

DFX12SF Carrier Grade Switch



The DFX12SF is a ruggedised, 19" rack mountable, high performance, 16 + 4 port, managed Ethernet switch with PoE support and gigabit uplinks.



The DFX12SF is a carrier grade high performance Layer 2 Ethernet switch meeting the needs of high availability communications networks.

The DFX12SF is ruggedised to meet the stringent environmental requirements of IEC-61850 for utility substation environments.

The DFX12SF has 12 x 100Base-FX Ethernet SFP interfaces and 4 x 100Base-T (RJ45) Electrical tributary ports. It also has 4 x 1000Base-X uplink ports to support protected network architectures.

It has a high performance Ethernet switching fabric and supports 1632 byte frames, with a range of rate limiting and storm control options.

Tag based VLANs (802.1q with 8K MAC addresses and 4K VLANs) are supported, allowing network segmentation without being restricted by physical connections.

802.1q based VLAN functionality (access, trunk & filtered trunk modes) are supported, allowing network designers more flexibility.

The Spanning Tree Protocol is supported for loop avoidance when deployed in meshed topologies providing additional resilience to link failures.

With an increasing number of critical services migrating to Ethernet, the DFX has been designed with an extremely high MTBF and for operation in high temperature environments.

The DFX12SF can be managed locally via the console port or remotely using Telnet, SNMP or Avara's Web Server over a secure VLAN. Full remote configuration and software download options reduces upgrade time. A comprehensive set of SNMP traps and alarms are provided to assist fault management and isolation.

The DFX supports Avara's Zero On-Site Configuration System enabling it to download its configuration dynamically from a centralised database, thus delivering a true "Plug and Go" solution to facilitate deployment and simplify network management.

Technical Highlights

Interfaces

- 12 x 100Base-FX (SFP) Ethernet Ports
- 4 x 10/100Base-T Ethernet Ports with PoE support
- 2 x 1000Base-X (SFP) Ethernet Uplink Ports (Supporting Ring Operation)
- 2 x 1000Base-X (SFP) Ethernet Uplink Ports

Key Features

- High performance Ethernet layer 2 switch fabric
- Point to point, linear and ring topology support
- Sub 50ms protection switching in ring mode
- Supports 802.1p/q VLAN capabilities
- Supports both VLAN access, trunk and filtered ports
- Rate Limiting on Ethernet ports
- Revertive operation for Ethernet
- Supports 8K MAC Addresses
- Support 4096 VLANs
- Rugged industrial design with compliance to IEC-61850-3 standards.
- High MTBF and fan-less operation to ensure high availability
- Management SNMP, Telnet, CLI, Web Browser, HPOV
- 20-72 VDC Power Supply
- -5 to +70 °C operation
- 4 x PoE configurations with up to 15.4 W per port

Technical Specifications

Model Order Code	P21048.02	Power	Supply Voltage Feeds Consumption Max Consumption	20 to 72 VDC (Isolated) Dual input 30 W + 18 W per PoE port (x4) 102 W
Mechanical	Housing Height Width Depth	IP30 protection 44 mm 440 mm 220 mm	Management	Local Remote
Interfaces	Uplink (SFP *) Tributary Ethernet (Electrical) Tributary Ethernet (SFP *)	4 x 1000Base-X 4 x 10/100Base-T (RJ45) With PoE 12 x 100Base-FX	Security	Data Interfaces Management
10/100Base-T Parameters	Speed Auto-negotiation Duplex MDI/MDIX Support PoE (Enable/Disable)	10/100Base-T Yes Full/Half Yes Yes	Alarm Contacts	2x Relay outputs with current carrying capacity of 1A @ 24V
100Base-FX Parameters	Speed Autonegotiation Duplex SFP	100Base-FX No Full Yes	Environmental	Operating Temperature Relative Humidity
1000Base-X Parameters	Speed Autonegotiation Duplex SFP	1000Base-X No Full Yes	MTBF	50 Years
Switch Parameters	IEEE 802.1p/q MAC Address Size VLANs Supported Rate Limiting Traffic Shaping Priority Queues Per Output	Yes 8K 4096 128K, 256K, 512K, 1M, 2M,4M, 8M Strict & Weighted Round Robin 4	Standards	IEEE 802.3 Ethernet IEEE 802.3ab 1000Base-T IEEE 802.3z Gigabit Fiber IEEE 802.3u Fast Ethernet IEEE 802.1q VLAN Tagging IEEE 802.1p Priority Queuing IEEE 802.3x Flow Control IEEE 802.1D MAC Bridges RFC1157 SNMP RFC1213 MIB II RFC854 Telnet RFC783 TFTP EN55022 Class A Emissions EN60950 Safety EN55024 Immunity EN50082-2 Generic Immunity ETS 300 019 -1-1 Operational ETS 300 019 -1-2 Storage IEEE802.3af PoE Standard
Network Topology	Topology Protection Switch Time Protection Switch Mode	Point to point, linear or ring < 50ms Revertive		

*Refer to SFP specification brochure

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