



RocketLinx® ES8508-XT

Part Number: 32010-4



KEY FEATURES AND BENEFITS::

- Eight 10/100BASE-TX ports
- EN50121-4 EMC and IEC 61373 vibration standards for railway applications
- Advanced Layer 2 features including: VLAN, Private VLAN, QinQ, GVRP, QoS, IGMP Snooping V1/V2/V3, rate control port trunking, LACP, and online multiport mirroring
- 32Gbps non-blocking, 8K MAC address table
- RSTP, MSTP and redundant ring support with sub 5ms ring recovery
- Management via Web, PortVision DX, SNMP, Telnet, and Serial Console
- Modbus TCP/IP support for participation on industrial Ethernet networks
- Hardware watchdog timer for system reset and recovery
- Configurable multi-event alarm output
- IP31 rated rugged aluminum housing with DIN rail mounting
- Dual 10-60VDC redundant power inputs
- Wide operating temperature (-40° to 75°C)
- IPv6 support
- RoHS2 compliance under CE
- NEMA TS2 certified

ETHERNET SWITCH

PRODUCT DESCRIPTION::

The RocketLinx ES8508-XT is an industrial-grade managed 8-port Fast Ethernet switch featuring advanced Layer 2 management, security, and system reliability for deployment in extreme and mission critical networking applications.

The ES8508-XT design incorporates the latest managed switch technologies to ensure reliable, high-bandwidth data

communications including a 32Gbps switch fabric for real-time non-blocking data transmission, redundant network topology supporting ring, RSTP and MSTP, and a high performance ARM9 processor with an embedded hardware watchdog timer. These features combined with a rugged IP-31 grade housing and extended operating temperature guarantee performance and stability for traffic, rail, and other demanding applications.



connect. communicate. control.

ROCKETLINX SPECIFICATIONS::

HARDWARE

Network Interface	10/100BASE-TX
Connector Type	RJ45
Enclosure	IP31 grade aluminum metal case Drop-waterproof and dustproof
Installation Method	DIN rail
LED Indicators	Power 1, power 2, system status ring Digital input, digital output RJ45 link/activity
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	4.75" x 5.9" x 2.15" 121 x 150 x 55 mm
Product Weight	2 lbs .91 kg

ETHERNET SPECIFICATIONS

Number of Ports	8
RJ45 (Standard)	10/100BASE-TX, auto MDI/MDIX, auto-negotiation (speed/duplex mode)
Cable Types	Cat 3, Cat 4, Cat 5, Cat 5e (UTP or STP)
Link Distance	100 meters
Port Alarm Relay	Yes
Standards	IEEE802.1AB: Link Layer Discovery Protocol (LLDP) IEEE802.1D-2004: Rapid Spanning Tree Protocol (RSTP) IEEE802.1p: Class of Service IEEE802.1Q VLAN Tagging and GVRP IEEE802.1s: Multiple Spanning Tree Protocol (MSTP) IEEE802.1x: Port Based Network Access Control IEEE802.3:10BASE-T IEEE802.3ad: Link Aggregation Control Protocol (LACP) IEEE802.3x: Flow Control and Back-Pressure IEEE1588: Precision Time Protocol (PTP)
Internet Protocol	IPv4 and IPv6

MANAGEMENT FEATURES

Configuration Management	NetVision 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 10/100Mbps half-duplex only
Class of Service (CoS)	IEEE 802.1p 4 priority queues/port
Flow Control Pause Frame	IEEE 802.3x 10/100Mbps 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, 256 IGMP multicast groups
IP Security	Assign authorized IP addresses to specific port, 10 max/port
Time Synchronization	Supports IEEE 1588 (precision time protocol), NTP protocol with daylight saving function, and localized time sync function
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 4 ports and maximum 4 trunk groups
Port-Based Network Access Control	IEEE 802.1x, supports user authentication by the RADIUS account, password and key for the RADIUS servers (primary and secondary)
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)
Transfer Packet Size	64 bytes to 1522 bytes (includes 1522 bytes VLAN tag)
Packet Buffer	1Mbits shared memory
Traffic Prioritization (QoS)	Supports 4 physical queues, weighted round robin queuing (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
Modbus TCP/IP	Supports Modbus TCP/IP communications with function code 4 for factory automation through the CLI, operates as slave/server device, while a typical master/client device is a host computer running appropriate through Ethernet, thus the Modbus TCP/IP master can read or write to the Modbus registers provided by the Modbus TCP/IP. Application software (SCADA / HMI System)

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 Protocol	IEEE 802.1s MSTP, each MSTP instance can include one or more VLANs and supports multiple RSTP deployed in a VLAN or multiple 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 Fast Ethernet Rings/Switch

ELECTRICAL SPECIFICATIONS

Device	DC Input Voltage (Positive or Negative)	10 – 60VDC
	Current Consumption (24VDC)	625mA
	Power Consumption (Max)	15W
Number of Power Connectors		2
Power Connector Type	4-Pin Screw Terminal Block	
Power Input Redundancy		Dual Redundant Inputs
Reverse Polarity Protection		Yes
Digital Input	1 with photo optical isolation	
	Logic Low (0)	0 to 10VDC
	Logic High (1)	11 to 30VDC
Digital Output (Relay Output)		1
	DC Input Voltage	24VDC
	Current Consumption (24VDC)	1A Maximum
	Multi-Event Relay Feature	Power, Port Link, DI/Ring Status Change, Ping Reset, or Perform Routing Relay On/Off Function

ENVIRONMENTAL SPECIFICATIONS

Air Temperature	System On	-40° to 75°C
	System Off	-40° to 85°C
Operating Humidity	(Non-condensing)	5% to 95%
MTBF	(Mean Time Between Failures)	79.98 years

EXPORT INFORMATION

Packaged Shipping Weight	2.9 lbs 1.32 kg
Package Dimensions	10" x 8.4" x 4.2" 254 x 213 x 107 mm
UPC Code	7-56727-32030-2
ECCN	5A991
Schedule B Number	8517.62.0050

REGULATORY STANDARDS

Emission	Canadian EMC Requirements ICES-003 European Standard EN55022 CISPR 22 FCC Part 15 Subpart B Class A Limit Heavy Industrial IEC 1000-6-4/EN61000-4-9: Pulse Magnetic Field
Immunity	Heavy Industrial IEC/EN 61000-6-2: 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 1000-4-8/EN61000-4-8: Magnetic Field
Railway EMC	EN 50121-4: Signaling and Telecommunications Apparatus EN 50121-1: Rolling Stock. Train and Complete Vehicle
Hi-Pot	AC 1.5KV for all ports and power
Other Regulatory Approvals	NEMA TS2 Certification Railway Vibration/Shock: IEC 61373 Free Fall with Package: IEC 60068-2-32 RoHS2 compliance under CE



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

Sales Support
+1.763.957.6000
sales@comtrol.com

Technical Support
+1.763.957.6000
www.comtrol.com/support

Email, FTP, and Web Support
info@comtrol.com
ftp.comtrol.com
www.comtrol.com