ROCKET*LINX* ES8510-XT
Industrial Ethernet Switch

HIGHLIGHTS

- Multiple redundant ring (recovery time <5ms)

- 7 10/100BASE-TX ports and 3 Gigabit RJ45/SFP combo ports (10/100/1000 BASE-TX, 100BASE-FX, 1000BASE-X)

- 32Gbps non-blocking, 8K MAC address table

- 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, 802.1x network access control

- Event notification by email, SNMP trap, syslog, digital input and relay output

- -40º to +74º C operating temperature for extreme environments

- Rigid aluminum IP31 housing, excellent heat dispersion, redundant power, DIN-rail/wall-mount installation

- NEMA TS2 compliant

Part Number
32061-6

Extreme Temperature Ratings
-40º to +74ºC

NEMA CERTIFIED TS2

Product Description

The RocketLinx ES8510-XT is a managed Industrial Ethernet Switch, equipped with seven 10/100TX ports and three 10/100/1000 RJ45/100-FX/ Gigabit SX/LX/LHX/ZX/SFP combo ports. Two gigabit ports may be used to form a non-stop Redundant Ring while the third gigabit port enables connection to an upper switch, couple ring or public server. The Gigabit combo port design provides flexibility to choose copper or fiber media supporting 100BASE-FX or 1000BASE-X, Multi-Mode or Single-Mode for a wide variety of distance and installation requirements.

The RocketLinx ES8510-XT is housed in a rugged aluminum enclosure that features an excellent heat dispersing mechanical design and a 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-XT also provides a built-in watchdog timer and digital input and relay output to avoid undetected problems. The RocketLinx ES8510-XT provides the perfect foundation for building your industrial Ethernet infrastructure.

Three Gigabit Ports for Flexible Network Planning
A unique feature to the RocketLinx ES8510-XT is the three Gigabit RJ45/ SFP combo ports, which can improve performance dramatically compared to products with only two Gigabit RJ45/SFP combos. Each combo comes with a flexible connection -- 100Mbps or 1000Mbps, as well as fiber or copper connection options. All together, as many as ten different combinations of port connections are possible. By selecting the appropriate fiber transceivers, the RocketLinx ES8510-XT can meet your industrial application requirements with virtually any transmission distance.

100/1000Mbps SFP
The RocketLinx ES8510-XT SFP socket supports 100BASE-FX Single/ Multi-Mode and 1000BASE-SX/LX/LHX/XD Multi/Single Mode transceivers. The available distance of the 100BASE-FX is up to 30KM. 1000BASE-SX Multi-Mode supports 550M, 1000BASE-LX Single-Mode supports 10KM, 1000BASE-LHX Single-Mode supports 30KM, 1000BASE-XD Single-Mode supports up to 50KM. 1000BASE-ZX Single-Mode supports up to 70KM.

COMTROL®
Network Enabling Devices

SPECIFICATIONS

HARDWARE

• Bus Interface Specification	10/100/1000BASE-TX; 100BASE-FX; 1000BASE-SX/LX/LHX/XD/ZX Gigabit 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; Gigabit 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 802.3AB	1000BASE-TX
IEEE 802.3z	Gigabit Ethernet Fiber
IEEE 802.1D-2004	Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1Q-2003	VLAN Tagging and GVRP
IEEE 802.1p	Class of Service
IEEE 802.3ad	For Port Trunk with Link Aggregation Control Protocol (LACP)
IEEE802.1X	Port Based Network Access Control
IEEE802.3x	Flow Control and Back-Pressure

PERFORMANCE

• Switch Technology	32Gbps Switch Fabric Store and Forward Switch Technology
• System Throughput	14,880pps for 10Mbps; 148,800pps for 100Mbps; 1,488,100 for Gigabit Ethernet
• Number of MAC Address	8K
• Packet Buffer Memory	1Mbits
• Transfer Packet Size	64 bytes to 1522 bytes (with VLAN Tag)
• Priority Queues per Port	4
• Port Trunk (Max)	5 Static Trunk
• VLAN (Max)	64
• DHCP Server	Up to 255 IP Addresses

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**
  IP security to prevent unauthorized access
- **802.1x**
  Port-based network access control
- **DHCP Server**
  Up to 255 IP address, support IP and MAC binding
- **Email 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**
  Multiple uplink paths to upper switches
- **Redundant Ring**
  Rapid Super ring
  Super Ring IEEE

ELECTRICAL SPECIFICATIONS

• Device	
DC Input Voltage	12-48VDC
Current Consumption	
+24VDC	0.8A
Power Consumption (Max)	20W
• 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	-40^0 to +74^0 C
System Off	-40^0 to +74^0 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	(7) 10/100BASE-TX Auto MDI/MDIX, Auto Negotiation
	(3) 10/100/1000BASE-TX, Combo with SFP
• Standard for Optional SFP	1000BASE-SX/LX/LHX/XD/ZX Gigabit Fiber 100BASE-FX
• Port Alarm Relay	Alarm Relay for Port Failure Notification
• Relay Rating	1A Max. @ 24VDC

SERIAL CONSOLE PORT SPECIFICATION

• Connector Type	RJ45
• 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

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	7-56727-32061-6
• 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
- **Other**
  European Standard: 2002/95/EC Directive (RoHS)
  NEMA TS2 Compliant
- **Regulatory Approvals**
  RoHS 2002/95/EC
  CE
  FCC
  UL/cUL

ORDERING INFORMATION

32061-6 RocketLinx ES8510-XT

RECOMMENDED ACCESSORIES

32101-9 PS1060, 60 Watts Industrial DIN Rail Power Supply (24V, 60W, DIN Rail)
32102-6 PS1100, 100 Watts Industrial DIN Rail Power Supply (24V, 100W, DIN Rail)
1200038 24VDC External Power Adapter, Bare Wires (24VDC, 24W, 3-Wire)

PRODUCT SUPPORT & SERVICE INFORMATION

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

Sales Support
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