MG460 Switch

460-Switch Compliant with IEC 61162-460 & IACS UR E27
Gigabit Managed Switch for Maritime Systems



INTRODUCTION

The MG460 Switch is a maritime-grade managed Gigabit Ethernet switch designed for ship-wide deployment, including bridge, engine room, cargo, and accommodation networks. Designed to comply with **IEC 61162-460 Edition 3 (2024), IEC 60945 Edition 4,** and **IACS UR E10** requirements, it supports vessel network operation with flow-based bandwidth management, traffic prioritization, and redundancy features for operational continuity at sea.

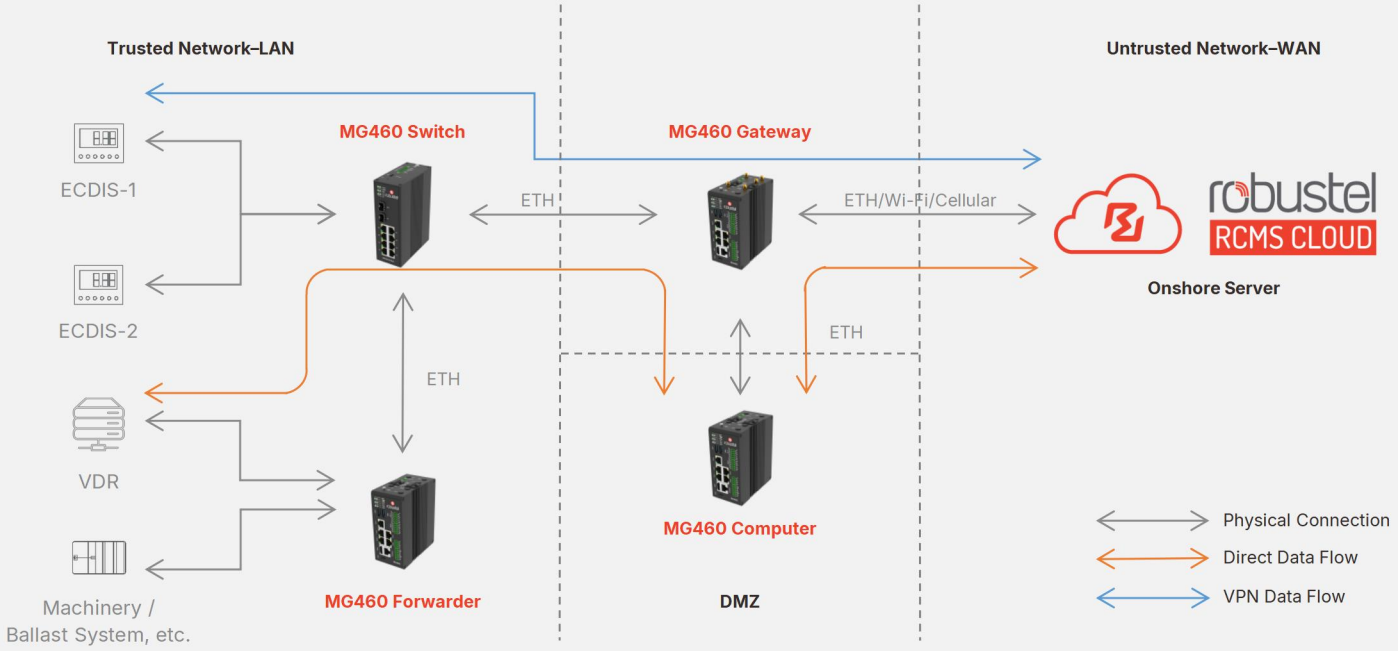
As part of the Robustel MG460 product family (Gateway, Forwarder, Computer, Switch), the MG460 Switch provides the Layer 2+ switching foundation for complete, cyber-secure 460-network architectures. It is engineered to help maritime OEMs, integrators, and vessel IT teams build compliant network segmentation and predictable performance across critical onboard systems.

For flexible deployment, the MG460 Switch provides 8 x Gigabit RJ45 ports and 2 x SFP slots for fiber or copper uplinks, with non-blocking wire-speed switching and Layer 2+ features such as VLAN, QoS, IGMP snooping, RSTP, and MRP. Mission-critical reliability is reinforced with dual redundant DC power inputs, an alarm relay output for system integration, and a USB-C console port for configuration and diagnostics—supported by Web UI, CLI, SNMP, and USB-C console access in a rugged design built for harsh marine environments.

