MULTIGIGABIT ENTERPRISE SWITCHES

DATA SHEET

QN-SW-425 SERIES

PRODUCT OVERVIEW

o QN-SW-425 series offers 8/24/48 Multigigabit (100/1000/2500 Mbps) downlink ports, 4 x 25G (SFP28) Uplink ports and 2 x 25G (SFP 28) dedicated stacking ports.

o The 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 Dedicated console port, Dedicated out of Band management port, USB flash drive port for storage.

o PoE budget options to power advanced devices with the option of PoE / PoE+ / PoE++ (60W/90W) per port. 24 Port switch supports 1 to 8 ports PoE++ and 48 Port switch supports 1 to 16 ports PoE++.

o Enhancing security measures, offers Device Protection Profiles for authenticating device management users through centralized AAA/RADIUS services.

o Three-year limited liability manufacturer's warranty from day one.

HIGHLIGHTS

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

o **Reliable performance.**
Delivers Stability, Scalability and Effortless handling of diverse workloads.

   o The switch supports a non-blocking architecture that provides from 420 Gbps to 540 Gbps of wire-speed switching capacity and from 313 Mpps to 402 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-425-Series

Communication Ports	Specifications						
Model	100/1000/ 2500 Mbps RJ45 Downlinks	Fiber Uplinks / Dedicated Stacking Uplinks	PoE Budget (Watt)[*2]	Max PoE (802.3af)	Max PoE+ (802.3at)	Max PoE++ (802.3bt) (60W)	Max PoE++ (802.3bt) (90W)
QN-SW-425-48FP	48	4+2[*1] (25G)	1440	48	48	16	16
QN-SW-425-48	48	4+2[*1] (25G)	--	--	--	--	--
QN-SW-425-24FP	24	4+2[*1] (25G)	740	24	24	8	8
QN-SW-425-24	24	4+2[*1] (25G)	--	--	--	--	--
QN-SW-425-8FP	8	2[*1] (10G)	240	8	8		
QN-SW-425-8	8	2[*1] (10G)	--	--	--	--	--

Management Ports	48 Ports	24 Ports	8 Ports
Console (RJ45)	1	1	1
Management (OOB)	1	1	1
Storage (USB Type A)	1	1	1

Capacity	48 Ports	24 Ports	8 Ports
Switching capacity	540 Gbps	420 Gbps	80 Gbps
Forwarding rate	402 Mpps	313 Mpps	60 Mpps
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

Quality of Service	
DiffServ (Differentiated services)	Strict priority support
Priority queue	Traffic shaping/policing
ACL mapping to priority queue	WRR support
Flow mirror, 802.1p Support	SP+WRR
Flow redirection	Rate limiting (Based on per port and per queue)
Single Rate Three Color Marker (srTCM)	Class map defines traffic flow with ACLs or support for network traffic management
Two Rate Three Color Marker (trTCM)	Policy map & route MAP to define the action for a set of classified inbound traffic
QoS based on classification (Based on IP, MAC and VLAN)	

Security	
RADIUS, TACACS+	MACsec*3
Port security	DHCP Snooping
AAA (Authentication, Authorization, and Accounting)	Role based access control
ACL (Based On IP, Port, Protocol, MAC, Time Based)	802.1x authentication (Port Based, MAC Based, Web Based)
IP source guard	Management ACL
Protected port	DoS prevention
ARP inspection (DAI & SAI)	Secure copy (SCP)
Downloadable ACL and Dynamic ACL by integrating with NAC (Network Access Controller)	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 (RIPv2, RIPng)	OSPFv2/v3 (Open Shortest Path First)
Border Gateway Protocol (BGP)	
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	Management: RUDDER (Controller)/Standalone
Industrial standard CLI	SPAN/RSPAN
Telnet support	SSHv1/v2
Storage & File management with USB	Firmware auto-install support
TFTP support	Syslog server
SNMP v1/v2c/v3, SNTP	RMON (All 4 Groups 1,2,3,9)
Manual/schedule reboot	sFlow
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	

Packaging Content
Switch with type D power cord with rack mounting kit

CERTIFICATION & COMPLIANCES*4

Regulatory	FCC
	BIS
Environmental	RoHS
	CE

*4 For more information, visit www.qntmnet.com/certification or email us at sales@qntmnet.com.

ORDERING INFORMATION

Part Number	Description
QN-SW-425-48FP	Networking Switch, 48×100/1000/2500 Mbps 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-year online activation warranty.
QN-SW-425-48	Networking Switch, 48×100/1000/2500 Mbps ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port, includes 3-year online activation warranty.
QN-SW-425-24FP	Networking Switch, 24×100/1000/2500 Mbps 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-year online activation warranty.
QN-SW-425-24	Networking Switch, 24×100/1000/2500 Mbps ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port, includes 3-year online activation warranty.
QN-SW-425-8FP	Networking Switch, 8×100/1000/2500 Mbps ports with 2x10 GbE SFP+ Uplink ports/stacking port, 240 Watts PoE Budget, includes 3-year online activation warranty.
QN-SW-425-8	Networking Switch, 8×100/1000/2500 Mbps ports with 2x10 GbE SFP+ Uplink ports/stacking port, includes 3-year online activation warranty.
Part Number – With MACsec*3	Description
QN-SW-425-48FP:M	Networking Switch, 48×1/2.5 GbE PoE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port/Uplink Ports, 1-16 PoE++(90W) Ports, 1440 Watts PoE Budget, includes 3-year online activation warranty.
QN-SW-425-48:M	Networking Switch, 48×1/2.5 GbE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port/Uplink Ports with MACsec, includes 3-year online activation warranty.
QN-SW-425-24FP:M	Networking Switch, 24×1/2.5 GbE PoE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated Stacking Port/Uplink Port, 1-8 PoE++(90W) Ports, 740 Watts PoE Budget with MACsec, includes 3-year online activation warranty.
QN-SW-425-24:M	Networking Switch, 24×1/2.5 GbE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated Stacking Port/Uplink Ports with MACsec, includes 3-year online activation warranty.
QN-SW-425-8FP:M	Networking Switch, 8×1/2.5 GbE PoE ports with 2x10 GbE SFP+ Uplink ports/stacking port, 240 Watts PoE Budget with MACsec, includes 3-year online activation warranty.
QN-SW-425-8:M	Networking Switch, 8×1/2.5 GbE ports with 2x10 GbE SFP+ Uplink ports/stacking port with MACsec, includes 3-year online activation warranty.