

FLC-2528XP-4F-T | Industrial Modular Rack Mount Gigabit Switch

Feature Highlights

- Maximum 128Gbps switching capacity, 95.24Mpps throughput
- Rugged industrial design for -40~75° C harsh environment
- Flexible modular configuration, 3 module-dedicated slots
- Up to 24 PoE ports, with maximum 720W of PoE power budget
- 4 x 1 Gigabit or 4 x 10 Gigabit SFP Uplink slots
- Up to 20 possible configurations in 4 power input versions
- ITU-T G.8032 ERPS Ring, RSTP, or MRP (client) redundancy
- EN50155 / EN50121-4 Certified for rail way applications
- PROFINET v2.33 CC-B conformance. Provides GSD Description file



DESCRIPTION

Sbjlink's high-density FLC-2528XP managed rack mount switch extend your network bandwidth by the flexibility of its hardware configurations. You will be able to choose among 4 different core switch versions based on power supply and uplink port variations and 3 different 8-port modules to customize your device in a very simple way.

Designed for power over ethernet and also wide temperature environments, FLC-2528XP supports 24 gigabit ports in any 8-port module configurations. A maximum power over Ethernet is total 720W over the 24 ports, compliant to IEEE 802.3af/at and with 4 power input variants available for your application. Its fanless design and EMC Level 3 protection guarantee reliable operations between -40 and +75°C.

FLC-2528XP supports ITU-T G.8032 ERPS Ring, IEEE802.1D-2004, RSTP, STP, MSTP, MRP (Client) and many compatible rings protocols for network redundancy. It provides network redundant self-recovery mechanism less than 20ms. With a Multifunctional web dashboard, its offers intelligent features such as Quality of service (QoS), IGMP, Port mirroring and security. Profinet CC-B v2.33 compliance makes FLC-2528XP **the ideal** candidate for being the backbone of your Industrial automation network.

FLC-2528XP is EN 60950-1:2006 and EN50155-certified to ensure reliable performance under a wide range of power supply conditions. Its EN50121-4 certificate is also for rail ground equipment.

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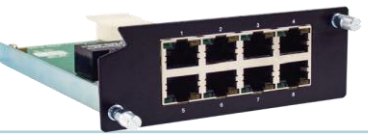
CONFIGURATIONS



FLC-2528XP-4F-T-2A2D-X1
Main unit, with 4 x 10 Gigabit SFP uplink slots and redundant AC power input



FLC-M-2528GP-8GP-X1
8-port Gigabit RJ45 PoE module



FLC-M-2528GP-8G-X1
8-port Gigabit RJ45 module



FLC-M-2528GP-8F-X1
8 port 100/1000 SFP module



24 ports and 4 1/10 Gbe SFP uplink Layer-2 Managed Switch, with the optional modules of 8 Gigabit PoE ports, 8 Gigabit RJ45 ports or 8 100/1000 SFP slots

SPECIFICATIONS

Core Switch



Switch Properties

Priority Queues	8
VLAN Table	4096
MAC-Based VLAN	512
VLAN ID Range	VID 1 to 4094
Static IGMP Groups	128
Dynamic IGMP Groups	256
Mac Table Size	16k
Packet Buffer Size	1.5 MB
Jumbo Frame	9216 Byte
Switching Fabric Capacity	56 Gbps (1G uplinks) / 128 Gbps (10G uplinks)
Maximum throughput	41.67 Mpps (1G uplinks) / 95.24 Mpps (10G uplinks)

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SPECIFICATIONS

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	
Protocols	IEEE 802.1X for Authentication	
	IEEE 802.3ad for Port Trunk with LACP	
	IEEE 802.3az for Energy Efficient Ethernet	
	IPv4, IPv6, IGMPv1/v2/v3, IGMP snooping, GARP, GMRP, GVRP, SNMPv1/v2c/v3, SNMP Inform, ICMP, Telnet, SSH, Client/IP-port-mapping, BootP, TFTP, SMTP, SMTP (Gmail), RMON, HTTP, HTTPS, Syslog, MRP(Client), LLDP, 802.1x,EAP, RADIUS,TACACS+, Mirror port, QoS, ACL, ITU-T G.8032 ERPSRing, STP, RSTP, MSTP, Compatible Ring/Chain, U-Ring, NTP Server/Client, Serial Console, Modbus/TCP, IEEE 1588 PTP V1/V2, UDLD, Security, PoE, Trunk,LACP, MLD, 802.1Q VLAN, Port-Based VLAN,MAC-Based VLAN, IP-Sub-net-Based VLAN, Protocol-Based VLAN, QinQ,802.1x, ARP spoof Prevention, DHCP snooping,IP source Guard, Dynamic ARP Inspection, Profinet, DHCP relay Agent	
	ITU-T G.8032 ERPS Ring, STP, RSTP, MSTP, Compatible Ring/Chain, U-Ring	
	Network Synchronization	NTP Server/Client, SNTP
	Precision Network Synchronization	IEEE1588v1 OC/BC (Software) IEEE1588v2 TC (Hardware) IEEE1588v2 OC/BC (Software)
	Automation Profiles	
	Profinet v2.33 CC-B conformance, Modbus/TCP status registers	
	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		

