



## DATASHEET

# S3800 Series Ethernet Switches

1GE Access and 10G Uplink  
Network Switches

## Overview

FS S3800 series are designed for class-carrier GE access and 10G uplink network, they cover all kinds of enterprise/ operators customer.

S3800 Series provide 20/24/48\* 10/100/1000Base-T, 1000Base-X SFP or 10G SPF+ for the demand of cost-effective Gigabit access /aggregation. It adopts high performance processor to provide full speed forwarding and line-dormant capacity to coordinate with NGGN unified software. It supports strong ACL and IP+MAC+ports binding etc.

## Configurations

Part Number	Description
S3800-24F4S	<ul style="list-style-type: none"> <li>➤ 20x 100/1000 Base-X SFP Ports</li> <li>➤ 4x 10GE SFP+ Ports</li> <li>➤ 4x 1GE Combo Ports</li> </ul>
S3800-24T4S	<ul style="list-style-type: none"> <li>➤ 24x 10/100/1000 Base-T Ports</li> <li>➤ 4x 10GE SFP+ Ports</li> </ul>
S3800-48T4S	<ul style="list-style-type: none"> <li>➤ 48x 10/100/1000 Base-T Ports</li> <li>➤ 4x 10GE SFP+ Ports</li> </ul>

## Primary Product Highlights

### I. Carrier-class Equipment Stability and Network Resiliency

- Adopt NGBN autonomous intellectual property operating system with large- scale application in global network of operators
- Support multiple link redundancy and network redundancy protocols such as VRRP / GARP / MSTP / smart link

### II. Perfect Security Mechanism

- Use the hardware - based packet - by - packet forwarding mechanism, the feature packets are effectively detected and filtered

- Support various protection functions such as DDoS, CPU overcurrent protection and VRRP
- The system vendors can choose the image with features for today and have the option for smoothly upgrading in the future
- Support DHCP snooping / IP source Guard / 802.1X etc. Rich security features can effectively protect the user, equipment and network availability
- Support link protection such as BFD, FlexLink, dynamic link aggregation, and Ethernet ring network

### III. Rich Business Characteristics

- Support DHCP Server and DHCP Relay
- Support L2 - Tunneling transparent encapsulation network edge service protocol
- Support Ethernet OAM protocol

### IV. Strong QoS Capability

- Support 2Rate3Color-controlled traffic management policies
- Support CAR to implement precise rate limits based on ports and streams
- Support various traffic classification and QoS flow control to guarantee the transmission of high priority packets
- Support SP / WRR and other priority algorithms to protect the transmission of multimedia services

## Specification

	S3800-24F4S	S3800-24T4S	S3800-48T4S
<b>Ports</b>			
Gigabit RJ45 Ports	--	24	48
1GE SFP Ports	20	--	--
10GE SFP+ Ports	4	4	4

	S3800-24F4S	S3800-24T4S	S3800-48T4S
<b>Ports</b>			
Combo Ports	4 (RJ45/SFP)	--	--
Control Port	1	1	1
<b>General</b>			
CPU	ARM		
Switching Chip	BCM53347	BCM53346	BCM53346
Operating System	Based on Vxworks		
Switching Capacity	128Gbps	128Gbps	176Gbps
Forwarding Rate	95Mpps	95Mpps	130Mpps
SDRAM Memory	512MB		
Flash Memory	16MB		
<b>Power Requirements</b>			
Power Supply	AC: 100~240V, 50/60Hz		
Power Consumption (Full-loaded)	≤60W	≤40W	≤60W
Power Consumption (Idle)	≤20W	≤13W	≤25W
<b>Environmental</b>			
Working Temperature	-20° C~55° C		
Storage Temperature	-40° C~70° C		
Relative Humidity	10%~90%, non-condensing		
<b>Physical</b>			
Dimensions (W x D x H)	440x280x44mm	440x220x44mm	440x300x44mm
Weight (Full-Loaded)	3kg	3.5kg	3kg

