

ROCKETLINX ES9528

Industrial Managed Switch

HIGHLIGHTS

- 28-port managed switch featuring 10/100-TX and 4-port gigabit RJ45/SFP combo (10/100/1000BASE-TX, 1000BASE-X)
- 12.8Gbps switch fabric
- 8K MAC address table
- Supports jumbo frame up to 9,216 bytes
- Max 12 x 100M rings and 2 gigabit rings aggregation capabilities
- 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 features support IP security, port security, DHCP server, IP and MAC binding, 802.1x network access control
- Event notification by e-mail, SNMP trap, syslog
- -25° to 70° C operating temperature for extreme environments
- Rackmount installation, low-power



Part Number
32070-8

Product Description

The RocketLinx ES9528 is a layer 2 managed Industrial Ethernet switch, equipped with 24 10/100BASE-TX ports and four gigabit RJ45/GBIC combo ports. The four gigabit combo port design allows 10/100/1000 triple speed, and the SFP ports accept all types of gigabit SFP transceivers, including SX, LX, LHX, ZX and XD for a variety of connections and distances. It is specially designed for control rooms and applications where high-port density and performance are required.

The ES9528 is typically mounted within a 19-inch rack, along with other 19-inch public servers or other network devices. When lower industrial switches are aggregated to the ES9528, the 24 port plus 4G

design allows the connection of up to 12 100M rings plus two Gigabit rings. Each having its own ring redundancy protection.

The RocketLinx ES9528 is a fan-less rackmount switch with low-power consumption and supports a wide operating temperature. It supports Jumbo Frame featuring up to 9,216 bytes packet size for large file transmissions.

The embedded software supports full Layer 2 management features, multi-form ring redundancy, network control, monitoring, security and notification. The RocketLinx ES9528 provides the perfect foundation for building your industrial Ethernet infrastructure.

SPECIFICATIONS

HARDWARE

• Bus Interface Specification	10/100/1000BASE-TX 1000BASE-SX/LX/LHX/ XD/ZX Gigabit Fiber
• Enclosure	Black Finished Steel
• Installation Method	19-inch, 1U Rack Mount
• LED Indicators	
Power, Ring Master(R.M)	10/100Base-TX Link/Activity
10/100Base-TX Link/Activity	10/100Base-TX Full/Half Duplex
Gigabit Copper Link/Activity, Duplex	Gigabit SFP Link/Activity
• Dimensions	17.2" x 6.7" x 1.7"
• Product Weight	3.7 lb

TECHNOLOGY

- Standards
 - IEEE802.3 for 10BASE-T
 - IEEE802.3u for 100BASE-TX
 - IEEE802.3ab for 1000BASE-TX
 - IEEE802.3z Gigabit Ethernet Fiber
 - IEEE802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
 - IEEE802.1Q VLAN Tagging and GVRP
 - IEEE802.1p Class of Service
 - IEEE802.3ad for Port Trunk with Link Aggregation Control Protocol (LACP)
 - IEEE802.1X Port Based Network Access Control
 - IEEE802.1AB Link Layer Discovery Protocol
- Protocols
 - IGMP v1/v2/v3, SNMP v1/v2/v3, SNTP, HTTP, HTTPS, SSL, SSH, GMRP, GVRP, DHCP Server/ Client, DHCP Option 82, Syslog, RMON, LACP, RSTP, STP, LLDP
- Flow Control
 - IEEE802.3x Flow Control and Back-Pressure

PERFORMANCE

• Switch Technology	12.8Gbps Switch Fabric Store and Forward Switch Technology
• System Throughput	14,880pps for 10Mbps 148,880pps for 100Mbps 1,488,100 for Gigabit Ethernet
• Number of MAC Address	8K
• Packet Buffer Memory	2Mbits
• Transfer Packet Size	64 – 1536 Bytes
• Jumbo Frame Size	Up to 9216 Bytes
• Priority Queues per Port	4
• Port Trunk (Max)	8 Static Trunk
• Ports per Trunk	2 – 8 Ports
• VLAN (Max)	64
• DHCP Server	Up to 255 Dynamic IP Pool

