



DGS-F3700 Series

16, 12 or 20-Port High-Bandwidth Industrial Managed Layer-3 Gigabit PoE Switch

Features

- Up to 16 10/100/1000 RJ45 ports or 100/1000 BASE-X SFP slots, plus 4 dedicated 1/10G Uplink SFP slots
- Up to 8x 802.3af/ 802.3at PoE/PoE+ Power over Ethernet ports, with maximum 30W PoE power per port and up to 240W power budget
- Powerful Layer-3 Switching, supporting BGPv4, IPv4 Static, RIPv1/v2 and OSPFv2
- Redundancy through ITU-T G.8032 ERPS Ring, RSTP, STP, MRP (Manager/ Client), compatible rings & compatible chains
- UL 62368-1:2014, CE/FCC, NEMA TS-2 Certified for traffic control
- IEEE 1588v2 Precision Time Protocol Hardware-Based End-to-End TC
- Wide temperature operations, from -40°C to 70°C

Flexible and cost-effective, this is an ideal industrial solution where high-throughput and high-reliability are fundamental. Especially with NEMA TS-2 Certification, this series is the perfect choice for Smart City and Traffic Control applications.

Unprecedented throughput and power:

DGS-F3700 Series offers 24 versions of up to 20 Gigabit ports, with different port configurations in copper, PoE or fiber, all of which include 4 x 1/10 Gigabit Ethernet SFP uplinks. Specifically designed for bringing power through Ethernet cables virtually anywhere, it supports a maximum of 8 PoE/PoE+ ports (802.3af/at) to produce up to 240W Power over Ethernet output.

Rugged and reliable:

This switch series is EN61000-6-2, EN61000-6-4, IEC/EN/UL62368-1:2014 and FCC Certified, able to withstand the harshest environment and the most demanding EMC environment for almost any application. NEMA TS-2 certification further ensures that it is the perfect choice for smart cities and traffic control. Its fanless design and EMC Level 3 protection guarantee reliable operations between -40 and +70°C, and zero packet loss even with all ports running full power. High-performance network redundancy functions provide self-recovery in less than 20ms on full load, enabling a reliable network through almost any redundant ring topology such as ITU-T G.8032 ERPS Ring, IEEE802.1D-2004 RSTP, STP, MSTP, MRP (Manager/Client), iA-Ring, and iA-Chain.

Secure and smart:

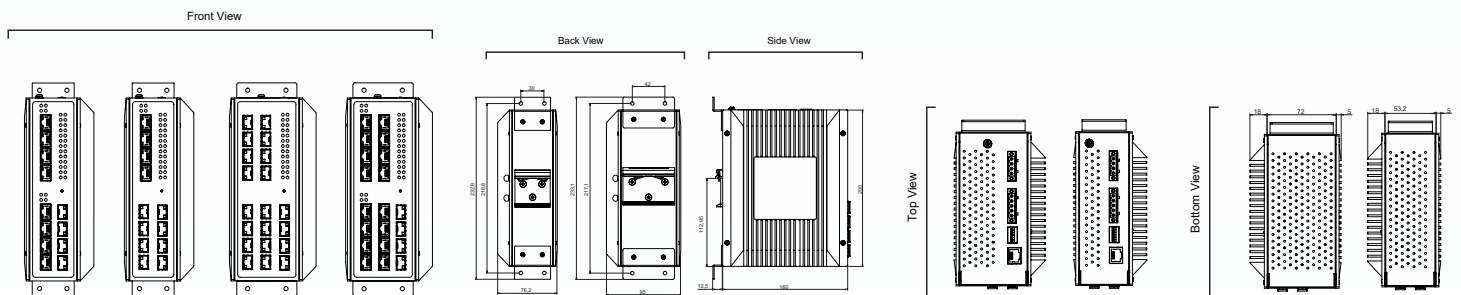
To prevent network intrusions, it is necessary to have a good accessing control mechanism that can identify, authenticate and authorize users. DGS-F3700 series supports user account, password policy, and authentication interface management functions that comply with IEC62443 standards. The multifunctional web dashboard also offers further intelligent features such as Quality of service (QoS) per port or per VLAN, VLAN, IGMP and port mirroring. Layer-3 routing support BGPv4, IPv4 static routing, RIP v1/v2 and OSPFv2.

