



QN-SW-325 SERIES



PRODUCT OVERVIEW

- o QN-SW-325 Switch Series provides robust Layer 2 switching and Layer 3 routing features to meet the diverse needs of enterprise/campus networks.
- o Centralized device management options: Cloud-hosted Quantum Rudder Network and Services Controller (NSC), on-premises Rudder NSC, Device GUI/CLI, SNMP.
- o Port density of 24/48 Gigabit ports and 4x25G SFP28 Uplink ports and 2x25G SFP28 Dedicated stacking port, non-blocking switching capabilities.
- The 24-Port switches support 1 to 8 ports PoE++ and 48-Port switches support 1 to 16 ports PoE++.
- o On-device management ports include a dedicated console port, an Out-of-Band management port and a USB flash drive port for storage.
- o Three-year limited liability manufacturer's warranty from day one.

HIGHLIGHTS

Simplified network management.

Unified management stacks (Rudder, Network and Service Controller) to deploy, monitor and troubleshoot wired as well as wireless networks.

Reliable performance.

Delivers Stability, Scalability and Effortless handling of diverse workloads.

- The switch supports a non-blocking architecture that provides from 348 Gbps to 396 Gbps of wire-speed switching capacity and from 258.9 Mpps to 294.6 Mpps of forwarding capacity, allowing it to handle a wide range of workloads.
- o For better network security, the switch supports multiple authentication methods, including 802.1x and MAC authentication. The switch provides identity-driven security and controls via granular Access Control Lists (ACLs).

o Centralized network observability.

Dashboards and reporting logs for various network events.



KEY SPECIFICATION

QN-SW-325-Series

FEATURE	SPECIFICATIONS				
Communication Ports	48FP (Full PoE)	48 (Non PoE)	24FP (Full PoE)	24 (Non PoE)	
10/100/1000 Mbps RJ45 Downlinks	48	48	24	24	
1/10/25G Fiber Uplinks	4+2*1	4+2*1	4+2*1	4+2*1	
1/10/25G Fiber Dedicated Stacking Uplinks	2*1	2*1	2*1	2*1	
Full Power Budget (Watt)*2	1440	-	740	-	
Max PoE (802.3af)	48	-	24	-	
Max PoE+ (802.3at)	48	-	24	-	
Max PoE++ (802.3bt) (60W)	16	-	8	-	
Max PoE++ (802.3bt) (90W)	16	-	8	-	
Management Ports	48 Ports		24 Ports	24 Ports	
Console (RJ45)	1		1	1	
Management (OOB)	1		1	1	
Storage (USB Type A)	1		1	1	
Capacity	48 Ports		24 Ports	24 Ports	
Switching capacity	396 Gbps			348 Gbps	
Forwarding rate	294.6 Mpps		258.9 Mpps	258.9 Mpps	
Packet Buffer	6 MB		6 MB		
RAM	4 GB		4 GB	4 GB	
Flash Memory	8 GB		8 GB	8 GB	
MAC address table	Max 32K		Max 32K	Max 32K	
Active VLAN support	4096		4096	4096	
IPv4 route	29700		29700	29700	
IPv6 route	7400		7400	7400	
Maximum jumbo frame size	9,216 bytes		9,216 bytes	9,216 bytes	
Link Aggregation groups	Max 64		Max 64	Max 64	
Link aggregation ports per group	Max 8		Max 8	Max 8	
Qos Priority queues	8 per port		8 per port	8 per port	
ACL	3000		3000	3000	
CPU	Multi-Core		Multi-Core	Multi-Core	
Quality of Service					
Port and VLAN based QoS (802.1P)		Single Rate Three Color Marker (srTCM)			
QoS based on IP/MAC/Port		Two Rate Three Color Marker (trTCM)			
Traffic shaping		Strict priority support			
DiffServ		Weighted Round Robin (WRR) support			
Class-map & Policy-map		Queue assignment based on DSCP & CoS			
QoS aggregate-policer		Traffic classificat	Traffic classification based on COS/DSCP		
QoS Mapping on Queue					

^{*1} Dedicated stacking ports can be configured as uplink ports.

 $^{^{*2}}$ The PoE power budget will be -30 or +30 watts, depending on the current power budget.