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, RMON, Dual Firmware Images
- Jumbo Frame Enable/Disable
 - Yes
 - Up to 9216 Bytes
- Link Layer Discovery Protocol (LLDP)
 - LLDP to advertise system/port identity and local network's capability
- SNMP
 - SNMP v1, v2, v3, and Traps
- SNMP MIB
 - MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON, Private MIB
- SNTP
 - SNTP to synchronize time
- Port Trunk
 - Up to 8 Static Trunk and IEEE802.3ad LACP
 - 2 to 8 ports per trunk
- VLAN
 - IEEE802.1Q VLAN, GVRP. Up to 255 VLAN Groups
- Quality of Service (QoS)
 - Four Priority Queues/ Port
 - IEEE802.1 Class of Service and Layer 3 TOS/DiffServ
- IGMP Snooping
 - IGMP Snooping V1/V2/V3 for multicast filtering
 - IGMP Query
- GMRP
 - GVRP Multicast
Registration Protocol

- Rate Control
 - Ingress Filtering for Broadcast, Multicast, Unknown DA or all packets
 - Egress Filtering for all packets
- Embedded Watchdog
 - Embedded hardware watchdog time auto reset system in case of a 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
- Access Control List
 - Permit/ Deny Access Control Lists
- 802.1x
 - 802.1x Port based Network Access Control
- DHCP Server
 - Up to 255 Dynamic IP Pool
- DHCP Option 82
 - Relay the DHCP request to remote server
- Alarm
 - E-mail warning by pre-defined events
- System Log
 - Both Local mode and Server mode supported

NETWORK REDUNDANCY

- Rapid Spanning Tree Protocol (RSTP)
 - IEEE802.1D-2004 RSTP
 - Compatible with Legacy STP
- Rapid Super Ring (RSR)
 - Yes
- Rapid Dual Homing (RDH)
 - Multiple uplink paths to one or multiple switches
- MultiRing
 - Multiple Rapid Super Rings
 - Maximum of 14 Rings at RocketLinx ES9528
- Legacy Super Ring
 - Backward compatible in Client Mode

ELECTRICAL SPECIFICATIONS

- Device
 - AC Input Voltage 90-264VAC
 - Power Consumption (maximum) 20W
- Power Connector 1
- Power Connector Type IEC320-C14 connector

ENVIRONMENTAL SPECIFICATIONS

- Air Temperature
 - System On -25° to 70° C
 - System Off -40° to 85° C
- Operating Humidity
 - Non-condensing 5% to 95%
- MTBF (Mean Time Between Failures) TBD

ETHERNET SPECIFICATIONS

- Connector Type RJ-45
- Number of Ports 28
- Standard for RJ45 Ports
 - (24) 10/100BASE-TX Auto MDI/MDI-X, Auto negotiation
 - (4) 10/100/1000Base-TX, Combo with SFP
- Standard for Optional SFP
 - (4) 1000Base-SX/LX/LHX/XD/ZX Gigabit Fiber
- Ethernet Cable Type
 - CAT-3, CAT-4, CAT-5, CAT-5e (UTP or STP)
- Link Distance 100 Meters
- Port Alarm Relay Alarm Relay for Port Failure Notification

SERIAL CONSOLE PORT SPECIFICATIONS

- Connector Type DB9 Male
- 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

EXPORT INFORMATION

• Packaged Shipping Weight	5.9 lb
• Package Dimensions	19.8" x 3.5" x 12"
• UPC Code	7-56727-32070-8
• ECCN	5A991
• Schedule B Number	8517.62.0050

REGULATORY APPROVALS

- Emissions
 - Canadian EMC Requirements ICES-003
 - European Standard EN55022
 - 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)
- Regulatory Approvals



ORDERING INFORMATION

32070-8 RocketLinx ES9528

RECOMMENDED ACCESSORIES

1200059 SFP, Multi-mode, 1000BASE-GSX (Extended Temperature)

1200060 SFP, Single-mode, 1000BASE-GLX (Extended Temperature)

PRODUCT SUPPORT & SERVICE INFORMATION

Warranty Information

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

Sales Support

+1.763.494.4100
sales@comtrol.com

Technical Support

+1.763.494.4100
www.comtrol.com/support

Email, FTP, and Web Support

info@comtrol.com
ftp.comtrol.com
www.comtrol.com