



RocketLinx® ES9528-XT

Part Number: 32071-5



KEY FEATURES AND BENEFITS::

- 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, Private VLAN, QinQ, 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
- 802.1s MSTP, RSTP and ring and multiple ring for redundant network topologies
- Event notification by e-mail, SNMP trap, syslog
- -40° to +74°C operating temperature for extreme environments
- Rack mount installation, low-power
- NEMA TS2 certified
- RoHS2 compliant under CE
- IPv6 support

PRODUCT DESCRIPTION::

The RocketLinx ES9528-XT is a Layer 2 managed Industrial Ethernet switch, equipped with 24 10/100BASE-TX ports and four Gigabit Ethernet RJ45/SFP 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-XT 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-XT, the 24-port plus 4G design allows the connection of up to twelve 100M

rings plus two Gigabit rings. Each having its own ring redundancy protection.

The RocketLinx ES9528-XT is a fan-less rack mount 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-XT provides the perfect foundation for building your industrial Ethernet infrastructure.



ROCKETLINX SPECIFICATIONS::

HARDWARE

Interface Specification

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

Connector Type

24 - RJ45
4 - RJ45/SFP Combo

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 Full/Half Duplex
Gigabit Copper Link/Activity, Duplex
Gigabit SFP Link/Activity

Serial Console Port

One DB9 RS-232 (TXD, RXD, Signal GND), Baud Rate: 9600bps,
Data Bits: 8, Parity: None, Stop Bits: 1, Flow Control: None

Dimensions

17.2" x 6.7" x 1.7"
440 x 170 x 44 mm

Product Weight

5.5 lbs
2.49 kg

ETHERNET SPECIFICATIONS

Number of Ports

28 Total: 24 - RJ45 and 4 - Combo (RJ45/SFP)

RJ45

10/100/1000BASE-TX, Auto MDI/MDIX, auto-negotiation (Speed/
Duplex Mode)

SFP (Optional)

1000BASE-SX/LX/LHX/XD/ZX, Auto MDI/MDIX, auto-negotiation
(Speed/Duplex Mode)

Cable Types

Cat 3, Cat 4, Cat 5, Cat 5e, Cat 6 (UTP or STP)

Link Distances

RJ45: 100 Meters
SFP: (Depends on model: Single-Mode: 30KM, Multi-Mode: 2KM)

Transfer Packet Size

64 bytes to 1536 bytes

Jumbo Frame Enabled

Up to 9216 bytes

Standards

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

Internet Protocol

IPv4 and IPv6

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

Alarm

Email warning by pre-defined events

System Log

Supports both local mode and server mode

DHCP

DHCP client, DHCP server with IP and MAC address binding, port-
based DHCP server configuration and DHCP relay agent (Option
82)

NETWORK PERFORMANCE

Access Control List

Permit/Deny access control lists

Back-Pressure

IEEE 802.3x: 1000Mbps Half-Duplex Only

Class of Service (CoS)

IEEE 802.1p: 4 priority queues/port

Flow Control Pause Frame

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

GMMP

GARP multicast registration protocol

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, filter rule (ACL)
supports up to 200 rules

LLDP

Provides Link Layer Discovery Protocol, advertizes system and
port identity capability on the local network

Modbus TCP/IP

CLI support for Modbus TCP/IP communications with Function
Code 4 (factory automation). Operates as slave/server device,
while a typical master/client device is a host computer running
appropriate through Ethernet. The Modbus TCP/IP master can
read or write to the Modbus registers provided by the Modbus
TCP/IP application software (SCADA/HMI System).

Packet Buffer Memory

2Mbits

Port-Based Network Access Control

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, filter rule (ACL)
supports up to 200 rules

Port Trunk

IEEE 802.3ad LACP with timer and static port trunk; Trunk
member up to 8 ports and maximum 8 trunk groups including
gigabit Ethernet ports

Private VLAN

Direct client ports in isolated/community VLAN to promiscuous
port in Primary VLAN

RADIUS

Login with RADIUS account/password, key for RADIUS server
authentication

Rate Control

Ingress filtering for broadcast, multicast, unknown DA or all
packets, egress filtering for all packet types

Switch Technology

12.8Gbps switch fabric, Store/Forward switch technology, 8K
MAC address

System Throughput

14,880pps - 10Mbps; 148,800pps - 100Mbps; 1,488,100pps -
1000Mbps

Time Synchronization

Supports IEEE 1588
NTP protocol with Daylight Saving function and Localize Time
Sync function

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. IEEE
802.1 QinQ supports Double VLAN Tag function for implementing
metro network topologies

NETWORK REDUNDANCY

Rapid Spanning Tree Protocol (RSTP)

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

Redundant Ring Technology

Failure Recovery within 0-100ms
Rapid Dual Homing: Multiple uplink paths to upper switches
Ring Trunking: Integrates Port Aggregate Function in ring path to
get higher Throughput Ring
Multiple Ring: Couple or Multiples of up to 14 Rapid Super Rings,
Supports up to 12 x 100M rings plus 2 Gigabit Rings

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 -40° to 85°C
System Off -40° to 85°C

Operating Humidity

Non-condensing 5% to 95%
MTBF (Mean Time Between Failures) 24.98 Years

EXPORT INFORMATION

Packaged Shipping Weight

7.55 lb
3.42 kg

Package Dimensions

19.8" x 3.5" x 12"
50.29 x 8.89 x 30.48 cm

UPC Code

7-56727-32070-8

ECCN

5A992

Schedule B Number

8517.62.0050

REGULATORY APPROVALS

Emissions

European Standard EN55022
European Standard EN61000-6-4
FCC Part 15 Subpart B
Class A limit

Immunity

European Standard EN55024
European Standard EN61000-6-2
EN61000-4-2: Electrostatic Discharge (ESD)
EN61000-4-3: Radiated, Radio-Frequency (RF)
EN61000-4-4: Fast Transient/Burst
EN61000-4-5: Surge
EN61000-4-6: Conducted Disturbance
EN61000-4-8: Magnetic Field
EN61000-4-11: Dips and Voltage Variations

Safety

IEC 60950/EN60950 (LISTED)
CSA C22.2 No. 60950/UL60950 Third Edition

Vibration

IEC60068-2-6

Shock

IEC60068-2-27

Free Fall

IEC60068-2-32

Other

European Standard: 2002/95/EC Directive (RoHS2)
NEMA TS2 Certified

Regulatory Approvals



RECOMMENDED PRODUCTS::

1200059 SFP, Multi-Mode, 550M 1000BASE-GSX
(Extended Temperature)

1200060 SFP, Single-Mode, 10KM 1000BASE-GLX
(Extended Temperature)



Warranty Information

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

Sales Support

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Technical Support

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