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# BC3112TM Series
## 12-port 10G Managed Ethernet Fiber Switch



**Ideal for:**

- Telecom
- Hotels & Resorts
- Universities
- Healthcare
- Public Places
- Airport
- Transport
- Industries

## OVEVIEW

The BC3112TM is a 10G managed Ethernet fiber switch. It has 12*1/10G SFP+ Fiber ports. Each port supports wire-speed forwarding.

The BC3112TM as L2+ network management functions, supports IPV4/IPV6 Static routing forwarding, complete security protection mechanism, perfect ACL/Qu's strategy, and rich VLAN functions for easy management and Maintenance. Supports network redundancy protocols STP/RSTP/MSTP (<50ms) And (ITU-T G.8032) ERPS (<20ms) to improve link backup and network reliability When a unidirectional network fails, communication can be quickly restored to Ensure uninterrupted communication of important applications. Port management, Routing address management, port flow control, VLAN division, IGMP, Security policy, and other business configurations can be performed through Network management methods such as Web, CLI, SNMP, Telnet, etc. According to application needs.It meets the high-density network application Environment and is suitable for hotels, campuses, parks, supermarkets, Scenic spots, hospitals, banks, and other small and medium-sized scenarios to Build an economical, efficient, and reliable communication network

## PICTURE

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**Ethernet Switch**
12TF (10G)Managed Switch

## FEATURES

❖ **10G SFP+ fiber port aggregation access**

➢ Support non-blocking wire-speed forwarding**.**

➢ Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure

➢ Support 10G SFP+ fiber port suitable for large data aggregation and core switching,
Convenient for users to flexibly network and meet the networking needs of various scenarios

❖ **Strong business processing capability**

➢ Support ERPS ring network and STP/RSTP/MSTP to eliminate layer 2 loops and realize link backup

➢ Support IEEE802.1Q VLAN, Users can flexibly divide VLAN, Voice VLAN, and QinQ configuration
according to their needs

➢ Support static and dynamic aggregation to effectively increase link bandwidth, realize load balancing, link
backup, and improve link reliability.

➢ Support IGMP Snooping V1/V2/V3 multicast protocol to meet the high-definition video surveillance and
video conference access requirements

➢ Support QoS, port-based, 802.1P-based, and DSCP-based three priority modes and four queue
scheduling algorithms: Equ, SP, WRR, and SP+WRR.

➢ Support ACL to filter data packets by configuring matching rule processing operations and time
permissions, and provide flexible security access control policies.

❖ **Security**

➢ Support port isolation and port broadcast storm suppression.

➢ Support port+MAC binding and IP+MAC+port binding functions.

➢ Support 802.1X authentication to provide authentication functions for LAN computers, and control the
authorization status of controlled ports according to the authentication results.

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❖ **Stable and reliable**

➢ CCC, CE, FCC, RoHS.

➢ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, and Link.

➢ Self-developed power supply, high redundancy design, providing a long-term and stable power output

➢ Low power consumption, no fan, Galvanized steel housing, and excellent heat dissipation to ensure the stable operation of the switch.

❖ **Easy O&M management**

➢ Support CPU monitoring, memory monitoring, Ping detection, and cable length detection.

➢ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.

➢ Support HTTPS, SSLV3, SSHV1/V2, and other encryption methods, making management more secure

➢ Support LLDP to facilitate the network management system to query and judge the communication status of the link.

➢ Support Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, and other diversified management and maintenance.

## TECHNICAL SPECIFICATION

| Model | BC3112TM |
|---|---|
| **Interface Characteristics** | |
| Fixed Port | 1*Console port (115200, N, 8,1) <br> 12*1/10G uplink SFP+ fiber ports (Data) |
| Optical Fiber Port | 1/10G SFP+ optical fiber port, default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC) |
| Optical Fiber Port Expansion | Support Turbo overclocking 2.5G optical module expansion and ring network |
| Optical Cable/ Distance | Multi-mode: 850nm/ 0-550m (1G), 0-300m (10G), Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km |

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| Chip Parameter | |
|---|---|
| Network Management Type | L2+ |
| Network Protocol | IEEE 802.3z 1000Base-X, IEEE 802.3ae 10GBase-SR/LR, IEEE 802.3x |
| Forwarding Mode | Store and Forward (Full Wire Speed) |
| Switching Capacity | 240Gbps (non-blocking) |
| Forwarding Rate @64byte | 178.56Mpps |
| CPU(Hz) | Dual Core 1G |
| DRAM | 2G |
| FLASH | 256M |
| MAC | 32K |
| Buffer Memory | 16M |
| Jumbo Frame | 12K |
| LED Indicator | Fiber port: L/A (Green), Network: Link (Yellow), System: SYS (Green) |
| Reset Switch | Yes, press and hold the switch for 10 seconds and release it to restore the factory settings |
| **Power Supply** | |
| Total Power/ Input Voltage | 30W/ (AC100-240V) |
| Power Consumption | Standby<13W, Full load<20W |
| Power Supply | Built-in power supply, AC100~240V 50-60Hz, 0.65A |
| **Physical Parameter** | |
| Operation Temp/ Humidity | -20~+55°C, 5%~90% RH Non condensing |
| Storage Temp/ Humidity | -40~+75°C, 5%~95% RH Non condensing |