KEY FEATURES

- **Full Gigabit Switching Performance:** The MG460 Switch provides Gigabit Ethernet performance on all RJ45 ports and 1000/2500BASE-X support on SFP uplinks. This delivers the bandwidth required for demanding maritime applications including INS, ECDIS, RADAR, VDR, CCTV, and other onboard marine systems.
- **Purpose-Built Architecture:** The MG460 Switch is a dedicated Layer 2+ switch designed for optimized switching performance, simplified configuration, and cost-effective deployment.
- **Marine-approved Hardware Design:** Designed to meet IACS UR E10 and IEC 60945 Edition 4 requirements for environmental testing, EMC immunity, and electrical safety for marine installations.
- **Complete Product Family:** Combine the MG460 Gateway, MG460 Forwarder, MG460 Computer, and MG460 Switch to create a network architecture that complies with IEC 61162-460 device roles and IACS UR E26 network segmentation requirements.
- **Interfaces:** 8 x Gigabit RJ45, 2 x SFP, 1 x USB-C console

APPLICATION EXAMPLE



SPECIFICATIONS

Ethernet Port (PoE PSE available when the input voltage is above 44 VDC)	
Number of ports	8 x 10/100/1000BASE-T RJ45 (G1–G8)
PoE ports	G1–G8
PoE standards	IEEE 802.3af, 802.3at
PoE max power per port	Up to 30 W
Total PoE power budget	Up to 120 W (dependent on power supply capacity)
Fiber Port	
Number of ports	2 x SFP slots, 1000/2500BASE-X (G9–G10)
Console Port	
Number of ports	1 x USB-C console port (isolated USB device)
Relay Output Port*	
Number of ports	1 x Alarm Relay (dry contact)
Digital Input*	
Number of ports	1 x Digital Input (wet contact)
Switching Performance	
Switching capacity	26 Gbps (non-blocking, full duplex)
Forwarding rate	19.34 Mpps (wire-speed)
Latency	<10 µs (store-and-forward)
MAC address table	8,192 entries
Jumbo frames	Up to 9,600 bytes
Layer 2+ Features	
VLAN	IEEE 802.1Q, up to 4k VLANs
Spanning tree	STP (802.1D), RSTP (802.1w), MRP*
IGMP snooping	v1/v2/v3, IGMP Querier, 256+ multicast groups
Link aggregation*	Static LAG and LACP (802.3ad)
Port mirroring*	Many-to-one, ingress/egress/both
Storm control	Broadcast, multicast, unknown unicast
Quality of Service (QoS)	
Priority queues	8 queues per port
Classification	Port-based, 802.1p CoS, DSCP
Scheduling	Strict Priority (SP), Weighted Round Robin (WRR)
Rate limiting	Per-port ingress and egress

NOTE: *Available in future software release.

IEC 61162-460 Compliance	
Flow management	Up to 256 concurrent flows with 5-tuple classification
Bandwidth control	Guaranteed (CIR) and maximum (PIR) per flow
Admission control	Prevents oversubscription
Flow monitoring	Real-time bandwidth usage, statistics, alerts
Security	
Standard	IEC 62443-4-2 (SL-C 2)*
Access control	Role-based (Admin/Operator/Viewer)
Port security	MAC address limiting
Firmware security	Secure boot, dual-bank with automatic rollback
Management	
Web interface	HTTPS with TLS 1.2/1.3
Command line	SSH (v2), USB-C console
SNMP	v1, v2c, v3 (authentication + encryption)
Other	Syslog, NTP client, RCMS, TFTP/SCP firmware update
Power Supply	
Input voltage	Dual redundant 24 VDC (type-approved for maritime) 9.6–60.0 VDC (absolute input range)
Physical Characteristics	
Housing & Weight	Metal, 553 g
Dimensions	49 x 105 x 143 mm
Installation	Desktop, wall mounting & 35 mm DIN rail mounting
Operating temperature	-25 to +70 °C
Regulatory and Type Approvals	
Environmental	RoHS 2.0
Vibration & Shock	IEC 60068-2-64 & IEC 60068-2-27, 5 g acceleration
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Contact Level 3, Air Level 3 EN 61000-4-3 (RS) Level 3 EN 61000-4-4 (EFT) Level 3 EN 61000-4-5 (Surge) Level 3 EN 61000-4-6 (CS) Level 3
Accessories (optional)	
Fiber SFP module	2.5G SFP 1310 nm 2 km LC optical transceiver
Copper SFP module	1000BASE-T copper SFP transceiver

ORDERING INFORMATION

Model	Order Code	Region	Certifications	Package Contents
MG460SW-08GP2S	A015600001	Global	CE, UKCA, RCM, FCC, IC DNV IEC 61162-460* DNV IACS UR E27* CCS IACS UR E27* IEC 62443-4-2*	1 x MG460 Switch (B Code: B015600001) 1 x DIN Rail Mounting Kit

NOTE:
1. * Denotes certification in progress.

© 2026 Guangzhou Robustel Co., Ltd. All rights reserved.
Subject to change without notice.