



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
25G Fiber Uplinks	4+2 ^{*1}	4+2 ^{*1}	4+2 ^{*1}	4+2 ^{*1}
25G Fiber Dedicated Stacking Uplinks ^{*1}	2	2	2	2
PoE Budget (Watt) ^{*2}	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 VLANs support	4096		4096	
Maximum jumbo frame size	9,216 bytes		9,216 bytes	
Link aggregation groups	Max 32		Max 32	
Link aggregation ports per group	Max 8		Max 8	
QoS priority queues	8 per port		8 per port	
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)				

^{*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+	MACsec*3
Port security	Role based access control
AAA (Authentication, Authorization, and Accounting)	802.1x authentication (Port Based, MAC Based, Web 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)	Kerberos, SSL
Downloadable ACL and Dynamic ACL by integrating with NAC (Network Access Controller)	
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, RIPv3)	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	RMON (All 4 Groups 1,2,3,9)
SNTP	sFlow
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)	802.3bt Power over Ethernet high power
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-430-48FP	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, 1900 Watts PoE Budget, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs, includes 3-year online activation warranty.
QN-SW-430-48	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.
QN-SW-430-24FP	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, 820 Watts PoE Budget, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs, includes 3-year online activation warranty.
QN-SW-430-24	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.
Part Number – With MAC sec ^{*3}	Description
QN-SW-430-48FP: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, 1900 Watts PoE Budget, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs with MACsec, includes 3-year online activation warranty.
QN-SW-430-48:M	Networking Switch, 48×1/2.5 GbE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port/Uplink Ports, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs with MACsec, includes 3-year online activation warranty.
QN-SW-430-24FP:M	Networking Switch, 24×1/2.5 GbE PoE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port/Uplink Ports, 1-8 PoE++(90W) Ports, 820 Watts PoE Budget, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs with MACsec, includes 3-year online activation warranty.
QN-SW-430-24:M	Networking Switch, 24×1/2.5 GbE ports with 4x25 GbE SFP28 Uplink ports and 2x25 GbE SFP28 Dedicated stacking port/Uplink Ports, Redundant AC/AC Hot Swapable Power Supply and Hot swapable FANs with MACsec, includes 3-year online activation warranty.