



GT-SX-4554-2QF4ZF-F
48 Port Layer 3 Switch

Technical Specifications

Physical Specification

GT-SX-4554-2QF4ZF-F

Interfaces	48 × 10-Gig SFP+ and 2 × 40-Gig QSFP+ Ports and 4 × 100G QSFP28 ports
Console Port	RJ-45 console ports for out-of-band CLI management
Management Port	Yes
USB Port	USB 2.0
Flash (MB)	2048
DRAM (MB)	2048

Performance

Switching Capacity	1.92 Tbps
Max. Forwarding Rate	1440 Mpps
Packet Buffer Memory	9 MB
MAC Address Table	65K
MTBF(H)	>200,000
Forwarding Mode	Store Forward

Physical

Power input	Dual Redundant AC hot swappable Power supplies (100 to 230 V AC, 50Hz±10%)
Power Consumption	no-load 102W Full-load 102W
Total output BTU (1000BTU/H=293W)	501.71
Noise@25°C(dBA)	57
Dimensions/ Weight	442×404×44 mm (W x D x H) 1U /8.8 Kg (empty)
Operating Temperature	0° to 50° C
Storage Temperature	-20° to 70° C
Operating Humidity	10%-90% non-condensing
Storage Humidity	10%-90% non-condensing

Software Features

Physical Stacking

Up to 4 units in single Stack on 100G ports

Layer 2 Features

- MAC Address Table
- Up to 65K entries
- Flow Control
- 802.3x Flow Control when using full- duplex
- Back Pressure when using half-duplex
- HOL Blocking Prevention
- Spanning Tree Protocol
- 802.1D STP • 802.1w RSTP
- 802.1s MSTP
- Root Guard
- Loop Guard
- Jumbo Frame
- Up to 9 KB
- 802.1AX Link Aggregation
- Max. 32 groups per device, 16 ports per group
- ERPS (Ethernet Ring Protection Switching)
- Port mirroring
- Supports one-to-one
- Supports mirroring for Tx/Rx/both
- L2 protocol tunnelling
- Loopback Detection (LBD)

L2 Multicast Features

- MLD Snooping
- MLD v1/v2 Snooping
- Supports 256 groups
- Host-based MLD Snooping Fast Leave
- MLD Snooping Querier
- Per-VLAN MLD Snooping
- MLD Proxy Reporting
- IGMP Snooping
- IGMP v1/v2/v3 Snooping
- Supports 2K IGMP groups
- Per VLAN IGMP Snooping
- IGMP Snooping Querier
- Host-based IGMP Snooping Fast Leave
- PIM Snooping

Layer 3 Multicast

- IGMP v1/v2/v3
- MLD v1/v2
- PIM-DM/SM for IPv4/IPv6

L3 Features

- IPv4 ARP/IPv6ND support up to 16K/4K
- ARP • 1K static ARP
- Loopback interface
- UDP helper
- IPv6 tunnelling
- Static
- ISATAP
- GRE
- 6to4
- IPv6 Neighbor Discovery (ND)
- IGMP Proxy Reporting
- VRRP v2/v3
- IPv6 Tunnelling
- Static
- 6to4
- IP Interface
- Supports 1K interfaces

Software Features

L3 Routing

- Supports 36K Hardware L3 forwarding entries IPv4/IPv6
- Static routing
- Max. 16K IPv4 entries
- Max. 4K IPv6 entries
- Supports Route Redistribution
- Default routing
- Policy-based Route (PBR)
 - RIP
 - RIP v1/v2
 - RIPng
- Route Redistribution
- Default route
- Static route
- RIP
- RIPng OSPF
- OSPF v2/v3
- OSPF Passive Interface
- Stub/NSSA Area
- Bidirectional Forwarding Detection (BFD)
- OSPF
- BGP, BGP4+

VLAN

- 802.1Q
- 802.1v
- Double VLAN (Q-in-Q)
- Port-based Q-in-Q
- Selective Q-in-Q
- Port-based VLAN
- MAC-based VLAN
- Private VLAN
- VLAN group
- Max. 4K Vlan
- Max. 4094 Vlan IDs
- ISM VLAN (multicast VLAN)
- GVRP
- Up to 4094 dynamic VLANs