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| | |
|---|---|
| Dimension (L*W*H) | 270*181*44.5mm |
| Net /Gross Weight | 1.25kg/ 1.75kg |
| Installation | Desktop, 1U/19" cabinet |
| **Certification & Warranty** | |
| Lightning Protection | Lightning protection: 4KV 8/20us, Protection level: IP30 |
| Certification | CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS |
| Warranty | 3 years, lifelong maintenance. |
| **Network Management Feature** | |
| Interface | IEEE802.3x flow control (Full duplex)<br>Port exception protection mechanism<br>Port real-time flow management (Flow Interval)<br>Broadcast storm suppression based on port rate<br>Optical port SFP module DDMI real-time digital diagnosis<br>Port EEE Green Ethernet Energy-Saving configuration and status view<br>Limit the rate of packet traffic on incoming and outgoing ports, mini granularity is 16Kbps and max 1Gbps |
| L3 Feature | RIPv1/v2, RIPng, OSPFv1/v2, OSPFv3<br>Static routing max 128 entries, ARP protocol max 1024 entries<br>L2+ network management function, IPv4/IPv6 dual-stack management |
| VLAN | Protocol-based VLAN, MAC address-based VLAN<br>Port configuration of Access, Trunk, Hybrid. GVRP VLAN protocol<br>(4K) VLAN based on port, IEEE802.1q, Voice VLAN, QinQ configuration |
| Port Aggregation | LACP, Static aggregation, Max 6 aggregation groups and 8 ports per group |
| Spanning Tree | STP BPDU Guard, BPDU filtering and BPDU forwarding<br>STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s) |

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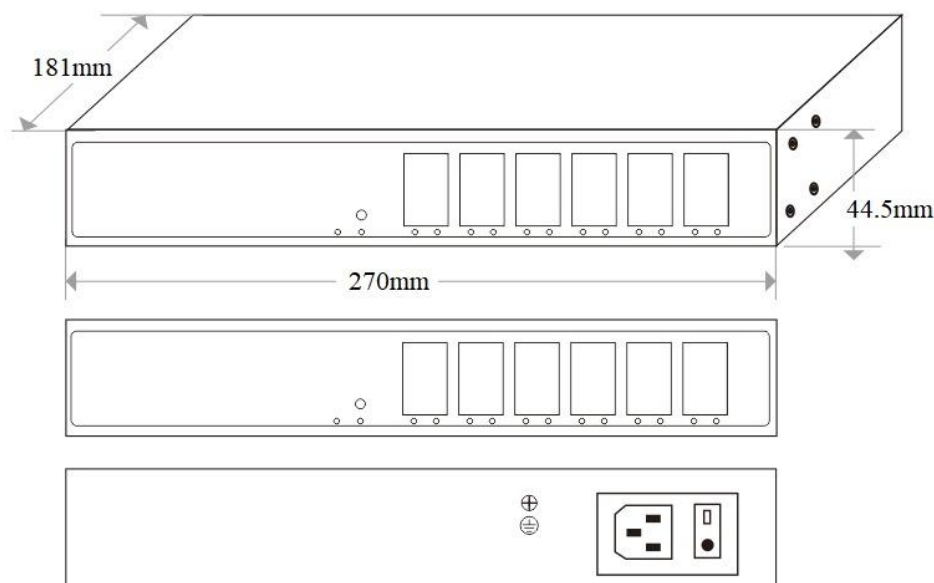| | |
|---|---|
| ERPS Ring Network | ERPS Ring Network, Recovery time less than 20ms, ITU-T G.8032 |
| Multicast | MLD Snooping, Multicast VLAN<br>User quick log out, MVR (Multicast VLAN Registration)<br>IGMP Snooping v1/v2/v3 and 1024 multicast groups at most |
| Mirroring | Bidirectional traffic mirroring for basic ports<br>one-to-multiple mirroring, supports up to 4 port sessions |
| QoS | Queue Scheduling Algorithm (SP, WRR, SP+WRR)<br>Flow-based Rate Limiting, Flow-based Packet Filtering<br>Flow-based redirection, 8*Output queues of each port<br>802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/ Remark |
| ACL | ACL distribution based on port and VLAN<br>L2-L4 packet filtering function, matching the first 80 bytes message, and provides<br>ACL definitions based on source MAC address, destination MAC address, source IP<br>address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port<br>range, VLAN, etc. |
| Security | Port based IEEE802.1X authentication<br>SSL guarantees data transmission security<br>Quad binding function of IP+MAC+VLAN+ports<br>MAC address learning limit, MAC address black hole<br>Anti DoS attack, Port broadcast message suppression<br>IP Source Guard function, AAA&RADIUS certification<br>Hierarchical user management and password protection<br>SSH 2.0 provides a secure encrypted channel for user login<br>Host data backup mechanism, ARP intrusion detection function<br>Port isolation, IP Source Guard, ARP message speed limit function |
| DHCP | DHCP Client, DHCP Snooping, DHCP Server |

