

ROCKETLINX ES8509-XT

Industrial Gigabit Switch

HIGHLIGHTS

- 9-port fully managed industrial grade Gigabit switch
- Nine Gigabit ports: 4 10/100/1000BASE-TX RJ45 ports and 5 Gigabit combo (RJ45/SFP 10/100/1000BASE-TX, 100BASE-FX, 1000BASE-X) ports
- 32G switch fabric, 8K MAC address ensuring high quality data transmission
- Advanced features including: private VLAN, VLAN, GVRP, QoS, IGMP snooping V1/V2/V3, rate control, port trunking, LACP, online multi-port mirroring
- Comprehensive security features supporting IP security, port security, DHCP server, IP and MAC binding, 802.1x network access control
- Advanced network redundancy, Multiple Gigabit rings (recovery time <5ms), STP, RSTP, MSTP, and Rapid Dual Homing
- Multiple management methods; Command Line Interface (CLI) using the console port or Telnet/SSH, Web (HTTP/HTTPS), or NetVision
- Event notification by email, SNMP trap, syslog, digital input and relay output
- Dual redundant 10.5 - 60VDC power inputs for enhanced reliability
- -40° to +75°C operating temperature for extreme environments and NEMA TS2 compliant
- Rigid aluminum IP31 housing, excellent heat dispersion, DIN rail/wall-mount installation



Part Number
32065-4



Extreme Temperature Ratings
-40° to +75°C



Product Description

The RocketLinx ES8509-XT is a managed industrial Ethernet switch that brings the speed of nine full Gigabit Ethernet ports together with the flexibility of five DDM capable SFP fiber communication ports in a managed, wide-temperature rated switch ideal for traffic and industrial-grade networks. The combination of Gigabit copper and SFP ports along with advanced management capabilities such as IGMP snooping, LACP, 256 VLAN support, multiple redundant ring configuration, and extensive security features places the RocketLinx ES8509-XT in a class by itself for meeting the high-bandwidth, wide-area requirements of the most demanding industrial network infrastructures.

The RocketLinx ES8509-XT is housed in a rugged aluminum enclosure featuring an excellent heat dispersing design supporting a wide operating temperature that meets NEMA TS2 standards. The embedded software supports full Layer 2 management features, multi-form ring redundancy,

network control, monitoring, security, and notification. The RocketLinx ES8509-XT also includes a built-in watchdog timer and digital input and relay output for event notification and problem alerts. The RocketLinx ES8509-XT provides the perfect foundation for building your industrial Ethernet or traffic and transportation network.

Five Gigabit SFP Ports for Flexible Network Planning

A unique feature of the RocketLinx ES8509-XT is the five Gigabit RJ45/SFP combo ports, which can improve performance dramatically compared to products with fewer Gigabit RJ45/SFP ports. Each combo comes with a flexible connection, as well as fiber or copper connection options. By selecting the appropriate fiber transceivers, the RocketLinx ES8509-XT offers the flexibility to meet your industrial application requirements with virtually any transmission distance.

SPECIFICATIONS

HARDWARE

Network Interface

10/100/1000BASE-TX; 100BASE-FX; 1000BASE-SX/LX/LHX/ XD/ZX Gigabit Fiber

Enclosure

IP31 Grade Aluminum

Installation Method

DIN rail or Wall Mount

LED Indicators

Power 1, Power 2, System Status, Ring, Digital Input, Digital Output RJ45 Link/Activity and Link Speed, SFP Port Link/Activity and Link Speed

Digital Input (DI)

One DI, 4-Pin Screw Terminal Block

Digital Output (DO)

One DO (Dry Relay Output), 4-Pin Screw Terminal Block

Serial Console Port

One RJ45 RS-232 (TXD, RXD, Signal GND), Baud Rate: 9600bps, Data Bits: 8, Parity: None, Stop Bits: 1, Flow Control: None

Dimensions

5.0" x 6.3" x 3.7"

Product Weight

2.9 lbs

ETHERNET SPECIFICATIONS

Connector Type

RJ45

Number of Ports

9

Cable Types

CAT-3, CAT-4, CAT-5, CAT-5e, CAT-6 (UTP or STP)