# Product Features and Benefits

Features	Benefits
<b>L2 Features</b>	
MAC	<ul style="list-style-type: none"> <li>➤ 16K MAC address</li> <li>➤ MAC Black Hole</li> <li>➤ Port MAC Limit</li> </ul>
VLAN	<ul style="list-style-type: none"> <li>➤ 4K VLAN entries</li> <li>➤ Port-based/MAC-based/IP subnet-based VLAN</li> <li>➤ Port-based QinQ and Selective QinQ (StackVLAN)</li> <li>➤ VLAN Swap and VLAN Remark</li> <li>➤ PVLAN to realize port isolation and saving public-vlan resources</li> <li>➤ GVRP</li> </ul>
Spanning Tree Protocol	<ul style="list-style-type: none"> <li>➤ IEEE 802.1D Spanning Tree Protocol (STP)</li> <li>➤ IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)</li> <li>➤ IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP)</li> <li>➤ Remote loop detecting</li> </ul>
Port	<ul style="list-style-type: none"> <li>➤ Bidirectional bandwidth control, configure entry/exit and the smallest 64K control particle</li> <li>➤ Static and LACP</li> <li>➤ Port- mirroring of 1:1 or N:1</li> </ul>
<b>Security Features</b>	
User's security	<ul style="list-style-type: none"> <li>➤ ARP anti-Flooding, configure ARP traffic safety threshold and inhibition ARP packet</li> <li>➤ IP+MAC+port+VLAN binding manually</li> <li>➤ Port Isolation, configure hardware isolation of each port</li> <li>➤ Bind MAC address to port and MAC address filtration on port</li> <li>➤ IEEE 802.1x and AAA/Radius authentication</li> </ul>
Device Security	<ul style="list-style-type: none"> <li>➤ Anti-DOS attack</li> <li>➤ SSHv2 Secure Shell</li> <li>➤ SNMP v3 encryption</li> <li>➤ Telnet based on Security IP</li> <li>➤ Prevent unauthorized user</li> </ul>
Network security	<ul style="list-style-type: none"> <li>➤ One button binding based on dynamic ARP table</li> <li>➤ Manual binding parameter of IP 、 VLAN ID、 MAC and port etc.</li> <li>➤ L2-L7 ACL flow filtration</li> <li>➤ Auto-shutdown port in storm</li> <li>➤ Update user's location through DHCP Option82 and PPP</li> </ul>

## Features

## Benefits

### Service Features

ACL	<ul style="list-style-type: none"> <li>➤ Activate standard and extended ACL</li> <li>➤ Time Range ACL strategy</li> <li>➤ Flow classification based on SMAC, DMAC, VLAN, SIP, DIP, IP IP(IPv4/IPv6) , TCP/UDP port num, protocol type etc.</li> <li>➤ Packet filtration of L2~L7 IP header with 80bytes</li> </ul>
QoS	<ul style="list-style-type: none"> <li>➤ Rate-limit to packet sending/receiving speed of port or self-defined flow and provide general flow monitor and two-speed tri-color monitor of self-defined flow</li> <li>➤ Packet mirror and redirection of interface and self-defined flow Supports Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Remark</li> <li>➤ Super queue scheduler based on port and self-defined flow. Each port/ flow supports 8 priority queues and scheduler of SP, WRR and SP+WRR</li> </ul>
Multicast	<ul style="list-style-type: none"> <li>➤ IGMPv1/v2/v3 Snooping</li> <li>➤ IGMP Filter</li> <li>➤ MVR multicast VLAN register and cross VLAN multicast replication</li> <li>➤ IGMP Fast leave</li> <li>➤ IGMP Proxy</li> </ul>

### IP routing

IPv4	<ul style="list-style-type: none"> <li>➤ ARP Proxy</li> <li>➤ DHCP Relay</li> <li>➤ DHCP Server</li> <li>➤ Static route</li> </ul>
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### Reliability

Loop Protection	<ul style="list-style-type: none"> <li>➤ EAPS and GERP</li> <li>➤ Loopback-detection</li> </ul>
Link Protection	<ul style="list-style-type: none"> <li>➤ FlexLink</li> <li>➤ RSTP/MSTP</li> <li>➤ LACP</li> <li>➤ BFD</li> </ul>
Device Protection	<ul style="list-style-type: none"> <li>➤ Backup of host program and configuration files</li> </ul>

### Maintenance

Network Maintenance	<ul style="list-style-type: none"> <li>➤ Port real-time, utilization and transmit/receive statistic based on CLI</li> </ul>
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## Features

## Benefits

### Maintenance

Network Maintenance	<ul style="list-style-type: none"><li>➤ LLDP</li><li>➤ 802.3ah Ethernet OAM</li><li>➤ Syslog and RFC 3164 BSD syslog Protocol</li><li>➤ Ping and Traceroute</li></ul>
Device Management	<ul style="list-style-type: none"><li>➤ CLI, Console port, Telnet and WEB</li><li>➤ SNMPv1/v2/v3</li><li>➤ RMON (Remote Monitoring)1,2,3,9 group MIB</li><li>➤ NTP</li><li>➤ GN.Link II Server</li><li>➤ NGBNView network Management</li></ul>



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