# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Sixnet Networking Series

## **FFF** 6 Port Industrial Ethernot Ring Switch

The SL/SLX-6RS is a 6 port industrial Ethernet switch featuring Sixnet's Real-Time-Ring<sup>™</sup> which provides very fast, fault-tolerant network redundancy and prioritized message delivery needed in critical real-time systems. These Rings self-configure and just run, without the complex configuration steps required by alternative solutions. This advanced technology delivers reliability and performance, saves you money, and makes your job easier.

## PRODUCT HIGHLIGHTS

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- 6 ports including up to 2 fiber optic
- Super-fast, fault-tolerant ring redundancy
- Pre-configured for true plug & play simplicity
- Truly industrial hardened design

#### Slim case for DIN rail or direct panel mounting REAL-TIME FAULT-TOLERANT RINGS

- Recovery time of 30 mS plus 5 mS per hop!
- Ideal for deterministic systems and PLCs
- Real-time Modbus over Ethernet monitoring

#### REAL-TIME TRAFFICORRIGIRIZIZIATION (No 6 QOS)

- Assure delivery of real-time data
- Improve network utilization
- User settable priority assignments

## MANAGED SWITCH FEATUREs at a lower cost

- User configurable port settings
- Port mirroring for traffic diagnostics
- Message filtering to prevent broadcast storms

## TROUBLE FREE OPERATION

- TROUBLE FREE OPERATION Ultra-reliable 1,000,000 + hours MTBF
  - -40 to +85 °C operating range (SLX model)
  - UL/CSA (CUL), CE and Hazloc (Zone 2) rated
  - Dual (redundant) power inputs
  - Industrial surge and spike protection

networking

Self-test/alarm output contact

**industrial** 

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## **SL/SLX-6RS-1/4/5 Industrial Ethernet Switch Specifications**

#### ETHERNET PERFORMANCE

- 6 fast Ethernet ports with up to 2 fiber
- Managed, store & forward, wire-speed
- All IEEE 802.3 Ethernet protocols supported
- RJ45 ports (shielded) 10/100BaseTX
- RJ45 port speed auto-negotiation
- RJ45 MDI/MDIX auto-crossover
- RJ45 TD and RD auto-polarity
- Fiber optional on port 5 and 6
- Fiber optic port speed: 100 Mbps
- Fiber typical specs (see separate datasheet for details)
  Nultimode 4 km 4240 mm 50 20 5/425
  - Multimode, 4 km, 1310 nm, 50-62.5/125 μm
    Singlemode, 20 km, 1210 mm, 2 12/125
  - Singlemode, 20 km, 1310 nm, 9-10/125 μm
    Long baul, up to 130 km, 4550 cm, 0.40/105
- Long haul, up to 120 km, 1550 nm, 9-10/125 μm Typical latency (ματίσε σε laced 2 σε μίνατα)
- Typical latency (varies on load & settings)
- @ 10 Mbps: 16 us + frame time
  @ 100 Mbps: 5 us + frame time
- @ 100 Mbps: 5 us + frame time
- Full or half duplex operation configurable per port
  MAC addresses supported 2012
- MAC addresses supported 2048
  Mamonic has shall the 2.2 Cline
- Memory bandwidth 3.2 Gbps
  Ethernet is election 4500 MBH 200
- Ethernet isolation 1500 VRMS 1 minute

#### ETHERNET COMPLIANCE

- IEEE 802.3u (Fast Ethernet 100Mbps for newer devices)
- IEEE 802.3 (10Mbps Ethernet supports legacy devices)
- IEEE 802.1p (Priority Queuing QoS, CoS, ToS/DS)
- IEEE 802.3x (Full-Duplex with Flow Control)

#### REAL-TIME-RING™

- Link loss recovery: 30 mS plus 5 mS per hop
- Switches in a ring: <50 for best performance</li>
- 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 (typ. with all ports active)
  4 W (-1 model w/ no fiber)
- 6 W (-4/5 model w/ 2 fiber)
- Power input voltage 10-30 VDC
- Transient protection 15,000 watts peak
- Spike protection 5,000 watts (10x for 10 uS)

#### MECHANICAL DRAWING

#### ENVIRONMENTAL

- Operating temperature:
  - SLX: -40 to +85 °C (cold startup at -40 °C)
    SL: -40 to +60 °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
  - Maximum Operating Altitude: 30,000 ft.

