Industrial 6-port Managed Ethernet Switch with Fiber Port

HME-423E

Features

High Performance Network Switching Technology

- √ Complies with IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.1p, IEEE 802.1q, IEEE 802.1d, IEEE 802.1w, IEEE 802.1x, IEEE 802.3ad
- √ Provides 4 x 10/100 Mbps Ethernet ports with RJ-45 connector
- √ Provides 2 x 100 Mbps single-mode SC type fiber port
- √ RJ-45 Port support auto MDI/MDI-X crossover
- √ Provides broadcast storm protection
- √ Redundant X-Ring recovery time < 10 ms on full load
- √ Supports Dual Homing – RSTP over X-ring
- √ Supports Ring coupling
- √ SNMP for network management
- √ IGMP snooping for multicast traffic
- √ QoS / ToS to increase network packet determinism
- √ VLAN for easy network planning
- √ Event notification by e-mail, SNMP trap, Syslog & Relay output
- √ Online Port Mirroring for online debugging
- √ Supports IP security
- √ Configurable by WEB browser
- √ IntraVUE Network Management software compatible

Robust Industrial Design

- √ Robust Aluminum case complying to IP-30 housing standard
- √ Supports operating temperature -10 to 70°C Extended temperature -40 to 80°C
- √ DIN-Rail, Panel mount or desktop installation
- √ High level of immunity to electromagnetic interference typically found in industrial plant environments or external curb side enclosures

Reliable Power Design

- √ Wide range redundant power design
- √ Equipped with Redundant power inputs
- √ Supports 12 to 48VDC redundant power with polarity reverse protection
- √ Removable terminal block

Overview

The Husky Series HME-423 is a highly reliable and fault-tolerant Industrial 6-port Managed Ethernet Switch with four 10/100 Mbps Ethernet ports and two single-mode fiber ports. With the optic port, HME-423 transmits data at high speed for long distances up to 30 km with an SC connector. With its high performance switching device, HME-423 provides redundant self-recovery mechanism in less than 10ms on full load which allows you to establish a redundant Ethernet network to build a back-up ring topology. Dual homing and Ring coupling are supported to add reliability by allowing a device to be connected to be network by way of two independent connection points. HME-423 offers powerful network management functions including SNMP, SMTP, SNTP, Quality of Service, Class of Service, IGMP, Snooping, DHCP, VLAN, Port Mirror, and IP Security. The HME-423 is equipped with a terminal block to provide dual power inputs with reverse polarity protection. Its IP-30 housing protection, wide operating temperature of -10 to 70°C and DIN-Rail mounting is suitable for an industrial environment. The E version extends the temperature rating to -40 to 80°C. The HME-423 is a plug-and-play solution for your Industrial Ethernet applications.

Hardware Specifications

Interface

RJ-45 Ports: 4 10/100Base-TX auto-negotiation speed, Full/Half duplex, auto MDI/MDI-X

Fiber Ports: 2 100Base-FX single-mode port (SC connector)

LEDs:
Per unit: Power (Green), Power 1 (Green), Power 2 (Green), Fault (Red), Master (Green)
8 10/100: Link/Activity (Green), Full duplex/Collision (Orange)
Fiber: Link/Activity (Green)

Alarm: Relay output for port break and power failure
Current carry ability (1A at DC 24V)

Power Input: VDC 12 to 48V
Redundant power with removable terminal block

Power Protection: Power Reverse Polarity

Power Consumption: 11 watts

Dimensions: IP-30 standard, 54 mm (W) x 152 mm (H) x 105 mm (D)

Installation: DIN-Rail, Panel mount or desktop

Environmental

Operating Temp: -40 to 80°C

Storage Temp: -40 to 85°C (-40 to 185°F)

Operating Humidity: 5% to 90% RH (non-condensing)

Technical Specifications

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1d Spanning Tree Protocol
IEEE 802.1w Rapid Spanning Tree
IEEE 802.1p Class of service
IEEE 802.1q VLAN Tagging

RFC Standard:
RFC2030 SNTP, RFC 2821 SMTP, RFC 1215 Trap, RFC2233 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 2665 Ethernet like MIB, RFC 2819 RMON MIB, Private MIB

Network Media:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m)
100Base-TX: 2-pair UTP/STP Cat. 5/5e cable EIA/TIA-568 100-ohm (100m)

Packet Filter:
Broadcast packet filtering
-Number of MAC (50 Tables)
-IP Address Security (10 Sections)

Protocol Technology: CSMA/CD

Switching Architecture: Store and Forward

Performance

Data Transfer Rate:
14,880 pps for Ethernet port
148,800 pps for Fast Ethernet port

MAC Address: 8K

Memory Buffer: 1 Mbytes

System Log: Supported

Back-plane: 1.6 Gbps

Port Statistics: Supported

Flow Control: Full-duplex and Back Pressure for Half-duplex

Packet Filter: Broadcast/Multi-cast/Unknown Broadcast storm packet filter

Transfer Packet Throughput: 1.19Mpps @ 64bytes

Regulatory Approvals

EMI: FCC Class A

EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4,
EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

Safety: UL, cUL, CE/EN60950

Shock: IEC60068-2-27

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

Class 1 DIV 2: Pending*

DNV: Pending *

Environmental: WEEE, RoHS

MTBF: 325,000 hrs based on Mil-Hdbk-217F, GB

Warranty: 5 years

Management Specifications

Redundancy:
STP, RSTP
Dual Homing, Ring Coupling
X-Ring with recovery time < 10ms

Management Protocols:
SNMP v1/v2c, SMTP, SNTP, IGMP v1/v2 & Query mode, DHCP/Client, TFTP

MIB: MIB-II, Bridge MIB, Ethernet like MIB, VLAN MIB, Private MIB

Configuration:
Web interface management
Default button is available to restore default settings

VLAN:
Port Based VLAN
IEEE 802.1Q Tag VLAN (256 entries)
VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.)
GVRP (256 Groups)*
Double Tag VLAN (Q in Q)*
Private VLAN*

Quality of Service:
The quality of service determined by port,
Tag and IPv4 Type of service,
IPv4/IPv6 Different Service*

Port Mirroring: Support 3 mirroring types: “RX, TX and Both packet”

IP Security:
Support 10 IP address accounts for system management security for Web, SNMP and Telnet management security to prevent intruder.

IGMP Snooping: v1 and v2, query mode, multicast group with 256 entries

Class of Service: Support IEEE802.1p class of service, per port provides 4 priority queues

System Log: Support System log record and remote system log server

SNMP Trap: Up to 3 Trap stations
Cold start, Port link up, Port link down, Authentication Failure,
Private Trap for power status, Port Alarm configuration,
Fault alarm, X-Ring topology change

DNS: Provide DNS client feature and support Primary and Secondary DNS server*

SMTP: Support SMTP Server and 6 e-mail accounts for receiving event alert

SNTP: Support SNTP to synchronize system clock in Internet