DATA SHEET

FortiSwitch™ Rugged 112D-POE

High performance for harsh environments

FortiSwitch Rugged

FSR-112D-POE

High performance for harsh environments

FortiSwitch Rugged FSR-112D-POE switches deliver all of the performance and security of the trusted FortiSwitch line, but with added reinforcement that makes them ideal for deployments in harsh outdoor environments.

Resilient, sturdy and capable of withstanding intense temperature fluctuations, FortiSwitch Rugged ensures the integrity and performance of mission-critical networks in even the most challenging of deployments.

Add Ruggedized FortiGate for Tough and Powerful Protection

Engineered to survive in hostile environments with an extreme temperature range, the combination of FortiGate Rugged network security appliances with the FortiSwitch Rugged provides a connected network security solution.

Simple Network Deployment

The Power over Ethernet (PoE) capability enables simple installation of cameras, sensors and wireless access points in the network, with power and data delivered over the same network cable.

There is no need to contract electricians to install power for your PoE devices, reducing your overall network TCO.

There is no need to contract electricians to install power for your PoE devices, reducing your overall network TCO.

Highlights

- Mean time between failure greater than 25 years
- Fanless passive cooling
- DIN-rail or wall-mountable
- Power over Ethernet capable including PoE+
- 8x GE RJ45 and 4x GE SFP slots
- Redundant power input terminals

Key Features & Benefits

Sturdy IP30 construction	Built to ingress protection 30 standards, the construction of the FSR-112D-POE is designed to perform while enduring hostile conditions.
Passive cooling	With no fan and no moving parts, the mean time between failure for the FSR-112D-POE is greater than 25 years.
Redundant power inputs	Maximizes network availability by eliminating the downtime associated with failure of a power input.
Power over Ethernet capability	Seamless integration of peripheral devices such as cameras, sensors and wireless access points into the network.

CAPABILITIES: FORTILINK MODE VS. STANDALONE MODE

	FSR-112D-POE* STANDALONE SWITCH	FSR-112D-POE* FORTILINK MODE (FORTIGATE)
Security		
802.1x Port Authentication	Yes	Yes
MAC Address-Based Authentication	No	Yes
MAC Black/White Listing	No	Yes
Layer 3,4 Stateful Firewall to Control Access	No	Yes
TACACS+/RADIUS Admin Access	Yes	Yes
DHCP Relay/DHCP Snooping	No	Yes
Virtual Domain	No	Yes
Routing		
Layer 3, Dynamic Routing	No	Yes
Inter-VLAN Routing	No	Yes
Policy-Based Routing	No	Yes
DNS Server	No	Yes
Management		
Auto Discovery of Multiple Switches	1	16 (model dependent)
Software Upgrade of Switches	1 switch	Central upgrade of each switch
VLAN Configuration	1 switch	Central VLAN provisioning of entire switch network
Policy Control of Users and Devices	No	Yes
Syslog Collection	Yes	Yes (FortiGate syslog only)
Switch POE Control	Yes	Yes**
LAG support from FortiSwitch to FortiGate	Yes	Yes**
UTM Features		
Firewall	No	Yes
IPS, AV, Application Control	No	Yes

* For -D- models there is a dependency on the software version running on the FortiSwitch and on the FortiGate in order to use FortiLink mode.
FortiLink is only enabled on certain ports on FortiGate and FortiSwitch. Refer to FortiLink documentation.
Note: Please refer to FortiSwitch Admin Guide for details re: port connections supported for FortiLink functionality.

** Roadmap

SOFTWARE FEATURES (STANDALONE MODE)

	FSR-112D-POE*
Layer 2	
Jumbo Frames	Yes
Auto-negotiation for port speed and duplex	Yes
IEEE 802.1D MAC Bridging/STP (will interoperate)	Yes
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP, will interoperate)	Yes
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)	Yes
IEEE 802.1p Mapping to Priority Queue	Not supported
Edge Port / Port Fast	Yes
IEEE 802.1Q VLAN Tagging	Yes
Private VLAN	Not supported
IEEE 802.3ad Link Aggregation with LACP	Yes
Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)	Yes (MAC only)
IEEE 802.1AX Link Aggregation	Yes
IEEE 802.3x Flow Control and back-pressure	Yes
IEEE 802.3 10Base-T	Yes
IEEE 802.3u 100Base-TX	Yes
IEEE 802.3z 1000Base-SX/LX	Yes
IEEE 802.3ab 1000Base-T	Yes
802.3ae 10 Gigabit Ethernet	Not supported
802.3 CSMA/CD Access Method and Physical Layer Specifications	Yes
IEEE 802.3af-2003/2009 POE	Yes
IEEE 802.3at POE+	Yes
Layer 3	
Static Routing (Management Access only)	Yes
Security	
Port Mirroring	Yes
Admin Authentication Via RFC 2865 RADIUS	Yes
Supports Fortified Access (FortiLink) mode	Yes
802.1x authentication with port-based assignment	Yes
Management	
Telnet / SSH	Yes
HTTP / HTTPS	Yes
SNMP v1/v2c	Yes
SNTP	Yes
LLDP (802.1ab, Link Layer Discovery Protocol) (receive only)	Yes
Standard CLI and web GUI interface	Yes
Software download/upload: TFTP/FTP/GUI	Yes
RFC and MIB Support**	
RFC 2571 Architecture for Describing SNMP Framework	Yes
DHCP Client	Yes
RFC 854 Telnet Server	Yes
RFC 2865 RADIUS	Yes
RFC 1643 Ethernet-like Interface MIB	Yes
RFC 3176 sFlow	Not supported
RFC 1213 MIB-II	Yes
RFC 1354 IP Forwarding Table MIB	Yes
RFC 2572 SNMP Message Processing and Dispatching	Yes
RFC 1573 SNMP MIB II	Yes
RFC 1157 SNMPv1/v2c	Yes
RFC 2030 SNTP	Yes

* Note: Check release notes for software feature availability.
** MIBs have been tested with Solarwinds NPM tool.