Technical Specifications

Model Name	DGS-F3700 Series	
Switch Properties		
Priority Queues	8	
VLAN Table	4096	
MAC-Based VLAN	512	
VLAN ID Range	VID 1 to 4094	
Trunk Group	4	
Static IGMP Groups	128	
Dynamic IGMP Groups	256	
MAC Table Size	16K	
Packet Buffer Size	1.5 MB	
Jumbo Frame	9216 Byte	
Ethernet		
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3ae For 10 Gigabit Ethernet Fiber IEEE 802.3x for Flow Control, back pressure flow control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1X for Authentication IEEE 802.3ad for Port Trunk with LACP IEEE 802.3az for Energy Efficient Ethernet	
Protocols	IPv4, IPv6, IGMPv1/v2/v3, IGMP Snooping, GARP, GMRP, GVRP, SNMPv1/v2c/v3, SNMP Inform, ICMP, Telnet, SSH, DHCP Server/Relay/Client, DHCP Option 66/67/82, BootP, RARP, TFTP, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Syslog, MRP (Manager/ Client), LLDP, 802.1x, EAP,RADIUS, TACACS+, Mirror port, QoS, ACL, BGPv4, DHCP Snooping, ARP Spoof Prevention, Dynamic ARP Inspection, MLD, UDLD, IP Source Guard, sFlow	
Layer-3 Protocols	Routing: IPv4 Unicast static routing, RIP v1/v2, OSPFv2, BGPv4 Multicast: IGMPv1/v2/v3, DVMRP, PIM-DM, PIM-SM, PIM-SSM Routing Redundancy: VRRP (Virtual Router Redundancy Protocol)	
Redundancy	ITU-T G.8032 ERPS, STP, RSTP, MSTP, MRP(Manager/Client), Compatible Ring/Chain, U-Ring	
Time Synchronization	Network Synchronization	NTP Server/Client, SNTP
	Precision Network Synchronization	IEEE1588v1 OC/BC (Software)
		IEEE1588v2 E2E TC (Hardware) - ns acc. IEEE1588v2 OC/BC (Software)
Automation Profiles	Modbus/TCP device status registers	
SNMP MIB	MIB II, IF-MIB, SNMPv2 MIB, BRIDGE-MIB, RMON MIB Group 1,2,3,9, RFC RFC 1157, RFC 1213, RFC 1215, RFC 1493, RFC 1643, RFC 1757, RFC 2011, RFC 2012, RFC 2013, RFC 2233, RFC 2571, RFC 2742, RFC 2819, RFC 2863, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 2674	

Power	
Input Voltage	9-57 VDC for Non-PoE models 45-57 VDC for 802.3af mode 51-57 VDC for 802.3at mode
Input Current (System)	Max. 2.2 A @ 12 VDC (without PoE) Max. 3.3 A @ 45 VDC (Support up to 8 ports at 15.4 W per PoE port) Max. 5.2 A @ 51 VDC (Support up to 8 ports at 30 W per PoE port)
Power Consumption (System)	Max. 26.4 W @ 12 VDC (without PoE) Max. 148.5 W @ 45 VDC (Support up to 8 ports at 15.4 W per PoE port) Max. 265.2 W @ 51 VDC (Support up to 8 ports at 30 W per PoE port)
Connector Reverse Polarity Protection	5-Pin 5.08 mm Lockable Terminal Block Yes
Interfaces	
RJ45 Ports Fiber Optics Ports LED Indicators Console Relay Output DIP Switches Button	Up to 16 10/100/1000BASE-T(X) auto negotiation speed Up to 16 100/1000BASE-X SFP slot plus 4 1000BASE-X or 4 10G SFP slots PWR1, PWR2, Alarm, Run, Ring, Ring Master, RJ-45 Link/Speed, SFP Link, PoE RS232 (RJ45 connector) 2 relay outputs with current carrying capacity of 1A @ 24 VDC Ring Control Reset Button
Physical Characteristics	
Housing Dimension (W x H x D) Weight Installation	IP30 SPCC Metal housing, ruggedized heat-sink 12 Ports: 76 x 200 x 160 mm; 16 and 20 Ports: 95 x 200 x 160 mm 2,500 g DIN-Rail, Wall mount (optional kit)
Environmental Limits	
Operating Temperature Storage Temperature Ambient Relative Humidity	-40°C to +70°C (-40°F to +158°F) -40°C to +85°C (-40°F to +185°F) 5% to 95% (Non-condensing test @55°C)