#### STANDARDS COMPLIANČE

- Electrical safety UL508 / CSA C22.2/142; EN61010-1, CE
- EMC FCC part 15, ICES-003; EN61000-6-2/4, CE
- Hazardous locations ANSI/ISA 12.12.01 / 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

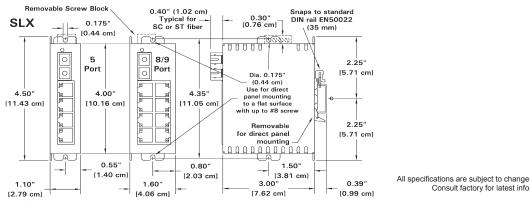
#### PHYSICAL

- DIN rail or direct panel mounting
  - Case Aluminum (SLX) or Lexan (SL)
    - Ingress protection
    - SL models: IP30
    - SLX models: IP40
  - Weight SLX: 0.23 kg (8 oz.); SL: 0.17 kg (6 oz.)
  - Dimensions see mechanical diagram

#### ORDERING GUIDE

| SLX-6RS-1-D16 RJ45 ports, metal case, wide temp.SLX-6RS-4SC-D14 RJ45 ports, 2 multimode SC, 4 kmSLX-6RS-4ST-D14 RJ45 ports, 2 multimode ST, 4 kmSLX-6RS-5SC-D14 RJ45 ports, 2 singlemode SC, 20 kmSLX-6RS-5ST-D14 RJ45 ports, 2 singlemode ST, 20 kmSLX-6RS-5SCL-D14 RJ45 ports, 2 singlemode SC, 40+ kmSLX-6RS-5STL-D14 RJ45 ports, 2 singlemode ST, 40+ kmSL-W/ Lexan case and limited temperatureSetup WizardFree - Windows configuration toolET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning<br>protector for 10/100 ports | ONDERING CODE   |                                       |
|---|-----------------|---------------------------------------|
| SLX-6RS-4ST-D14 RJ45 ports, 2 multimode ST, 4 kmSLX-6RS-5SC-D14 RJ45 ports, 2 singlemode SC, 20 kmSLX-6RS-5ST-D14 RJ45 ports, 2 singlemode ST, 20 kmSLX-6RS-5SCL-D14 RJ45 ports, 2 singlemode SC, 40+ kmSLX-6RS-5STL-D14 RJ45 ports, 2 singlemode ST, 40+ kmSL-4 RJ45 ports, 2 singlemode ST, 40+ kmSL-W/ Lexan case and limited temperatureSetup WizardFree - Windows configuration toolET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning   | SLX-6RS-1-D1    | 6 RJ45 ports, metal case, wide temp.  |
| SLX-6RS-5SC-D14 RJ45 ports, 2 singlemode SC, 20 kmSLX-6RS-5ST-D14 RJ45 ports, 2 singlemode ST, 20 kmSLX-6RS-5SCL-D14 RJ45 ports, 2 singlemode SC, 40+ kmSLX-6RS-5STL-D14 RJ45 ports, 2 singlemode ST, 40+ kmSL-w/ Lexan case and limited temperatureSetup WizardFree - Windows configuration toolET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning   | SLX-6RS-4SC-D1  | 4 RJ45 ports, 2 multimode SC, 4 km    |
| SLX-6RS-5ST-D14 RJ45 ports, 2 singlemode ST, 20 kmSLX-6RS-5SCL-D14 RJ45 ports, 2 singlemode SC, 40+ kmSLX-6RS-5STL-D14 RJ45 ports, 2 singlemode ST, 40+ kmSL-w/ Lexan case and limited temperatureSetup WizardFree - Windows configuration toolET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning   | SLX-6RS-4ST-D1  | 4 RJ45 ports, 2 multimode ST, 4 km    |
| SLX-6RS-5SCL-D14 RJ45 ports, 2 singlemode SC, 40+ kmSLX-6RS-5STL-D14 RJ45 ports, 2 singlemode ST, 40+ kmSL-w/ Lexan case and limited temperatureSetup WizardFree - Windows configuration toolET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning   | SLX-6RS-5SC-D1  | 4 RJ45 ports, 2 singlemode SC, 20 km  |
| SLX-6RS-5STL-D1    4 RJ45 ports, 2 singlemode ST, 40+ km      SL-    w/ Lexan case and limited temperature      Setup Wizard    Free - Windows configuration tool      ET-PS-024-02    Power supply – AC to 24VDC, 2A      SP-ETH-2    Dual port Ethernet surge & lightning   | SLX-6RS-5ST-D1  | 4 RJ45 ports, 2 singlemode ST, 20 km  |
| SL-w/ Lexan case and limited temperatureSetup WizardFree - Windows configuration toolET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning   | SLX-6RS-5SCL-D1 | 4 RJ45 ports, 2 singlemode SC, 40+ km |
| Setup WizardFree - Windows configuration toolET-PS-024-02Power supply - AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning   | SLX-6RS-5STL-D1 | 4 RJ45 ports, 2 singlemode ST, 40+ km |
| ET-PS-024-02Power supply – AC to 24VDC, 2ASP-ETH-2Dual port Ethernet surge & lightning  | SL-             | w/ Lexan case and limited temperature |
| <b>SP-ETH-2</b> Dual port Ethernet surge & lightning  | Setup Wizard    | Free - Windows configuration tool     |
|   | ET-PS-024-02    | Power supply – AC to 24VDC, 2A        |
|   | SP-ETH-2        |                                       |

**NOTE:** The suffix 1 means it is pre-configured for 1 ring on ports 5 & 6. Contact SIXNET for other pre-configuration options.



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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our automation, Ethernet and cellular M2M technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is part of Spectris plc, the productivity-enhancing instrumentation and controls company. For more information, please visit www.redlion.net.

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