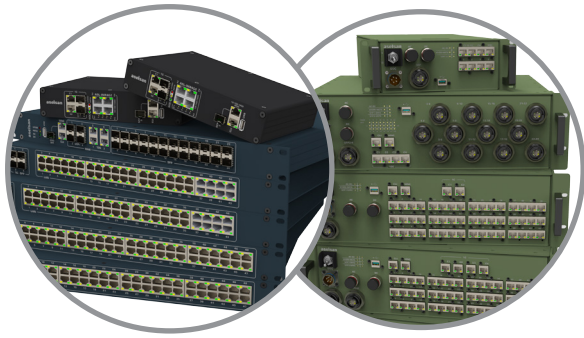


# ETHERNET SWITCH FAMILY

## MILITARY AND INDUSTRIAL TYPE ETHERNET SWITCH DEVICES



Military Models	Industrial Models	Configuration / Port Numbers
ETHS-M-08FE2GE-P	ETHS-I-8FE2GE-P	8 x 10/100Base-T Fast ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo, 8 x PoE+
ETHS-M-12FE2GE-N	ETHS-I-12FE2GE-N	12 x 10/100Base-T Fast ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-12FE2GE-P	ETHS-I-12FE2GE-P	12 x 10/100Base-T Fast ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo, 12 x PoE+
ETHS-M-16FE4GE-N	ETHS-I-16FE4GE-N	16 x 10/100Base-T Fast ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-16FE4GE-P	ETHS-I-16FE4GE-P	16 x 10/100Base-T Fast ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo, 16 x PoE+
ETHS-M-24FE4GE-N	ETHS-I-24FE4GE-N	24 x 10/100Base-T Fast ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-24FE4GE-P	ETHS-I-24FE4GE-P	24 x 10/100Base-T Fast ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo, 24 x PoE+
ETHS-M-08GE2GE-P	ETHS-I-08GE2GE-P	8 x 10/100/1000Base-T ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo, 8 x PoE+
ETHS-M-08GE2XG-P	ETHS-I-08GE2XG-P	8 x 10/100/1000Base-T ETHERNET, 2 x 10 Gigabit ETHERNET/SFP+ Combo, 8 x PoE+
ETHS-M-12GE2GE-N	ETHS-I-12GE2GE-N	12 x 10/100/1000Base-T ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-12GE2GE-P	ETHS-I-12GE2GE-P	12 x 10/100/1000Base-T ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo, 12 x PoE+
ETHS-M-16GE4GE-N	ETHS-I-16GE4GE-N	16 x 10/100/1000Base-T ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-16GE4GE-P	ETHS-I-16GE4GE-P	16 x 10/100/1000Base-T ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo, 16 x PoE+
ETHS-M-24GE4GE-N	ETHS-I-24GE4GE-N	24 x 10/100/1000Base-T ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-24GE4GE-P	ETHS-I-24GE4GE-P	24 x 10/100/1000Base-T ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo, 24 x PoE+
ETHS-M-48GE4GE-N	ETHS-I-48GE4GE-N	48 x 10/100/1000Base-T ETHERNET, 4 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-48GE4XG-N	ETHS-I-48GE4XG-N	48 x 10/100/1000Base-T ETHERNET, 4 x 10 Gigabit ETHERNET/SFP+ Combo
ETHS-M-48GE2XG-N	ETHS-I-48GE2XG-N	48 x 10/100/1000Base-T ETHERNET, 2 x 10 Gigabit ETHERNET/SFP+ Combo (WAN Stacking: 4 x 10 Gigabit ETHERNET/SFP+)
ETHS-M-48GE2GE-N	ETHS-I-48GE2GE-N	48 x 10/100/1000Base-T ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo
ETHS-M-24SE4XG-N	ETHS-I-24SE4XG-N	24 x 1000Base-LX/SX/ZX SFP, 4 x 10 Gigabit SFP+ Combo
ETHS3-M-4GE2GE-N	ETHS3-I-4GE2GE-N	4 x 10/100/1000Base-T ETHERNET, 2 x 1 Gigabit ETHERNET/SFP Combo Layer 3 Switch



