18-port Managed Industrial Switch

TI-2016G-2DGS

18-port Managed Industrial Ethernet Switch

2.5Gbps fiber uplink interfaces with alarm output interface

Overview

Teroline's TI-2016G-2DGS is a Managed Industrial Ethernet Switch with 16 x 10/100/1000Base-T ports, 2 x 1000/2500Base-X ports. It is featured with full L2 features such as VLAN, QoS, IGMP, Port Mirroring, LLDP, security, ring protection and IPv4/6 based network management.

TI-2016G-2DGS is an ideal solution designed with input 12-58VDC, redundant inputs with polarity reverse and over-voltage protection, enclosed in a robust IP40 fan-less housing with DIN-rail installation clamp to support extended operation temperature from -40°C to 75°C as well as enhanced EMI/EMC capability. It is a powerful and easy-to-deploy solution for most industrial environment, such as manufacturing, transportation, electricity, oil & gas, chemistry, video surveillance and other various industry automation networks.
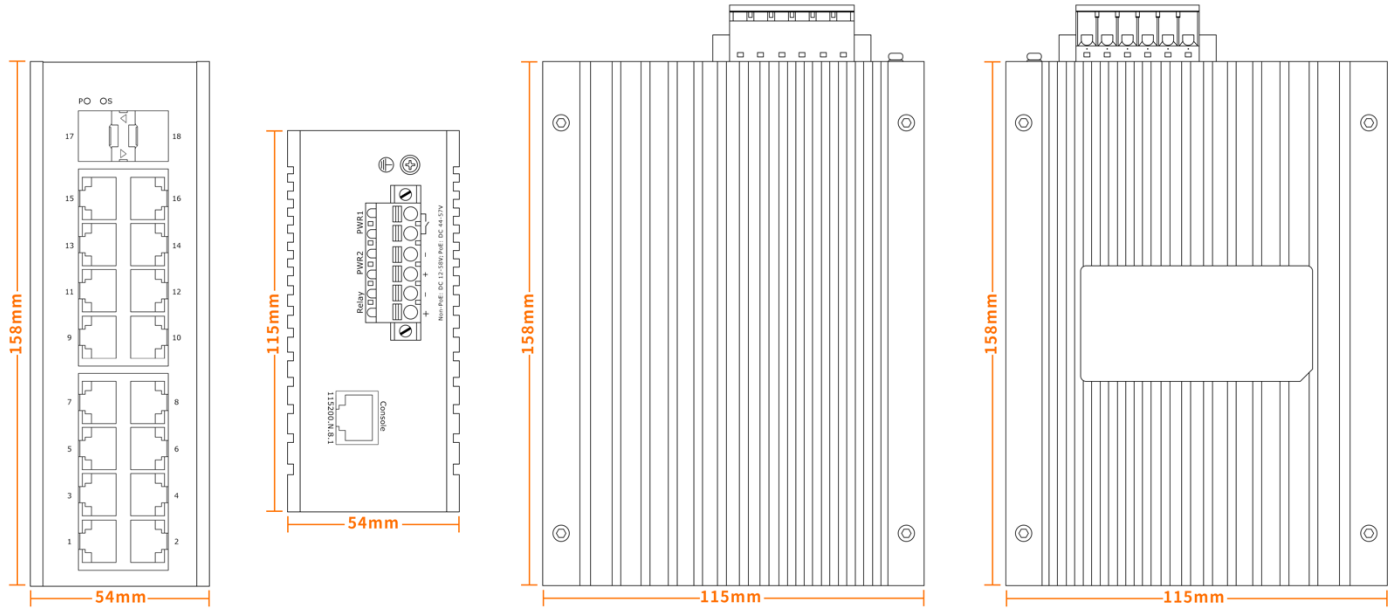
Key features

> 2 x 1000/2500Base-X SFP fiber interfaces and 8 x 10/100/1000BASE-T RJ45 LAN interfaces, one Digital Output port for alarm relay

