

# ROCKETLINX ES8510-XTE

Industrial Ethernet Switch

## HIGHLIGHTS

- 7 10/100Base-TX ports and 3 RJ45/SFP combo (10/100BASE-TX, 100BASE-FX)
- Enhanced redundancy featuring multiple redundant ring technology (recovery time <5ms)
- Non-blocking switching, 8K MAC address table, 32 Gbps switch fabric
- VLAN, GVRP, QoS, IGMP snooping V1/V2/V3, rate control, port trunking, LACP, online multi-port mirroring
- Management via console CLI, Web, SNMP V1/V2c/V3, RMON, HTTPS, SSH and NetVision
- Advanced security feature supports IP security, port security, DHCP server, IP and MAC binding, IEEE 802.1x network access control
- Event notification by e-mail, SNMP trap, syslog, digital input and relay output
- Rigid aluminum IP31 housing, excellent heat dispersion, redundant power, DIN rail/wall-mount installation
- -40° to +74° C operating temperature for extreme environments
- NEMA TS2 certified



Part Number  
32062-3

## Product Description

The RocketLinx ES8510-XTE is a managed Industrial Ethernet Switch, equipped with seven 10/100BASE-TX ports and three RJ45/SFP combo (10/100BASE-TX, 100BASE-FX) ports. The three combo ports offer flexibility for additional fiber connections by plugging in different types of SFP modules, which can support distances of 2KM in Multi-Mode or 120KM in Single-Mode. The combo ports make port combination even easier, such as eight RJ ports and two fiber ports, or nine RJ ports and one fiber port.

The RocketLinx ES8510-XTE is housed in a rugged aluminum enclosure that features an excellent heat dispersing mechanical design and wide operating temperature support. The embedded software supports full Layer 2 management features, multi-form ring redundancy, network control, monitoring, security and notification. The RocketLinx ES8510-XTE also provides a built-in watchdog timer, digital input and relay output to avoid undetected problems. With industry leading management features and rugged industrial design, the RocketLinx ES8510-XTE provides the perfect foundation for building your industrial Ethernet infrastructure.



### Three RJ45/SFP Fast Ethernet Combo Ports for Flexible Network Planning

The RocketLinx ES8510-XTE is designed with three combo Fast Ethernet ports. Each combo port combines one Small Form-Factor Pluggable (SFP) socket for 100Mbps Multi-Mode or Single-Mode SFP transceiver, as well as one RJ45 copper port in 10Mbps full-duplex, 100Mbps half /full-duplex link mode. The switch will automatically detect the priority of cable connections for each combo port. Users are able to connect two 100Mbps SFP ports of the ES8510-XTE for Fast Ethernet fiber redundant ring topologies and the third combo port as a fiber uplink port.

### 100Mbps SFP

The RocketLinx ES8510-XTE SFP socket supports 100BASE-FX Single/Multi-Mode transceivers. The available distance of the 100BASE-FX ranges from 2KM Multi-Mode to 120KM with Single-Mode modules.



# SPECIFICATIONS

## HARDWARE

- Bus Interface Specification 10/100BASE-TX; 100BASE-FX Fast Ethernet Fiber
- Enclosure IP31 Grade Aluminum;
- Installation Method DIN rail
- LED Indicators Power 1, Power 2, Ring Master (R.M.); 10/100BASE-TX Link/Activity; 10/100BASE-TX Full-Duplex/Collision; Copper/SFP Link/Activity; Digital Input 1 & 2, Digital Output 1 & 2
- Dimensions 5.0" x 6.3" x 3.7"
- Product Weight 2.63 lb

## TECHNOLOGY

- Standards
  - IEEE 802.3 10BASE-T
  - IEEE 802.3u 100BASE-TX and 100BASE-FX
  - IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
  - IEEE 802.1Q VLAN Tagging and GVRP
  - IEEE 802.1p Class of Service
  - IEEE 802.3ad For Port Trunk with Link Aggregation Control Protocol (LACP)
  - IEEE 802.1X Port-Based Network Access Control
- Flow Control
  - IEEE 802.3x Flow Control and Back-Pressure

## PERFORMANCE

- Switch Technology
  - 32Gbps Switch Fabric
  - Store and Forward Switch Technology
  - 2.976Mbps with 64Bytes packet
  - 8K
  - 1Mbits
  - 64 bytes to 1522 bytes (with VLAN Tag)
  - 4
  - 5 Static Trunk
  - 64
  - Up to 255 IP Addresses
- System Throughput
- Number of MAC Address
- Packet Buffer Memory
- Transfer Packet Size
- Priority Queues per Port
- Port Trunk (Max)
- VLAN (Max)
- DHCP Server