AAA

- 802.1X authentication
- Supports port-based access control
- Supports host-based access control
- Dynamic VLAN assignment
- QoS assignment
- ACL assignment
- Identity-driven policy assignment
- Dynamic VLAN assignment
- QoS assignment
- ACL assignment
- Supports port-based access control
- Supports host-based access control
- MAC-based Access Control (MAC)
- Identity-driven policy assignment
- Dynamic VLAN assignment
- QoS assignment
- ACL assignment
- Supports port-based access control
- Supports host-based access control
- RAIDUS and TACACS+ authentication
- Authentication Database Failover
- Guest VLAN

Quality of Service (QoS)

- 802.1p Quality of Service
- 8 queues per port
- QoS based on
 - 802.1p Priority Queues
 - DSCP • IP address
 - MAC address
 - VLAN
 - IPv6 traffic class
 - IPv6 Flow Label
 - TCP/UDP port
 - Congestion Control
 - WRED
- Queue handling
- Strict
- Weighted Round Robin (WRR)
- Strict + WRR
- Bandwidth control
- Port-based (min. granularity 64 Kb/s)
- Flow-based (min. granularity 64 Kb/s)
- Per queue bandwidth control (min. granularity 64 Kb/s)
- Support for following actions:
 - Remark 802.1p priority tag
 - Remark ToS/DSCP tag
 - Committed Information Rate (CIR)

Software Features

Access Control List (ACL)

- ACL based on:
 - 802.1p priority
 - VLAN • MAC address
 - Ether Type
 - IP address
 - DSCP
 - Protocol type
 - TCP/UDP port number
- Max. ACL entries:
 - Ingress/Egress
 - IPv4: 2K
 - IPv6: 2K

Security

- Broadcast/multicast/unicast storm control
- DHCP server screening
- IP-MAC-Port Binding
- Dynamic ARP Inspection
- IP Source Guard
- DHCP Snooping
- IPv6 Snooping
- DHCPv6 Guard
- IPv6 Route Advertisement (RA) Guard
- IPv6 ND Inspection
- MD5, SHA-256, RSA-1024, AES256, etc
- ARP Spoofing Prevention
- Duplicate Address Detection (DAD)
- L3 Control Packet Filtering
- SSL • Supports v1/v2/v3
- Supports IPv4/IPv6 access
- SSH
- Supports SSH v2
- Supports IPv4/IPv6 access
- TLS v1.2 or above
- BPDU attack protection
- DoS attack prevention

Operations, Administration, and Maintenance (OAM)

- Cable diagnostics
- 802.3ah Ethernet link OAM
- Unidirectional Link Detection (ULD)
- Optical Transceiver Digital Diagnostic Monitoring (DDM)

Management

- Web-based GUI IPv4/IPv6
- CLI • SSH v1/v2
- Telnet client
- TFTP client
- FTP client
- Secure FTP (SFTP) server
- Traffic monitoring
- SNMP
- Supports v1/v2c/v3
- SNMP Trap
- System log
- DHCP client
- DHCP server
- DHCP Relay options 60, 61, 82
- CPU monitoring
- MTU setting
- Diagnostic tools
- Ping
- Traceroute
- LLDP
- NTP, SNTP
- RMON v1/v2
- Password encryption
- Debug command
- VAPT Test successful

Ordering Information

GT-SX-4554-2QF4ZF-F

GT L3 Managed Industrial Grade Switch with 4 Gigabit Fiber SFP Slots, 3 Open Slots for Gigabit Ports & Redundant Power Supply with GT 8 Gigabit Fiber SFP Slots Interface Module and GT 8-Port 10/100/1000 Base-T Interface Module

GT-MG-8F

GT 8 Gigabit Fiber SFP Slots Interface Module

GT-MC-8C

GT 8-Port 10/100/1000 Base-T Interface Module