Link Distance

100 meters

RJ45 Ports

(4) 10/100/1000BASE-TX Auto MDI/MDIX, Auto Negotiation
(5) 100BASE-FX/1000BASE-X Combo with SFP

SFP Slots

1000BASE-SX/LX/LHX/XD/ZX Gigabit Fiber
100BASE-FX

Transfer Packet Size

64 bytes to 1522 bytes (with VLAN tag)

Standards

IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1Q-2003 VLAN Tagging and GVRP
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
IEEE 802.1p Class of Service
IEEE 802.1x Port Based Network Access Control
IEEE 802.1QinQ Double VLAN Tag for Metro Network Topologies
IEEE 802.3 10BASE-T
IEEE 802.3u 100BASE-TX and 100BASE-FX
IEEE 802.3ab 1000BASE-TX
IEEE 802.3z Gigabit Ethernet Fiber
IEEE 802.3ad Port Trunking with Link Aggregation Control Protocol (LACP)
IEEE 802.3x Flow Control and Back-Pressure
IEEE 1588 Precision Time Protocol (PTP)

MANAGEMENT FEATURES

Configuration and Monitoring

Out-Band Management: Console Port with Command Line Interface (CLI) - Similar to Cisco CLI, In-Band Management: Web Interface (HTTP/HTTPS) or a Telnet/SSH Console with CLI

Embedded Watchdog

Embedded Hardware Watchdog Timer Automatically Resets System if Switch System Failure Occurs

System Upgrade/Backup

Provides TFTP/Web Interface for Firmware Upgrade and Configuration Backup/Restore

SNMP

V1, V2c, V3 with SNMP Trap Function, Up to Four Trap Stations

SNMP MIB

MIB-II, Bridge MIB, VLAN MIB, IGMP MIB, Ethernet-Like MIB, Control Private MIB, and RMON

Email Warning

Automatic Warning, Up to Four Accounts by Pre-Defined Events

System Log

Supports Both Local Mode and Server Mode

DHCP

DHCP Client, DHCP Server with IP and MAC Address Binding and DHCP Agent (Option 82)

NETWORK PERFORMANCE

Back-pressure

IEEE 802.3x 1000Mbps Half-Duplex Only

Class of Service (CoS)

IEEE 802.1p 4/Port Priority Queues

Flow Control Pause Frame

IEEE 802.3x 10/100/1000Mbps Full-Duplex

IGMP Snooping

V1/V2/V3 for Multicast Filtering and IGMP Query V1/V2;
Supports Unknown Multicasting, Processes Forwarding Policies: Drop, Flooding and Forward to Router Port

IP Security

Assign Authorized IP Addresses to Specific Port, 10 Max/Port

Network Time Protocol

Supports NTP protocol with Daylight Saving Function and Localize Time Sync Function

Packet Buffer Memory

1Mbits

Port Configuration

Port Link Speed, Link Mode, Port Status, Enable/Disable

Port Mirroring

Online Traffic Monitoring on Multiple Selected Ports

Port Security

Assign Authorized MAC Addresses to Specific Port, 10 Max/Port

Port Trunk

IEEE 802.3ad LACP with Timer and Static Port Trunk; Trunk Member Up to 8 Ports and Maximum 4 Trunk Groups Including Gigabit Ethernet Ports

Port-Based Network Access Control

IEEE 802.1x, Supports User Authenticate by the RADIUS Account, Password and Key for the RADIUS Server

Private VLAN

Direct Client Ports in Isolated/Community VLAN to Promiscuous Port in Primary VLAN

Rate Control

Ingress Filtering for Broadcast, Multicast, Unknown DA or All Packets, Egress Filtering for All Packet Types

Switch Technology

32Gbps Switch Fabric, Store/Forward Switch Technology, 8K MAC Address

System Throughput

26 Mega Packets/Second, 64 byte Packet Size, 14,880pps - 10Mbps; 148,800pps - 100Mbps; 1,488,100pps - 1000Mbps, Max Packet Size 1632