Dimensions



Regulatory Approvals				
Safety	UL62368-1, 2nd Ed., CSAC22.2 N. 62368-1-14, NZS62368.1:2018, EN62368-1:2014+A11:2017			
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4			
Traffic Control	NEMA TS-2			
Test	Item		Value	Level
IEC 61000-4-2	ESD	Contact Discharge	±6KV	3
		Air Discharge	±8KV	3
IEC 61000-4-3	RS	80-1000 MHz	10(V/m)	3
		1.4-2.0 GHz	3 (V/m)	3
		2.0-2.7 GHz	10(V/m)	3
IEC 61000-4-4	EFT	AC Power Port	±2.0KV	3
		DC Power Port	±2.0KV	3
		Signal Port	±1.0KV	3
IEC 61000-4-5	Surge	DC Power Port	Line-to Line±1.0KV	3
		DC Power Port	Line-to Earth±2.0KV	3
		Signal Port	Line-to Earth±2.0KV	3
IEC 61000-4-6	CS	0.15-80MHz	10V rms	3
IEC 61000-4-8	PFMF	Enclosure	30 V/m	4
IEC 61000-4-11	DIP	AC Power Port	-	A
Shock	MIL-STD-810G Method 516.5			
Drop	MIL-STD-810F Method 516.5			
Vibration	MIL-STD-810F Method 514.5 C-1 & C-2			
RoHS II	Yes			
MTBF	20 Years			
Ordering Information				
Model name	Description			
DGS-F3700-8P4XI	8P*1GTX RJ45/PoE; 4P*10GFX SFP			
DGS-F3700-8T4XI	8*1G RJ45; 4*10G SFP			
DGS-F3700-4T4P4XI	4*1G RJ45; 4*1G PoE; 4*10G SFP			
DGS-F3700-4T4S4XI	4*1G RJ45; 4*1G/4*10G SFP			
DGS-F3700-4P4S4XI	4*1G PoE; 4*1G/4*10G SFP			
DGS-F3700-12T4XI	12*1G RJ45; 4*10G SFP			
DGS-F3700-8T4P4XI	8*1G RJ45; 4*1G PoE; 4*10G SFP			
DGS-F3700-4T8P4XI	4*1G RJ45; 8*1G PoE; 4*10G SFP			
DGS-F3700-8T4S4XI	8*1G RJ45; 4*1G/4*10G SFP			
DGS-F3700-4T4P4S4XI	4*1G RJ; 4*1G PoE; 4*1G/4*10G SFP			
DGS-F3700-8P4S4XI	8*1G PoE; 4*1G/4*10G SFP			
DGS-F3700-4T8S4XI	8*1G RJ45; 4*1G/4*10G SFP			

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DGS-F3700-4P8S4XI	4*1G PoE; 8*1G SFP; 4*10G SFP
DGS-F3700-12S4XI	12*1G SFP; 4*10G SFP
DGS-F3700-16T4XI	16*1G RJ45; 4*10G SFP
DGS-F3700-12T4P4XI	12*1G RJ45; 4*1G PoE; 4*10G SFP
DGS-F3700-8T8P4XI	8*1G RJ45; 8*1G PoE; 4*10G SFP
DGS-F3700-12T4S4XI	12*1G RJ45; 4*1G/4*10G SFP
DGS-F3700-8T4P4S4XI	8*1G RJ; 4*1G PoE; 4*1G/4*10G SFP
DGS-F3700-4T8P4S4XI	4*1G RJ; 8*1G PoE; 4*1G/4*10G SFP
DGS-F3700-8T8S4XI	8*1G RJ45; 8*1G SFP; 4*10G SFP
DGS-F3700-4T12S4XI	4*1G RJ45; 12*1G SFP; 4*10G SFP
DGS-F3700-4P12S4XI	4*1G PoE; 12*1G SFP; 4*10G SFP
DGS-F3700-16S4XI	16*1G SFP; 4*10G SFP