SPECIFICATIONS

	FSR-112D-POE
Ethernet	
Ethernet interface	8x GE RJ45 (including 8x PoE/PoE+ capable ports), 4x GE SFP slots PoE is 802.3 af PoE+ is 802.3at
Console interface	DB9 connector
Operating mode	Store and forward, L2/L3 wire-speed/non-blocking switching engine
MAC addresses	8K
Copper RJ45 Ports	
Speed	10/100/1000 Mbps
MDI/MDIX auto-crossover	Support straight or cross wired cables
Auto-negotiating	10/100/1000 Mbps speed auto-negotiation; Full and half duplex
PoE+ (PSE)	IEEE 802.3at, up to 30 W per RJ45 GE port (up to 8 PoE+ ports)
SFP (pluggable) Ports	
Port types supported	Gigabit fiber multimode, fiber single mode, fiber long-haul single mode 1000Base(SX/LX/ZX)
Fiber port connector	LC typically for fiber (depends on module)
Power	
Power input	Redundant input terminals
Input voltage range	44–57 VDC (for PoE model), 12–57 V (non-PoE model), 44–49 V input voltage can support PoE (802.3af) on all ports, 50–57 V input voltage can support PoE+ (802.3at) on all ports.
Reverse power protection	Yes
Switch power	With 8x PoE+ sources, the switch itself draws 10.4 W
Heat dissipation	The switch dissipates 69.6 BTU with 8x PoE+ devices attached

	FSR-112D-POE
Indicators	
Power status indication	Indication of power input status
PoE indication	PoE port status
Ethernet port indication	Link and speed
Environmental and Compliances	
Operating temperature range	-40–167°F (-40–75°C) cold startup at -40°C/°F)
Storage temperature range	-40–185°F (-40–85°C)
Humidity (non-condensing)	5–95% RH
EMI	Radiated Emission: CISPR 22, EN55022 Class B Conducted Emission: EN55022 Class B
EMS	ESD: IEC61000-4-2 Radiated RF (RS): IEC61000-4-3 EFT: IEC61000-4-4 Surge: IEC61000-4-5 Conducted RF (CS): IEC61000-4-6
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
MTBF	> 30 years
Cooling	Fanless
Mechanical	
Ingress protection	IP30
Dimensions (w x d x h)	3.8 x 4.15 x 6.06 inches (96.4 x 105.5 x 154 mm)
Weight	2.7 lbs (1230 g)
Installation option	DIN-Rail mounting, wall mounting
Software	
L2	Dedicated VLANs for user ports. 802.1Q tagged frame on upstream ports. 802.1s(spanning tree), 802.1w(RSTP)
Warranty	
Fortinet warranty	Limited lifetime*

* Fortinet Warranty Policy: **http://www.fortinet.com/doc/legal/EULA.pdf**

ORDER INFORMATION

Product	SKU	Description
FortiSwitch Rugged 112D-POE	FSR-112D-POE	Ruggedized L2 PoE Switch — 8x GE RJ45 (including 8x PoE/PoE+ capable ports), 4x GE SFP slots, FortiGate switch controller compatible.
Accessories		
1 GE SFP LX transceiver module	FG-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP RJ45 transceiver module	FG-TRAN-GC	1 GE SFP RJ45 transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP SX transceiver module	FG-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP SX transceiver, MMF, -40–85°C operation	FR-TRAN-SX	1 GE SFP SX transceiver module, -40–85°C, over MMF, for all systems with SFP and SFP/SFP+ slots.
1 GE SFP LX transceiver, SMF, -40–85°C operation	FR-TRAN-LX	1 GE SFP LX transceiver module, -40–85°C, over SMF, for all systems with SFP and SFP/SFP+ slots.
1 GE SFP ZX transceiver, 90 km range, -40–85°C operation	FR-TRAN-ZX	1 GE SFP ZX transceiver module, -40–85°C, 90 km range, for all systems with SFP and SFP/SFP+ slots.

GLOBAL HEADQUARTERS
Fortinet Inc.
899 Kifer Road
Sunnyvale, CA 94086
United States
Tel: +1.408.235.7700
www.fortinet.com/sales

EMEA SALES OFFICE
120 rue Albert Caquot
06560, Sophia Antipolis,
France
Tel: +33.4.8987.0510

APAC SALES OFFICE
300 Beach Road 20-01
The Concourse
Singapore 199555
Tel: +65.6513.3730

LATIN AMERICA SALES OFFICE
Prol. Paseo de la Reforma 115 Int. 702
Col. Lomas de Santa Fe,
C.P. 01219
Del. Alvaro Obregón
México D.F.
Tel: 011-52-(55) 5524-8480