



## HMG-628GE-CD

### 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, IEEE 802.3z, IEEE 802.3ab
  - ✓ Provides 6 x 10/100/1000Base-TX Ethernet ports with RJ-45 connector
  - ✓ Provides 2 combo ports
  - ✓ SFP supports DMI (Digital Monitoring Interface)
  - ✓ RJ-45 ports 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 (port based, Tag VLAN & GVRP)
  - ✓ Event notification by e-mail, SNMP trap, Syslog & Relay output
  - ✓ Online Port Mirroring for online debugging
  - ✓ Supports IP security, port security & login 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 -40 to 80°C
  - ✓ 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
  - ✓ **Reliable Power Design**
  - ✓ Wide range redundant power design
  - ✓ Equipped with redundant power inputs
  - ✓ Supports 24 to 48VDC redundant power with polarity reverse protection
  - ✓ Supports 24VAC
  - ✓ Removable terminal block



### Overview

The Husky Series HMG-628GE-CD is an extremely powerful gigabit switch designed to be the best Industrial Extended Temperature 8-port Full Gigabit Managed Ethernet Switch in the industry. It supports state of the art design with six 10/100/1000T Ethernet ports and two small form pluggable (SFP) ports that supports dual mode (100/1000) and Digital Monitoring Interface (DMI). The DMI technology in SFP enhances the digital interface which allows real-time access to device operating parameters. SFP supporting DMI is capable of real time monitoring of RX received optical power, TX output power, Laser Bias current, temperature, supply voltage & wavelength. HMG-628GE-CD 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-628GE-CD offers powerful network management functions including SNMP, SMTP, SNTIP, Quality of Service, Class of Service, IGMP, Snooping, LACP, DHCP, VLAN, RMON, Port Trunk, Port Mirror, User Authentication (Radius) and IP Security. The HMG-628GE-CD is equipped with a terminal block to provide dual power inputs (12-48 VDC and 24VAC) with reverse polarity protection, 4000 VDC EFT and 8000 VDC ESD protection. Its IP-30 housing protection, wide operating temperature of -40 to 80°C and DIN-Rail mounting is suitable for an industrial environment. The HMG-628GE-CD is a plug-and-play solution for your Industrial Ethernet applications compliant to Class 1 Division 2 environments.

### Hardware Specifications

#### Interface

**RJ-45 Ports:** 6 10/100/1000Base-TX auto-negotiation speed, Full/Half duplex, auto MDI/MDI-X

**Fiber Ports:** 2 combo ports, DMI (Digital Monitoring Interface) supported

**Console port:** RS-232 connector

**LEDs:** Per unit: Power (Green), Power 1 (Green), Power 2 (Green), Fault (Red), Master (Green)  
Per port: 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)

**Power Input:** VDC 24-48V, 24VAC  
Redundant power with removable terminal block

**Power Protection:** ESD: 8000 VDC, EFT: 4000 VDC  
Power Reverse Polarity

**Power Consumption:** 18.96 watts

**Dimensions:** IP-30 standard, 59.6 mm (W) x 152 mm (H) x 105 mm (D)

**Installation:** DIN-Rail, panel mounting or desktop

#### Environmental

**Operating Temp:** Regular: -40 to 80°C

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

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

### 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:** 16 Gbps

**Local Configuration:** RJ-45 connector for RS-232 interface

**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:** 14.88Mpps @ 64 bytes

## 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)

### RFC Standard:

RFC2030 SMTP, 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

## 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  
UL508  
Class 1 Division 2

**Shock:** IEC60068-2-27

**Vibration:** IEC60068-2-6

**EMC:** CE, FCC Class A

EN61000-6-4, EN61000-6-2, EN61000-4-2 (ESD), EN61000-4-3 (Radiated RFI)  
EN61000-4-4 (Burst), EN61000-4-5 (Surge), EN61000-4-6 (Induced RFI)  
EN61000-4-8 (Magnetic Field), EN61000-4-11 (Voltage Dip)  
EN61000-3-2 (Harmonics Current), EN61000-3-3 (Voltage Fluctuation & Flickers)

**Freefall:** IEC60068-2-32

**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, RMON, 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

### VLAN:

Port-based VLAN/Tag VLAN (256 entries)  
VLAN ID (Up to 4K)  
GVRP (256 Groups)  
Double Tag VLAN (Q in Q)\*\*  
Static VLAN groups up to 256, the VLAN ID can be assigned from 1 to 4094

**LLDP\*:** Supports LLDP to allow switch to advise its identification and capability on the LAN

**Quality of Service:** Hardware supports 4 queues per port

**Port Mirroring:** Online traffic monitoring on selected ports

### MAC IP Security:

Ingress and egress MAC address filter and static source MAC address lock,  
Dumping MAC address Table, Ingress/Egress MAC address security,

### IP Security:

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

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

### Port Mirror:

Global system supports 3 mirroring types: "RX, TX and Both packet".  
Maximum of 8 entries

**Class of Service:** Per port 4 queues

**Email 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:** Up to 6 e-mail accounts

**Firmware Upgrade:** By TFTP

### Bandwidth Control:

Supports ingress packet filter and egress packet limit  
The egress rate control supports all packet types  
and the limit rates are 100K-250Mbps  
Ingress filter packet type combination rules are Broadcast/Multicast/Unknown  
Unicast packet, Broadcast/Multicast packet  
The packet filter rate can be set from 100k to 250Mbps

### Flow Control:

Support sFlow Control for Full-duplex and Back Pressure for Half-duplex

### DMI:

DMII(Digital Monitoring Interface)  
supports real time monitoring of RX Received Optical Power,  
TX Output Power, Laser Bias Current, Temperature, Supply Voltage and Wavelength

**DHCP:** Provides DHCP Client/DHCP Server functions

**DNS:** Provides DNS client feature and supports Primary and Secondary DNS server

**SNTP:** Supports SNTP to synchronize system clock in Internet

### Configuration upload and download:

Supports binary configuration file for system quick installation

### ifAlias:

Each port allows importing 128bit of alphabetic string of word on SNMP  
and CLI interface