

## FLC-3028G-4XF-T | 28 Port Industrial L3 Gigabit Rackmount Switch



### 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-3028G-4XF 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-3028G-4XF 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-3028G-4XF series also has L2 software pack version, which has reduced L3 routing functionality for smaller network. This series also provides 24 port power over ethernet (PoE) with 30W per port as power sourcing equipment (PSE).

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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           |   |
| 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  |
| 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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## SPECIFICATIONS

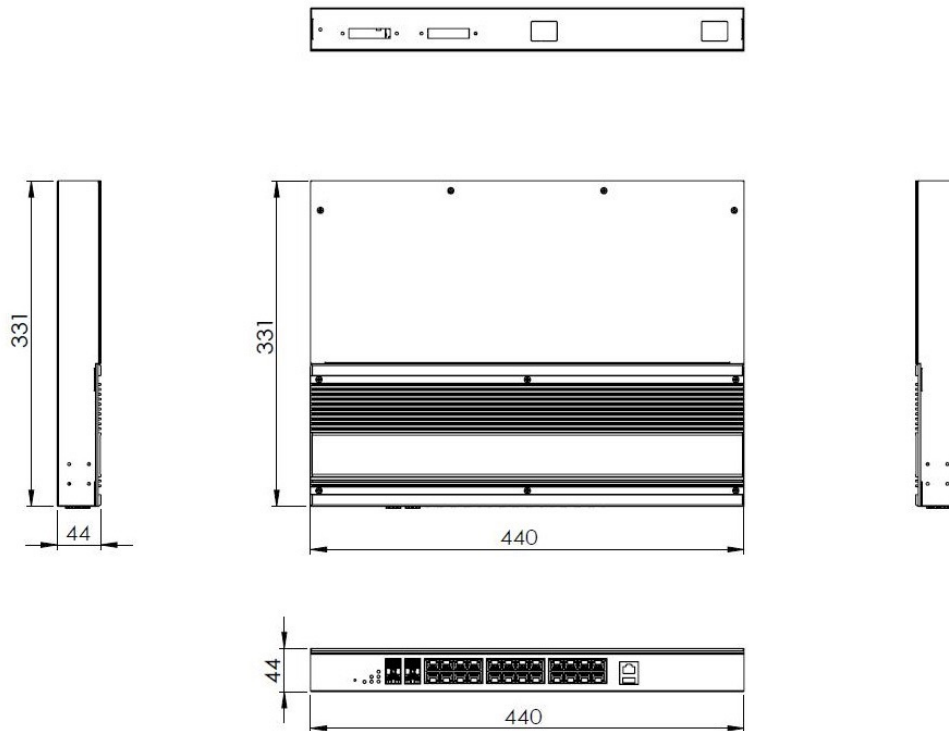
| Interface                 |   |
|---------------------------|---|
| RJ45 Port                 | 24x 10/100/1000T(x), auto negotiation speed duplex mode, auto MDI/MDI-X                   |
| Fiber Port                | 4x 1/10 Gigabit Ethernet SFP+ Slot  |
| LED Indicators            | Per unit: PWR1, 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         | 100~240VAC, 12VDC, redundant dual inputs  |
| Connection                | AC socket, DC 4-pin terminal block  |
| Power Consumption         | 0.38A@110VAC, 1.55A@12VDC   |
| Protection                | Overload Current Protected, Reverse Polarity Protected                                    |
| Mechanical Construction   |   |
| Enclosure                 | Aluminum / Steel metal  |
| Protection Class          | IP30  |
| Dimensions                | 440x44x331 mm (WxHxD)   |
| Weight                    | 6.00 kg   |
| Mounting                  | Rack Mounting   |
| Environmental Limits      |   |
| Operating Temperature     | -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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## SPECIFICATIONS

| 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-2028G-4XF-AD-T-X2 | L2               | 24             | 4       | 100-240VAC & 12-48VDC |
| FLC-2028G-4XF-AC-T-X2 | L2               | 24             | 4       | 100-240VAC redundant  |
| FLC-2028G-4XF-DC-T-X2 | L2               | 24             | 4       | 48VDC redundant       |
| FLC-3028G-4XF-AD-T-X2 | L3               | 24             | 4       | 100-240VAC & 12-48VDC |
| FLC-3028G-4XF-AC-T-X2 | L3               | 24             | 4       | 100-240VAC redundant  |
| FLC-3028G-4XF-DC-T-X2 | L3               | 24             | 4       | 48VDC redundant       |