | Gigabit SFP fiber transceiver, sm, 30 km                                    |
| G | SSFIBER-SFP-50K | Gigabit SFP fiber transceiver, sm, 50 km                                    |
| G | SSFIBER-SFP-80K | Gigabit SFP fiber transceiver, sm, 80 km                                    |
| F | MFIBER-SFP-4K   | 100Mb SFP fiber transceiver, mm, 4 km                                       |
| F | SFIBER-SFP-30K  | 100Mb SFP fiber transceiver, sm, 30 km                                      |
| F | SFIBER-SFP-60K  | 100Mb SFP fiber transceiver, sm, 60 km                                      |
| F | SFIBER-SFP-100  | 100Mb SFP fiber transceiver, sm, 100 km                                     |
| E | T-PS-024-02     | Power supply – AC to 24VDC, 2A  |
| S | P-ETH-2         | Dual port Ethernet surge & lightning protector<br>for the 10/100 ports only |
| R | RJ45-DB9F-CBL   | Console port cable, DB9 to RJ45   |

NOTE: Contact SIXNET for special or long haul transceivers up to 120 Km.



SIXNET Technology Park 331 Ushers Road • Ballston Lake, NY 12019 • USA 1.518.877.5173 • Fax 1.518.877.8346 • sales @sixnet.com

Datasheet SLX-10MG-1 Rev Aug 26, 2009

SOLUTIONS FOR YOUR INDUSTRIAL NETWORKING CHALLENGES