## MANAGEMENT FEATURES

- Configuration
  - Cisco-compatible CLI, NetVision Utility, HTTP, HTTPS, SSH, TFTP/Web update for firmware and configuration backup/restore, DHCP Client, warm reboot, reset to default, admin password, port speed/duplex control, status, statistic, MAC address table display, static MAC, aging time, SNMP v1, v2c, v3, traps and RMON1
- SNMP MIB
  - MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
- Port Trunk
  - Up to 5 static trunk and IEEE 802.3ad LACP
- VLAN
  - IEEE 802.1Q VLAN, GVRP. Up to 64 VLAN groups
- Quality of Service (QoS)
  - Four priority queues per port, IEEE 802.1p COS and Layer 3 TOS/DiffServ
- IGMP Snooping
  - IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
- Rate Control
  - Ingress filtering for broadcast, multicast, unknown DA or all packets, and egress filtering for all packets
- NTP
  - Network Time Protocol to synchronize time from Internet or local PC
- Embedded Watchdog
  - Embedded hardware watchdog timer to auto reset system when switch system failure
- Port Mirroring
  - Online traffic monitoring on multiple selected ports
- Port Security
  - Assign authorized MAC to specific port
- IP Security
  - IP security to prevent unauthorized access
- IEEE 802.1x
  - Port-based network access control
- DHCP Server
  - Up to 255 IP address, support IP and MAC binding

- E-mail Warning
  - Automatic warning by pre-defined events
- System Log
  - Supports both local mode and server mode

## NETWORK REDUNDANCY

- Rapid Spanning Tree Protocol
  - IEEE 802.1D-2004 rapid spanning tree protocol (RSTP)
  - Compatible with Legacy STP and IEEE 802.1w
- Redundant Ring Technology
  - Failure recovery within 5ms.
- Rapid Dual Homing (RDHTM)
  - Multiple uplink paths to upper switches
- MultiRing
  - Multiple rapid rings
- Port aggregation on Ring
  - Port aggregation function on Ring path for more bandwidth and higher throughput
- Legacy Super Ring
  - Backward compatible in client mode

## ELECTRICAL SPECIFICATIONS

- Device
  - DC Input Voltage 10-60 VDC
  - Current Consumption
    - +24VDC 1A
    - Power Consumption (Max) 24W
- Power Connector 1
- Power Connector Type 4-Pin Screw Terminal Block
- Power Input Redundancy Dual Redundant Independent Power Inputs
- Reverse Polarity Protection Yes
- Power Alarm Relay Alarm for power failure notification
- Relay Rating 1A Max @ 24VDC

## ENVIRONMENTAL

- Air Temperature
  - System On -40° to 74° C
  - System Off -40° to 74° C
- Operating Humidity
  - Non-condensing 5% to 95%
- MTBF (Mean Time Between Failures) 28.53 years

## ETHERNET SPECIFICATIONS

- Connector Type RJ45
- Number of Port 10
- Ethernet Cable Type CAT-3, CAT-4, CAT-5, CAT-5e (UTP or STP)
- Standard for RJ45 Ports 10/100BASE-TX Auto MDI/MDIX, Auto Negotiation
- Standard for Optional SFP 100BASE-FX Fast Ethernet Fiber
- Link Distance (RJ45 Ports) 100 Meters
- Port Alarm Relay Alarm Relay for Port Failure Notification
- Relay Rating 1A Max. @ 24VDC

## SERIAL CONSOLE PORT SPECIFICATION

- Connector Type RJ-45
- Number of Port 1
- Serial Interface RS-232 (TXD, RXD, Signal GND)
- Baud Rate 9600bps
- Device Data Control
  - Data Bits 8
  - Parity None
  - Stop Bits 1
  - Flow Control None

## DIGITAL INPUT SPECIFICATION

- Connector Type 4-Pin Screw Terminal Block
- Number of Inputs 2 Sets
- Voltage Levels
  - Logic Low (0) 0 to 10VDC
  - Logic High (1) 11 to 30VDC

## DIGITAL OUTPUT SPECIFICATION

- Connector Type 4-Pin Screw Terminal Block
- Number of Outputs 2 Sets of Relay Outputs
- Output Relay Rating 1A Max. @ 24VDC

## EXPORT INFORMATION

- Packaged Shipping Weight 3.9 lbs
- Package Dimensions 11.3" x 5.5" x 9.1"
- UPC Code 7-56727-32062-3
- 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
  - 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
  - IEC 1000-4-11/EN61000-4-11: Dips and Voltage Variations
- Safety
  - IEC 60950/EN60950 (LISTED)
  - CSA C22.2 No. 60950/UL60950 Third Edition
- Shock
  - IEC60068-2-27
- Vibration
  - IEC60068-2-6
- Free Fall
  - IEC60068-2-32
- Other
  - European Standard: 2002/95/EC Directive (RoHS)
  - NEMA TS2 Compliant
- Regulatory Approvals
  - RoHS 2002/95/EC
  - CE
  - FCC
  - UL/cUL



## ORDERING INFORMATION

32062-3 RocketLinX ES8510-XTE

## PRODUCT SUPPORT & SERVICE INFORMATION

### Warranty Information

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

### Sales Support

+1.763.494.4100  
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### Technical Support

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### Email, FTP, and Web Support

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