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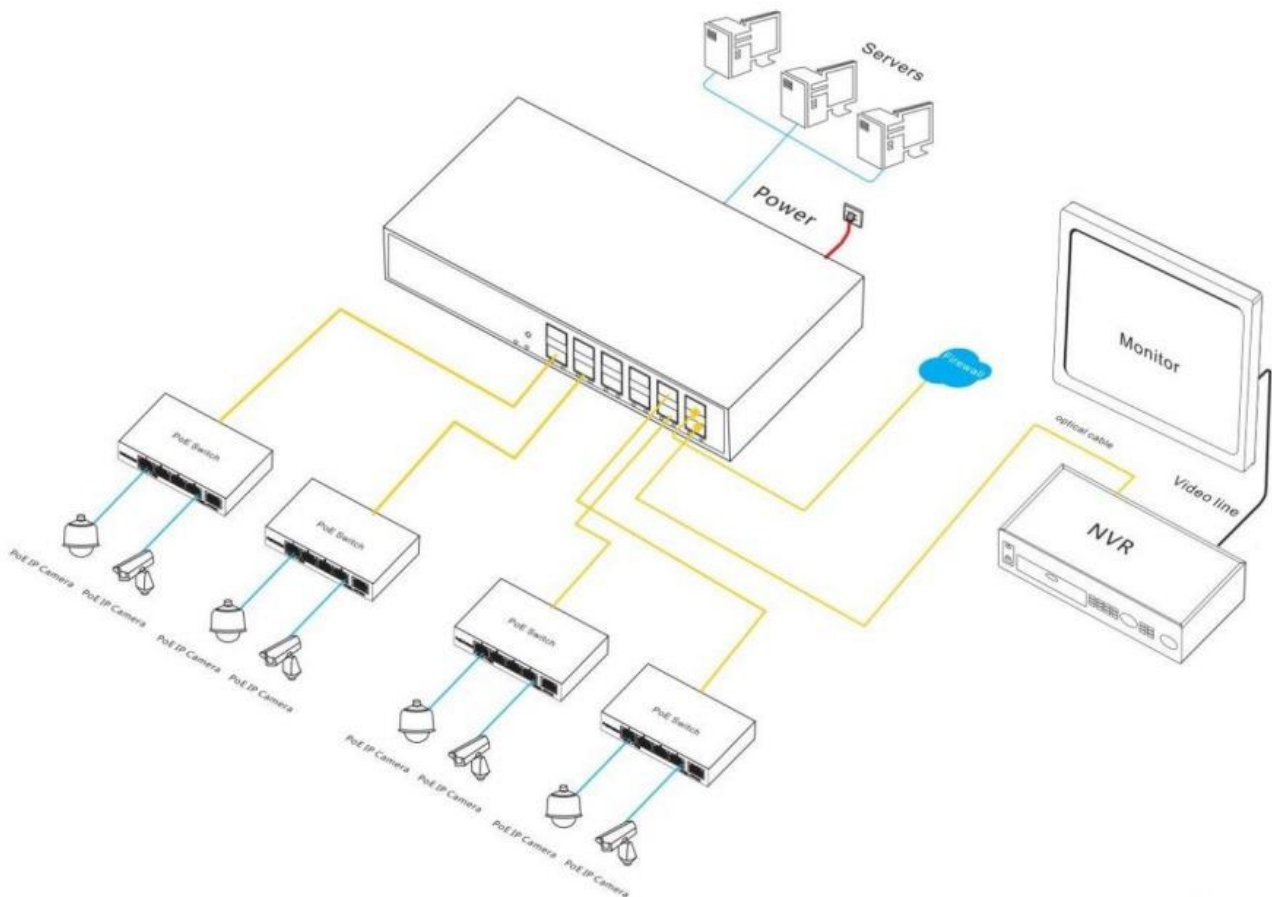| | |
|---|---|
| Management | NTP clock, Viewing CPU Instant Utilization Status<br>NMS platform cluster management (LLDP+SNMP)<br>SNMP V1/V2/V3, Web network management (https)<br>Ping detection, Link Layer Discovery Protocol(LLDP)<br>One-click restore, Cable status check, System work log<br>Console/ AUX Modem/ Telnet/ CLI command line configuration<br>FTP, TFTP, Xmodem, SFTP file upload and download management |
| System | Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable<br>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable |

## DIMENSION

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**APPLICATION**

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## PACKING LIST

| Content | | Qty | Unit |
|---|---|---|---|
| **Packing List** | 12-port 10G managed Ethernet fiber switch | 1 | Set |
| | RJ45-DB9 Adapter Cable | 1 | PC |
| | AC Power Cable | 1 | PC |
| | User Guide | 1 | PC |