Traffic Prioritization (QoS)

Supports 4 Physical Queues, Weighted Round Robin Queueing (WRR 8:4:2:1) and Strict Priority Scheme, which Follows 802.1p COS tag and IPv4 ToS/ Diffserv Information to Prioritize Industrial Network Traffic

VLAN

IEEE 802.1Q Tag VLAN with 256 (Max) VLAN Entries and 2K GVRP Entries; 3 VLAN Link Modes: Trunk, Hybrid, and Link Access, IEEE802.1 QinQ Supports Double VLAN Tag Function for Implementing Metro Network Topologies

NETWORK REDUNDANCY

Rapid Spanning Tree Protocol

IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
Compatible with Legacy STP and IEEE 802.1w

Multiple Spanning Tree

IEEE 802.1s MSTP, Each MSTP Instance Can Include One or More VLANs

Redundant Ring Technology

Failure Recovery within 5ms
Rapid Dual Homing: Multiple Uplink Paths to Upper Switches
Ring Trunking: Integrates Port Aggregate Function in Ring Path to Get Higher Throughput Ring Architecture
Multiple Ring: Couple or Multiples of Up to 16 Rapid Super Rings, Supports Up to 4 Gigabit Rings in One Switch

ELECTRICAL SPECIFICATIONS

Device

DC Input Voltage 10.5 - 60VDC
Current Consumption +24VDC 1A
Power Consumption (Max) 24W

Power Connectors

Power Connector Type 4-Pin Screw Terminal Block
Power Input Redundancy Dual Redundant Inputs

Reverse Polarity Protection

Yes

Digital Input

Logic Low (0) 0 to 10VDC

Logic High (1) 11 to 30VDC

Digital Output (Relay Output)

1A Max @ 30VDC

ENVIRONMENTAL SPECIFICATIONS

Air Temperature

System On -40° to +75° C

System Off -40° to +75° C

MTBF (Mean Time Between Failures)

48.62 years

Operating Humidity (Non-Condensing)

5% to 95%

EXPORT INFORMATION

Packaged Shipping Weight

4.2 lbs

Package Dimensions

11.3" x 5.5" x 9.1"

UPC Code

7-56727-32065-4

ECCN

5A991

Schedule B Number

8517.62.0050

REGULATORY APPROVALS

Emissions

Canadian EMC Requirements

ICES-003

European Standard EN55022

CISPR 22

FCC Part 15 Subpart B

Class A limit

Immunity

European Standard EN55024

IEC 1000-4-2/EN61000-4-2: ESD

IEC 1000-4-3/EN61000-4-3: RF

IEC 1000-4-4/EN61000-4-4: Fast Transient/Burst

IEC 1000-4-5/EN61000-4-5: Surge

IEC 1000-4-6/EN61000-4-6: Conducted Disturbance

IEC 1000-4-6/EN61000-4-8: Magnetic Field

IEC 1000-4-6/EN61000-4-11: DIPS and Voltage Variations

Safety

IEC 60950/EN60950 (LISTED)

CSA C22.2 No. 60950/UL60950 Third Edition

Other

European Standard: 2002/95/EC Directive (RoHS)

NEMA TS2 Compliant

Regulatory Approvals



ORDERING INFORMATION

32065-4 RocketLinX ES8509-XT

RECOMMENDED ACCESSORIES

32101-9 PS1060, 60 Watts Industrial DIN Rail

Power Supply (24V, 60W, DIN Rail)

1200059 SFP, Multi-Mode, 1000BASE-GSX

(Extended Temperature)

1200060 SFP, Single-Mode, 1000BASE-GLX

(Extended Temperature)

1200061 SFP, Single-Mode, 1000BASE-GLHX

(Extended Temperature)

1200055 LC-ST Fiber Adapter Cable Multi-Mode

1200056 LC-ST Fiber Adapter Cable Single-Mode

PRODUCT SUPPORT & SERVICE INFORMATION

Warranty Information

Comtrol offers a 30-day satisfaction guarantee and 5-year limited warranty.

Sales Support

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