> Full L2 switching functions and network management

> ITU-T G.8032 standard ERPS Ring with sub-20ms switchover time

> Up to 10K Bytes Jumbo Frame support

> IP40 protection level, Fan-less design, and DIN-rail mounted

> 6KV surge protection; ESD: 8KV/contact, 15KV/air protection

> Dual redundant DC12-58V inputs, with reverse & over-voltage protection

> Operation temperature from -40 to +75°C

Specifications

Interface Specifications	Fiber port	2 * 1000/2500Base-X SFP
	Copper port	16 * 10/100/1000Base-T (RJ45)
	Management Port	1 * RJ45 Console
	Alarm Relay	1 * Digital Output for alarm relay, 1A@24VDC
Power Specifications	Input voltage	12-58VDC, redundant inputs
	Input current	1.3A max
	Power consumption	≤ 15W (full load)
	Power interface	6-pin terminal block, Pin 5 & 6 for alarm relay
	Reverse polarity protection	Supported
	Over-voltage protection	Supported
	Over-current protection	Supported
LED Indicators	1 – PWR (Green)	Power on indicator
	2 – SYS (Green)	PoE working status indicator
	3 – LNK/ACT (Green)	RJ45 port link up/down/act indicator per port
	4 – SPEED (Yellow)	RJ45 port speed indicator per port
	5 – LNK/ACT (Green)	SFP port link up/down/act indicator per port
Specifications	Switching capacity	42Gbps
	Packet forwarding rate	53.5Mpps
	MAC address table	16K
	VLAN	4K
	Buffer	12Mb
	Forwarding delay	< 5us
	Jumbo frame	10K bytes
	Auto MDI/MDIX	Supported
	Watchdog	Supported
L2 Switching	Link Aggregation	Static and dynamic Link Aggregation
	Port-based Features	IEEE 802.3x flow control Port-based traffic statistics Port isolation Broadcast storm control
	VLAN	Access, trunk and hybrid mode Port-based Q-in-Q Flexible Q-in-Q
	Port Mirroring	Multiple to one port mirroring
	Ring Protection	STP/RSTP/MSTP ITU-T G.8032 ERPS, sub-20ms switchover time
	DHCP	DHCP Client DHCP Snooping
	Multicast	IGMPv1, v2 & v3 IGMP Snooping
	ACL	ACL policies based on MAC/IP
	Quality of Service (QoS)	Ingress port-based rate-limiting Egress port-based rate-limiting QoS class remarking Support policy-based QoS SP and WRR queue scheduling

	Security	IEEE 802.1x port/MAC authentication
		RADIUS
		IP Source Guard, port/MAC/IP binding
		ARP inspection and filtering
	Management and Maintenance	HTTP/HTTPS web management
		SNMPv1/v2c/v3 support
		Support IPv6 for management
		Syslog and alarm classification
		Support RMON
		Support LLDP
		Support NTP
		Support optic transceiver DDM
		Support Ping/Tracert for diagnosis
		Support Telnet and SSH connection
		Support TFTP and web for upgrade
Standards	IEEE 802.3	10BASE-T
	IEEE 802.3u	100BASE-TX
	IEEE 802.3ab	1000BASE-T
	IEEE 802.3z	1000Base-X
	IEEE 802.3x	Full-duplex flow control
	IEEE 802.1d/w	Spanning Tree/Rapid Spanning Tree
	IEEE 802.1Q	VLAN
	IEEE 802.1X	Port Authentication
	IEEE 802.1ab	LLDP
	IEEE 802.3ad	LACP
	ITU-T G.8032	ERPS
Environment	Operating temperature	-40°C to +75°C
	Storage temperature	-40°C to +85°C
	Relative humidity	5% to 95% (non-condensing)
	Thermal design	Fan-less, natural heat dissipation
	MTBF	100,000 hours
Standards compliance	Power surge protection	IEC 61000-4-5 (6KV/4KV) (8/20us)
	Ethernet port surge protection	IEC 61000-4-5 (6KV/2KV) (10/700us)
	ESD	IEC 61000-4-2 Level 4 (8K/15K)
	RS	IEC 61000-4-3 80MHz-1GHz: 10V/m
	EFT	IEC 61000-4-4 4K/2K
	CS	IEC 61000-4-6 10V
	Shock	IEC 60068-2-27
	Free fall	IEC 60068-2-32
	Vibration	IEC 60068-2-6
	EMI	FCC Part 15B Class A
	Certifications	CE, FCC, RoHS
Physical parameters	Dimensions	54(W)*115(D)*158(H)mm
	Weight	Net weight 1.41KG
	Protection Level	IP40
	Installation Method	DIN-Rail
Warranty	Standard Warranty	5 years

Physical dimensions

Ordering information

Model	Description
TI-2016G-2DGS	Managed Industrial Ethernet Switch, 16x10/100/1000Base-T RJ45 + 2x1000/2500Base-X SFP ports, DC12-58V dual redundant power inputs, Din-rail, operation temperature: -40°C to +75°C