



# MULTIGIGABIT ENTERPRISE SWITCHES DATASHEET

*With Redundant Power Supply*



## QN-SW-430 SERIES

## PRODUCT OVERVIEW

- QN-SW-430 series offers 24/48 Multigigabit (100/1000/2500 Mbps) downlink ports, 4 x 25G (SFP28) Uplink ports and 2 x 25G (SFP 28) dedicated stacking ports.
- The series provides robust Layer 2 switching and Layer 3 routing features to meet the diverse needs of enterprise/campus networks.
- Centralized device management options –Cloud hosted Quantum Rudder Network and Services Controller (NSC), on premises Rudder NSC, Device GUI/CLI, SNMP.
- Dedicated console port, Dedicated Out of Band management port, USB flash drive port for storage.
- 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++.
- Enhancing security measures, offers Device Protection Profiles for authenticating device management users through centralized AAA/RADIUS services.
- 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 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.
- 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).

- **Centralized network observability.**

Dashboards and reporting logs for various network events.

## KEY SPECIFICATION

### QN-SW-430-Series

Communication Ports	Model			
Specifications	48FP	48	24FP	24
100/1000/2500 Mbps RJ45 Downlinks	48	48	24	24
1/10/25G Fiber Uplinks	4+2 <sup>*1</sup>	4+2 <sup>*1</sup>	4+2 <sup>*1</sup>	4+2 <sup>*1</sup>
1/10/25G Fiber Dedicated Stacking Uplinks <sup>*1</sup>	2 <sup>*1</sup>	2 <sup>*1</sup>	2 <sup>*1</sup>	2 <sup>*1</sup>
PoE Budget (Watt) <sup>*2</sup>	1900	--	820	--
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	--
RPS	2	2	2	2
Management Ports	48 Ports		24 Ports	
Console (RJ45)	1		1	
Management (OOB)	1		1	
Storage (USB Type A)	1		1	
Capacity	48 Ports		24 Ports	
Switching capacity	540 Gbps		420 Gbps	
Forwarding rate	402Mpps		313 Mpps	
MAC address table	Max 32k		Max 32k	
Active VLAN support	4096		4096	
IPv4 route	29700		29700	
IPv6 route	7400		7400	
Maximum jumbo frame size	9,216 bytes		9,216 bytes	
Link Aggregation groups	Max 64		Max 64	
Link aggregation ports per group	Max 8		Max 8	
Qos Priority queues	8 per port		8 per port	
ACL	3000		3000	
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		

<sup>\*1</sup> Dedicated stacking ports can be configured as uplink ports.

<sup>\*2</sup> The PoE power budget will be -30 or +30 watts, depending on the current power budget.

QoS aggregate-policer	Traffic classification based on COS/DSCP
QoS Mapping on Queue	
<b>Security</b>	
RADIUS, TACACS+	Role based access control
Port security	802.1x authentication (Port Based, MAC Based, Web Based)
AAA (Authentication, Authorization, and Accounting)	Management ACL
ACL (Based On IP, Port, Protocol, MAC, Time Based)	DoS prevention
IP source guard	Secure copy (SCP)
Protected port	Kerberos
ARP inspection (DAI & SAI)	SSL
Downloadable ACL and Dynamic ACL by integrating with NAC (Network Access Controller)	
<b>Multicast</b>	
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)
<b>Layer 3</b>	
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
<b>Layer 3 Routing</b>	
Static routing (IPv4, IPv6)	Inter-VLAN routing
Routing Information Protocol (RIPv2, RIPv6)	OSPFv2/v3 (Open Shortest Path First)
Border Gateway Protocol (BGP)	
<b>Layer 2</b>	
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
<b>High Availability</b>	
Stacking (Up-to 8 members)	Ring Redundancy Protocol (RRP)
Equal-Cost Multi Path (ECMP)	Virtual Router Redundancy Protocol (VRRP)
Storm control (Broadcast, Multicast, Unicast)	
<b>Management</b>	
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	
<b>Standard Compliance</b>	
<b>IEEE Standards Compliance</b>	
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)	802.3bt Power over Ethernet high power
<b>Monitoring and Troubleshooting</b>	
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)
<b>Environment</b>	
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\*

Certifications	Parameter	Standards
Regulatory (IN)	MTCTE (ER)	EMI/EMC (IEC / EN-61000* & CISPR 32)
		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/](http://www.qntmnet.com/certification/) or email us at [sales@qntmnet.com](mailto:sales@qntmnet.com).

## ORDERING INFORMATION

Part Number	Description
<b>QN-SW-430-48FP</b>	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, 1900 Watts PoE Budget, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs, includes 3-year online activation warranty.
<b>QN-SW-430-48</b>	Networking Switch, 48×100/1000/2500 Mbps ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs, includes 3-year online activation warranty.
<b>QN-SW-430-24FP</b>	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, 820 Watts PoE Budget, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs, includes 3-year online activation warranty.
<b>QN-SW-430-24</b>	Networking Switch, 24×100/1000/2500 Mbps ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs, includes 3-year online activation warranty.