Security		
RADIUS, TACACS+	Downloadable ACL	
Port security	Dynamic ACL	
DHCP Snooping	Role based access control	
AAA (Authentication, Authorization, and	802.1x authentication (Port Based, MAC Based, Web	
Accounting)	Based)	
ACL (Based On IP, Port, Protocol, MAC, Time Based)	Management ACL	
IP source guard	DoS prevention	
Protected port	Secure copy (SCP)	
ARP inspection (DAI & SAI)	Security image integrity check	
Kerberos, SSL		
Multicast		
Internet Group Management Protocol -IGMP v1/v2/v3	Multicast Listener Discovery- MLD v1/V2	
IGMP snooping	MLD snooping	
PIM-SM/SSM	Multicast TV VLAN	
PIM-SMv6	MVR (Multicast VLAN registration)	
Layer 3		
IPv4 and IPv6 dual stack	IPv6 prefix list	
Intra-Site Automatic Tunnel Addressing Protocol (ISATAP)	IP source guard	
Policy Based Routing (PBR)	DHCP server	
ARP, Gratuitous ARP	DHCP relay	
DHCP Client	IPv6 NDRA (Neighbor Discovery Router Advertisement)	
ICMP redirect & ICMP unreachable	Duplicate Address Detection (DAD)	
IPv6 SLAAC (Stateless Address Auto configuration)	IPv6 ND	
ARP-Proxy	DHCP Option 82, 66, 67	
Layer 3 Routing		
Static routing (IPv4, IPv6)	Inter-VLAN routing	
Routing Information Protocol, version 2 (RIPv2)	OSPFv2/v3 (Open Shortest Path First)	
Layer 2		
Port Tagging/untagged	BPDU guard	
MAC based VLANs	GVRP	
Private VLAN	LLDP/LLDP MED	
Subnet based VLAN	RADIUS assigned VLAN	
Auto MDI/MDIX	Link aggregation (Ether Channel)	
Loopback detection	Link Aggregation Control Protocol (LACP)	
Port isolation	Port mirroring (Port, ACL, VLAN Based)	
Root guard	Default VLAN	
Guest VLAN	Auto voice VLAN	
Energy Efficient Ethernet (EEE)	Green Ethernet	



Link flapping detection	Flow control	
STP/RSTP/MSTP	Native VLAN	
QinQ (802.1Q)	Loop guard	
High Availability		
Stacking (Up-to 8 members)	Ring Redundancy Protocol (RRP)	
Equal-Cost Multi Path (ECMP)	Virtual Router Redundancy Protocol (VRRP)	
Storm control (Broadcast, Multicast, Unicast)		
Management		
Local GUI	NetConf/RestConf	
Industrial standard CLI	NTP authentication	
Telnet support	SPAN/RSPAN	
Storage & File management with USB	SSHv1/v2	
TFTP support	Firmware auto install support	
Dual Flash Images OS	Syslog server	
SNMP v1/v2c/v3	RMON (All 4 Groups 1,2,3,9)	
SNTP	sFlow	
Management: RUDDER (Controller)/Standalone	REST API	
Manual/schedule reboot		
Standard Compliance		
IEEE Standards Compliance		
802.1AB LLDP/ LLDP-MED	802.3ae 10 gigabit Ethernet	
802.1D MAC bridging	802.3at Power over Ethernet Plus	
802.1p Mapping to priority queue	802.3u 100Base-TX	
802.1s Multiple Spanning Tree (MST)	802.3x flow control	
802.1w Rapid Reconfiguration of Spanning Tree (RSTP)	802.3z 1000Base-SX/LX	
802.1x Port-based Network Access Control (PNAC)	802.3 MAU MIB (RFC 2239)	
802.3 Carrier Sense Multiple Access/Collision Detection (CSMA/CD)	802.1Q VLAN tagging	
802.3ab 1000Base-T	802.3az Energy Efficient Ethernet	
802.3 10Base-T	802.3af Power over Ethernet	
802.3ad link aggregation (Dynamic and Static)		
Monitoring and Troubleshooting		
Errdisable detection and recovery	CPU Utilization	
Device temp/PSU/FAN/status display & alarm	User operation logs	
Virtual cable test	Management logs, alarms	
ICMPv4/v6	DDM (Digital Diagnostic Monitoring)	
Traceroute	UDLD (Unidirectional Link Detection)	
Environment		
Operating temperature: -5° C (23°F) to 65°C (149°F)		
Humidity: 5% ~ 95% non-condensing		



Physical	
MTBF (Mean Time Between Failures)	1,00,000 hrs
Packaging Content	
Switch with type D power cord with rack mounting kit	

CERTIFICATION & COMPLIANCES*			
Certifications	Parameter Standards		
Environmental Compliances	CE, RoHS	EU safety, health, and environmental protection	
Regulatory (USA)	FCC	A product has been tested and found to comply with relevant FCC standards.	
		EMI/EMC (IEC / EN-61000* & CISPR 32)	
	MTCTE (ER)	Safety (IS-13252 & IEC-60950)	
		Technical (IPv4 & IPv6)	
	IPv6 Ready	Certified for next-generation network compatibility	

^{*}For detailed information on certifications apply to each model within the series mentioned in this datasheet, please visit www.qntmnet.com/certification/ or email us at sales@qntmnet.com/certification/.

ORDERING INFORMATION

Part Number	Description
QN-SW-325-48FP	Networking Switch, 48×1GbE PoE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port,1-16 PoE++(90W) Ports, 1440 Watts PoE Budget,
	includes 3 Years online activation warranty.
QN-SW-325-48	Networking Switch, 48×1 GbE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port, non-PoE, includes 3 Years online activation warranty.
QN-SW-325-24FP	Networking Switch, 24×1GbE PoE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port,1-8 PoE++(90W) Ports, 740 Watts PoE Budget, includes 3 Years online activation warranty.
QN-SW-325-24	Networking Switch, 24×1 GbE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port, non-PoE, includes 3 Years online activation warranty.