

FLC-3028X-4F | Industrial Rackmount Gigabit L3 with 10G Uplink

FEATURE HIGHLIGHTS

- 24x Gigabit Ethernet ports
- 4x 1/10 Gigabit Ethernet SFP+ Slot
- RSTP, MSTP, ERPS, LACP for Network Redundancy
- QoS CoS/DSCP to increase determinism
- Supports IGMP Snooping v1/v2/v3, up to 512 groups
- DHCP Relay Option 82 for IP address assignment
- SNMP v1/v2c/v3 for network management
- Supports Storm Protection
- USB storage for configuration-free replacement (optional)
- Industrial protocols Ethernet/IP and Modbus TCP

DESCRIPTION

FLC-3028X-4F series has up to 24 RJ-45 gigabit ports and 4 10 Gigabit SFP uplink ports. Its industrial design makes the equipment fanless and operating wide temperature for most of the industrial applications.

FLC-3028X-4F series provide superior security software feature sets, ie Radius, TACACS+, SSH, SSL and network redundancy such as RSTP, MSTP, G.8032 ERPSv2. Layer 3 routing features like static routing, RIP v1/v2, OSPF, VRRP are standard pack included in this switch.

For industrial automation application, industrial protocols Ethernet/IP and Modbus TCP could be handled via this particular switch for connecting PLC network. Time synchronization is also provided by IEEE1588v2. The variety of redundant dual power input in AC and DC gives more flexibility and reliability in different industrial environments.

FLC-3028X-4F series also has L2 software pack version, which has reduced L3 routing functionality for smaller network. This series also provides 8 port power over ethernet (PoE) with 30W per port as power sourcing equipment (PSE) with maximum 240W output in total for power device (PD).

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SPECIFICATIONS

Technology	
Standards	IEEE 802.3 10BaseT
	IEEE 802.3u 100BaseTX
	IEEE 802.3ab 1000BaseT
	IEEE 802.3ae 10GBase over Fiber
	IEEE 802.3x Flow Control
	IEEE 802.3ad/802.1AX LACP
	IEEE 802.1D Spanning Tree Protocol
	IEEE 802.1w Rapid STP
	IEEE 802.1s Multiple STP
	ITU-T G.8032 / Y.1344 ERPS
	IEEE 802.1Q VLAN Tagging
	IEEE 802.1ad Stacked VLANs
	IEEE 802.1p Class of Service
	IEEE 802.1X Network Authentication
	IEEE 802.1AB LLDP
IEEE 1588 PTP	
Processing Type	Store and Forward
Switch Properties	
Switch Fabric	128Gbps
Priority Queues	8 Queues
Jumbo Frame	9216bytes
MAC Table Size	16K
Packet Buffer	12Mbits
VLAN Table Size	4094
IGMP Group	512
ACL Group	512
VLAN IP Entries	64
Routing Entries (IPv4/IPv6)	512/256 host, 64/64 LPM
Software Feature	
Network Redundancy	RSTP, MSTP, G.8032 ERPSv2, Port Trunking with LACP
Security	802.1X, RADIUS, TACACS+, SSL, SSH
Management	IPv4, IPv6, Web, Telnet, Serial Console, CLI, SNMP v1/v2c/v3, uPnP
Diagnostics	RMON, SNMP Inform/Trap, Syslog, SMTP, Port Mirroring, LLDP, DDM
Configuration	DHCP Server/Client, Relay Option 82, TFTP, USB (optional)
Filter	802.1Q VLAN, Q-in-Q, IGMP Snooping v1/v2/v3, IGMP Querier, Independent Vlan Learning
Time Sync.	NTP, IEEE1588v2 OC (Software Timestamp), BC (Software Timestamp), TC (Hardware Timestamp)
QoS	CoS, DSCP, WRR/SPQ Queuing, Storm Protection
Industrial Profiles	Ethernet/IP, Modbus TCP
L3 Switching	Static Routing, RIP v1/v2, RIPng, OSPF v2, OSPF v3, VRRP v2

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Interface

RJ45 Port	24x 10/100/1000T(x), auto negotiation speed duplex mode, auto MDI/MDI-X
Fiber Port	4x 1/10 Gigabit Ethernet SFP+ Slot
LED Indicators	Per unit: PWR1, PWR2(AC2/DC2), Fault, Ring Master, Ring State
	Ports: Link/Active with highest speed(Green), low speed(Amber)
Alarm Contact	1x relay output with current carrying capacity of 1A @ 24 VDC
Digital Inputs	1x isolated input from the electronics.
	+13 to +30V for state "1"
	-30 to +3V for state "0"
Button	Max. input current: 8mA
Button	Multiple functions reset button
Serial Console	1x RS232 in RJ45 connector with console cable, 115.2Kbps, 8N1
Storage	1x USB 2.0 storage for firmware update, configuration backup, restore, boot up and syslog

