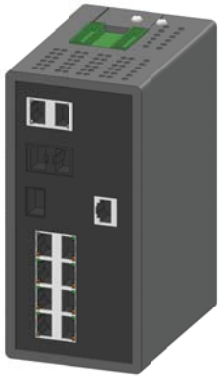
Industrial 10-port Gigabit Managed Ethernet Switch with Fiber Port



HMG-738

Features

High Performance Network Switching Technology

- √ Complies with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3X, IEEE 802.1p, IEEE 802.1q, IEEE 802.1d, IEEE 802.1w, IEEE 802.1x, IEEE 802.3ad, IEEE 802.3z, IEEE 802.1ab
- √ Provides 7 x 10/100 Mbps Ethernet ports with RJ-45 connector
- √ Provides 3 combo ports
- √ RJ-45 Port support auto MDI/MDI-X crossover
- √ Provides broadcast storm protection
- √ Redundant X-Ring re
- √ 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
- √ Recovery time < 10 ms on full load

Robust Industrial Design

- √ Robust Aluminum case complying to IP-30 housing standard
- √ Supports operating temperature -10 to 70℃ & Extended temperature -40 to 80℃
- √ DIN-Rail, Panel mount or desktop installation
- √ High level of immunity to electromagnetic interference power supply surges typically found in industrial plant environments or external curb side enclosures
- √ Supports DIDO function for integration with sensors and alarms in IP networks

Reliable Power Design

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

Overview

The Husky series HMG-738 is a highly reliable and fault-tolerant Industrial 10-port Gigabit Managed Ethernet Switch. It supports state of the art design with seven 10/100 Mbps Ethernet ports and three small form pluggable (SFP) ports that supports Gigabit SX or LC depending on your existing network structure. For integration with sensors and alarms in IP networks such as surveillance equipments, digital input in embedded in the unit. With high performance switching device, HMG-738 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. HMG-738 offers powerful network management functions including SNMP, SMTP, SNTP, Quality of Service, Class of Service, IGMP, Snooping, LACP, DHCP, VLAN, RMON, Port Trunk, Port Mirror, User Authentication and IP Security. The HMG-738 is equipped with a terminal block to provide dual power inputs with reverse polarity protection. Its IP-31 housing protection, wide operating temperature of -10 to 70℃ and DIN-Rail mounting is suitable for an industrial environment. The E version comes with -40 to 80℃ .

Hardware Specifications

Interface

RJ-45 Ports: 7 10/100Base-TX auto-negotiation speed, Full/Half duplex, auto MDI/MDI-X

Fiber Ports: 3 combo ports

LEDs: Per unit: Power (Green), Power 1 (Green), Power 2 (Green), Fault (Red), Master (Green)
10/100TX : Link/Activity (Green), Full duplex/Collision (Amber)
Giga Copper: Link/Activity (Green), Speed (1000Mbps Green)
SFP: Link/Activity (Green)

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

Connector: 10/100TX: 7 x RJ-45
Combo ports: 3 x RJ-45 + 3 x 100/1000 SFP sockets
RS-232 connector: RJ-45 type

DIDO: 2 Digital Input (DI)
2 Digital Output(DO)

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

Power Protection: ESD (Ethernet)
Surge: 1500VDC
Power Reverse Polarity

Power Consumption: 12.15 watts

Dimension: IP-30 standard, 72 mm (W) x 152 mm (H) x 105 mm (D)

Installation: DIN-Rail, Panel mount or desktop

Environmental

Operating Temp: Regular: -10 to 70℃

Storage Temp: -40 to 85℃ (-40 to 185℉)

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

Technical Specifications

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX
IEEE 802.3ab 1000Base-T
IEEE 802.3z Gigabit fiber
IEEE 802.3x Flow Control and Back Pressure
IEEE 802.3ad Port trunk with LACP
IEEE 802.1d Spanning Tree/ IEEE802.1w Rapid Spanning Tree
IEEE 802.1p Class of Service
IEEE 802.1q VLAN Tag
IEEE 802.1x User Authentication (Radius)
IEEE 802.1ab LLDP

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/ 5E cable
EIA/TIA-568 100-ohm (100m)
100Base-TX: 2-pair UTP/STP Cat. 5/ 5E cable
EIA/TIA-568 100-ohm (100m)
1000Base-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
1,488,000pps for Gigabit Fiber Ethernet port

MAC Address: 8k

Memory Buffer: 4Mbytes

System Log: 1000 records

Back-plane: 7.4 Gbps

Port Statistics: Supported

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

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

Transfer Packet Throughput: 14.88Mpps @ 64 bytes

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, Dual Ring*
X-Ring with recovery time < 10 ms

Management Protocols:
SNMP V1/V2c/v3/WEB/Telnet/CLI,
RMON, SMTP, SNTP, IGMP V1 & Query mode, DHCP/Client, TFTP

MIB: RFC 1215 Trap, RFC1213 MIBII, RFC 1157 SNMP MIB,
RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 , RFC 1757,
RSTP MIB, Private MIB

Configuration:
Web interface management

VLAN:
Support Port based VLAN/Tag VLAN (256 entries)
VLAN ID (Up to 4K)
GVRP (256 Groups)
Static VLAN groups up to 256, the VLAN ID can be assigned from 1 to 4094

LLDP: Support LLDP to allow switch to advise its identification and capability on the LAN

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”

MAC IP Security:
Supports ingress and egress MAC address filter
and static source MAC address lock, Dumping MAC address Table
Ingress/Egress MAC address security

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

IGMP Snooping:
Supports IGMP snooping v1,v2
256 multicast groups and IGMP query
Supports multicast filter

Bandwidth Control:
Supports ingress packet filter and egress packet limit
The egress rate control supports all of packet type
and the limit rates are 100K~250Mbps
Ingress filter packet type combination rules are Broadcast/Multicast/Unknown
Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all of packet.
The packet filter rate can be set from 100k to 250Mbps

LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members

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

E-mail Warning: Pre-defined events

SNMP Trap: Cold start, link down, link up, authorization fail,
X-ring topology Change, Power alarm trap,Trap station up to 3

SMTP: Support up to 6 e-mail accounts

Firmware upgrade: By TFTP