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SPECIFICATIONS

Power		
Input Voltage	Core Switch	DC version: redundant 48~57 VDC AC version: single 110~220 VAC
		Redundant AC version: dual 110~220 VAC
	PoE	Mixed AC/DC -Redundant: 1x110~220VAC & 48~57VDC 2 x 48-57 VDC (each power input max 360W)
Input Current (Max)	CPU board AC/ redundant AC: 110-220 VAC, 0.58 A Max, 64W Max CPU board redundancy DC 48-57 VDC , 0.68A Max, 32.7W Max IEEE802.3af PoE full loading: 45-57 VDC, 8.4A Max, 370W Max IEEE802.3at PoE+ full loading: 51-57 VDC, 14.4A Max, 720W Max	
Connectors	2 x Lockable 5-pin terminal blocks for PoE power input (all versions.) 2 x Lockable 3-pin terminal blocks for DC power input (DC versions) 1-2 x AC power inlet (non-redundant(x1) / -MR version(x1) / -R(x2)) 1 x Lockable 3-pin terminal blocks for DC power input (-MR version)	
Reverse Polarity Protection	Yes	

Physical Characteristics

Housing	IP30 SPCC metal housing
Dimension (W x H x D) Weight	440 x 44 x 340 mm (not including screws and rack-mount kit) 5Kg (not including module but module cover only)
Installation	1U Rack-mount, Rack-mount kit included

Environmental Limits

Operating Temperature	-40°C~75°C (-40°F~167°F)
Storage Temperature	-40°C~85°C (-40°F~185°F)
Ambient Relative Humidity	5%~95%, 55°C (Non-condensing)

Switch Modules



FLC-M-2528GP-8GP-X1



FLC-M-2528GP-8G-X1



FLC-M-2528GP-8F-X1

Options

Description	8-Port RJ45 PoE module	8-Port RJ45 module	8-Port SFP module
Model Name	FLC-M-2528GP-8GP-X1	FLC-M-2528GP-8G-X1	FLC-M-2528GP-8F-X1

Properties

Properties	FLC-M-2528GP-8GP-X1	FLC-M-2528GP-8G-X1	FLC-M-2528GP-8F-X1
PoE Power per port	15.4/30W (240W)	-	-
Number of ports	8	8	8
Port speed	10/100/1000 BASE-T(X)	10/100/1000 BASE-T(X)	100/1000 BASE-F(X)
Interface	RJ45	RJ45	SFP slot
Dimensions	104.5 x 171.6 x 39.5mm	104.5 x 171.6 x 39.5mm	104.5 x 171.6 x 39.5mm
Weight	550 g	500 g	450 g
Fixing	2 x screws (included)	2 x screws (included)	2 x screws (included)