# ETHERNET SWITCH FAMILY

## MILITARY AND INDUSTRIAL TYPE ETHERNET SWITCH DEVICES

### Performance Features

- Wirespeed Switching
- Non-Blocking Switching
- 16K MAC Address Table
- 8 Different Priority Queuing
- 10 KByte Jumbo Frame
- Traffic Shaping
- IPv4 and IPv6

### Power Supply

- Integrated AC/DC Power Supply
- IEEE802.3at and IEEE802.3af compatible PoE+ Power Supply
- DC Input: 19-32 VDC
- AC Input: 110/220 VAC 50 Hz

### Physical Layer Protocols

- Flow Control: Half Duplex and Full Duplex
- IEEE 802.3i (10Base-T 10 MBit/s over TP)
- IEEE 802.3u (100Base-TX, 100Base-T4 100 MBit/s over TP)
- IEEE 802.3ab (1000Base-T 1 GBit/s over TP)
- IEEE 802.3z (1000Base-X 1 GBit/s over FO)
- SyncE (Copper Ports)

### Physical Properties

Military Type Operating Temperature	-40°C +70°C (MIL-STD-810-G Method 502.5 Method 501.5)
Industrial Type Operating Temperature	-40°C +70°C (IEC 600068-2-1; IEC 600068-2-2)
Military Type Storage Temperature	-40°C +85°C (MIL-STD-810-G Method 502.5 Method 501.5)
Industrial Type Storage Temperature	-40°C +70°C (IEC 600068-2-1; IEC 600068-2-2)
Military Type Humidity	%95 @+40°C (MIL-STD-810-G Method 507.5)
Industrial Type Humidity	%95 @+40°C (IEC 60068-2-78)
Military Type IP Protection	IP65
Industrial Type IP Protection	IP30
Military Type Vibration	Vibration (MIL-STD-810-G Method 514.6)
Industrial Type Vibration	Free Fall, Shock, Vibration-Sinusoidal (IEC 60068-2-31; IEC 60068-2-27; IEC 60068-2-6)
Fanless Cooling	
Military Type EMI/EMC Compatibility	MIL-STD-461-E (CE102, CS101, CS114, CS115, CS116, RE102, RS103)
Industrial Type EMI/EMC Compatibility	FCC Class A, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-4-11, CE EN61000-4-12, CE EN61000-6-2, CE EN61000-6-4
Safety	CE/EN 60950-1

### Protection

- High Current Protection
- High Voltage/Low Voltage Protection
- Thermal Protection

### Data Link Layer Protocols

- LACP (IEEE 802.3ad)
- STP (IEEE 802.1d)
- MSTP (IEEE 802.1s)
- RSTP (IEEE 802.1w)
- VLAN (IEEE 802.1q), VLAN Tagging/VLAN Trunking
- LLDP
- QoS Policy, IEEE 802.1p, ToS
- IP DiffServ and ToS based QoS
- Strict Priority and Weighted Fair Queueing
- Port Mirroring
- IP Access Security
- AVB

### Internet Layer Protocols

- IGMP v3, IGMP Snooping, MLD Snooping
- IP Access Security
- Login Security
- MAC Address Authentication (IEEE 802.1x)
- Static Routing (32 Routes)
- TWAMP

### Application Layer Protocols

- DHCP (Server, Client, Relay)
- SNMP (SNMPv1/v2/v3)
- RMON
- DNS
- SNTF
- PTP (IEEE 1588 v2)
- TFTP

### Configuration Interfaces

- SNMP
- CLI
- Console Interface
- USB
- TELNET
- SSHV1/2 Support
- WEB Management Interface (https)
- Remote Configuration Backup and Upload
- Software Upgrade and System Report with TFTP
- TACACS+ Support
- ModbusTCP Support
- Network Management Software