Power Requirements

Operation Voltage	90~264VAC, 12~48VDC, redundant dual inputs
Connection	AC socket, DC 4-pin terminal block
Power Consumption	0.3A@110VAC, 1.55A@12VDC
Protection	Overload Current Protected, Reverse Polarity Protected

Mechanical Construction

Enclosure	Aluminum / Steel met
Protection Class	IP30
Dimensions	440x44x331 mm (WxHxD)
Weight	6.00 kg
Mounting	Rack Mounting

Environmental Limits

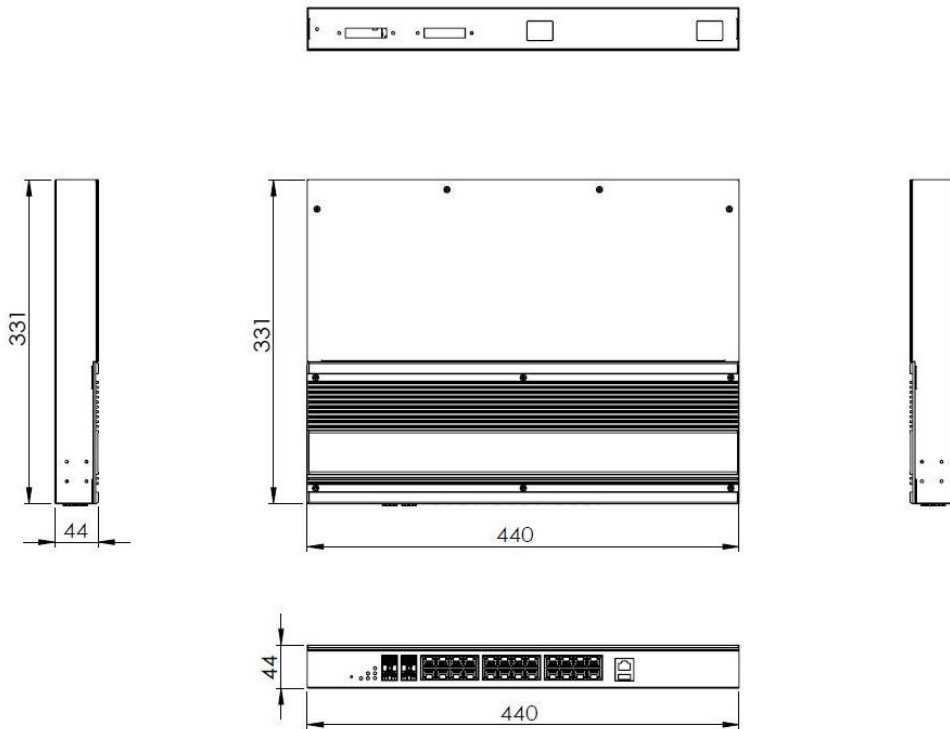
Operating Temperature	Extended: -40°C ~ 75°C (-40°F ~ 167°F) For 10G SFP+: -40 ~ 60°C (32°F ~ 140°F)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Ambient Relative Humidity	5 to 95%, (Non-Condensing)

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Regulatory Approvals	
EMI	FCC Part 15 Subpart B Class A
	CE EN 55032 Class A
EMS	IEC61000-4-2 (ESD)
	IEC61000-4-3 (RS)
	IEC61000-4-4 (EFT)
	IEC61000-4-5 (Surge)
	IEC61000-4-6 (CS)
	IEC61000-4-8 (Magnetic Field)
Free Fall	IEC60068-2-32
Shock	IEC60068-2-27
Vibration	IEC60068-2-6
Green	RoHS Compliant
MTBF	>100,000 hours
Warranty	5 Years

DIMENSIONS (Unit=mm)



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ORDERING INFORMATION

Model Name	Software (L2/L3)	10/100/1000 TX	10G SFP	Power input
FLC-3028X-4F-AD-T-X2	L3	24	4	90-264VAC 12-48VDC
FLC-3028X-4F-AC-T-X2	L3	24	4	90-264VAC
FLC-3028X-4F-DC-T-X2	L3	24	4	12-48VDC redundant
FLC-3028XP-4F-AD-T-X2	L3	24 (30W/ea)	4	90-264VAC, 48-57VDC
FLC-3028XP-4F-AC-T-X2	L3	24 (30W/ea)	4	90-264VAC
FLC-3028XP-4F-DC-T-X2	L3	24 (30W/ea)	4	48-57VDC redundant
FLC-2028X-4F-AD-T-X2	L2	24	4	90-264VAC 12-48VDC
FLC-2028X-4F-AC-T-X2	L2	24	4	90-264VAC redundant
FLC-2028X-4F-DC-T-X2	L2	24	4	12-48VDC redundant
FLC-2028XP-4F-AD-T-X2	L2	24 (30W/ea)	4	90-264VAC, 48-57VDC
FLC-2028XP-4F-AC-T-X2	L2	24 (30W/ea)	4	90-264VAC
FLC-2028XP-4F-DC-T-X2	L2	24 (30W/ea)	4	48-57VDC redundant