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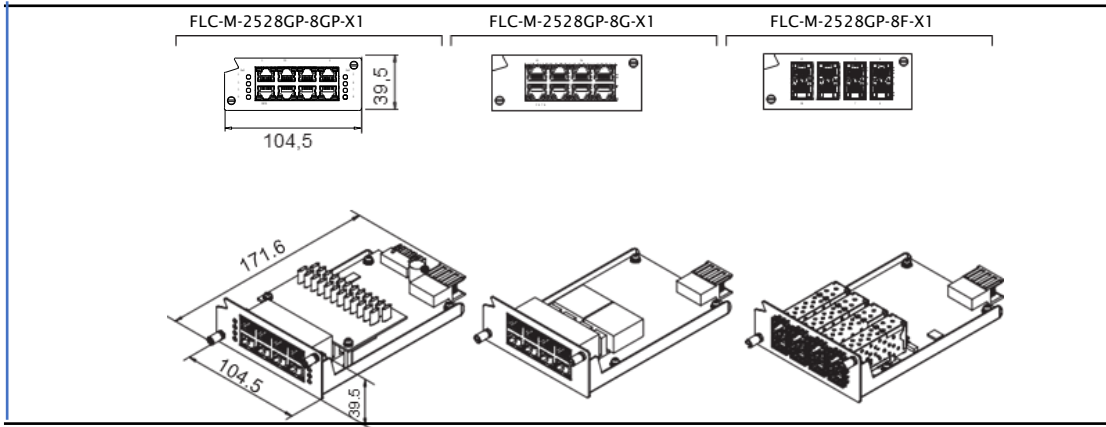
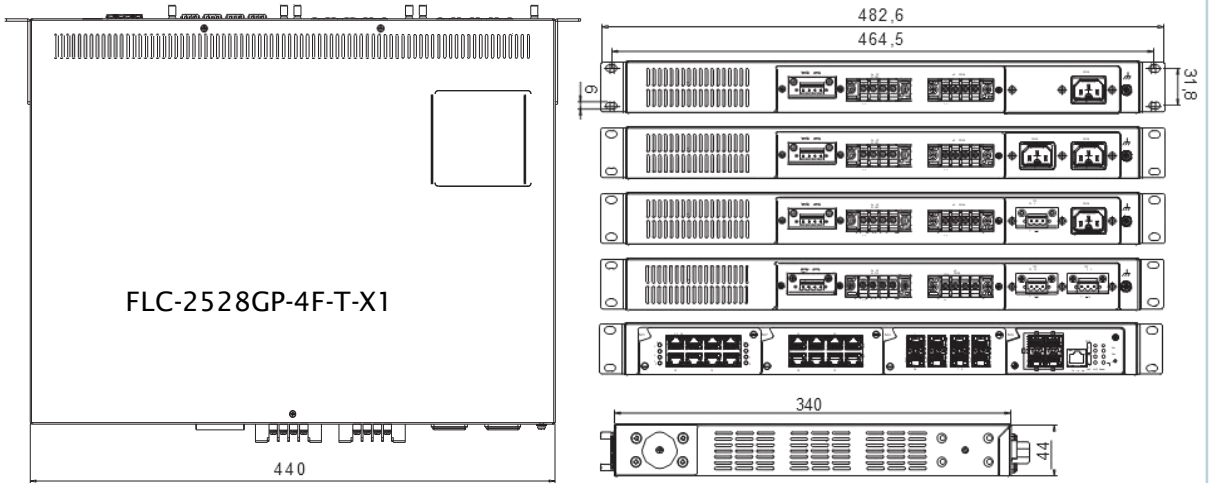
SPECIFICATIONS

Regulatory Approvals				
Safety	UL 60950-1 2nd Ed. /CSA C22.2 No.60950-1-07 2nd Ed. / EN 60950-1 / UL 62368-1 / IEC 62368-1			
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			
Test	Item		Value	Level
IEC 61000-4-2	ESD	Contact Discharge	±8KV	4
		Air Discharge	±15KV	4
IEC 61000-4-3	RS	Enclosure Port	10(V/m), 80-1000MHz	3 *
IEC 61000-4-4	EFT	AC Power Port	±2.0KV	3
		DC Power Port	±2.0KV	3
		Signal Port	±2.0KV	4
IEC 61000-4-5	Surge	AC Power Port	Line-to Line±1.0KV	3
		AC Power Port	Line-toEarth±2.0KV	3
		DC Power Port	Line-to Line±1.0KV	3
		DC Power Port	Line-toEarth±2.0KV	3
		Signal Port	Line-toEarth±2.0KV	3
IEC 61000-4-6	CS	0.15-80MHz	10V rms	3 *
IEC 61000-4-8	PFMF	(Enclosure)	AC 50Hz 10A/m	3
IEC 61000-4-11	DIP	AC Power Port	-	-
Shock Drop Vibration	MIL-STD-810G Method 516.5			
	MIL-STD-810F Method 516.5			
	MIL-STD-810F Method 514.5 C-1 & C-2			
Rail Traffic	EN50155 / EN50121-4 Certified			
RoHS2	Yes			
MTBF	12.20 Years			
Warranty	5 years			

* EMC level 3 on CS/RS pass conditional to the use of Shielded Ethernet Cable

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DIMENSIONS



FLC-2528XP-4F-T | Industrial Modular Rack Mount Gigabit Switch

Ordering information

Core Switch

Model Name	Slots	Uplink ports	Power supply
FLC-2528XP-4F-T-1A2D-X1	3	① 4 x 10 Gb SFP / 4 x 1Gb SFP	② Single 110~220 VAC + Dual 48~57 VDC PoE
FLC-2528XP-4F-T-2A2D-X1	3	① 4 x 10 Gb SFP / 4 x 1Gb SFP	② Dual 110~220 VAC + Dual 48~57 VDC for PoE
FLC-2528XP-4F-T-AD2D-X1	3	① 4 x 10 Gb SFP / 4 x 1Gb SFP	② Single 110~220 VAC and Single 48~57 VDC + Dual 48~57 VDC for PoE
FLC-2528XP-4C-T-2D2D-X1	3	① 4 x 10 Gb SFP / 4 x 1Gb SFP	② Dual 48~57 VDC + Dual 48~57 VDC for PoE

① Software selectable

② The power supply in bold is for core switch.

Modules (Optional)

Model Name	RJ45 PoE	RJ45 non- PoE ports	SFP ports
FLC-M-2528GP-8GP-X1	8	-	-
FLC-M-2528GP-8G-X1	-	8	-
FLC-M-2528GP-8F-X1	-	-	8