QUANTUM
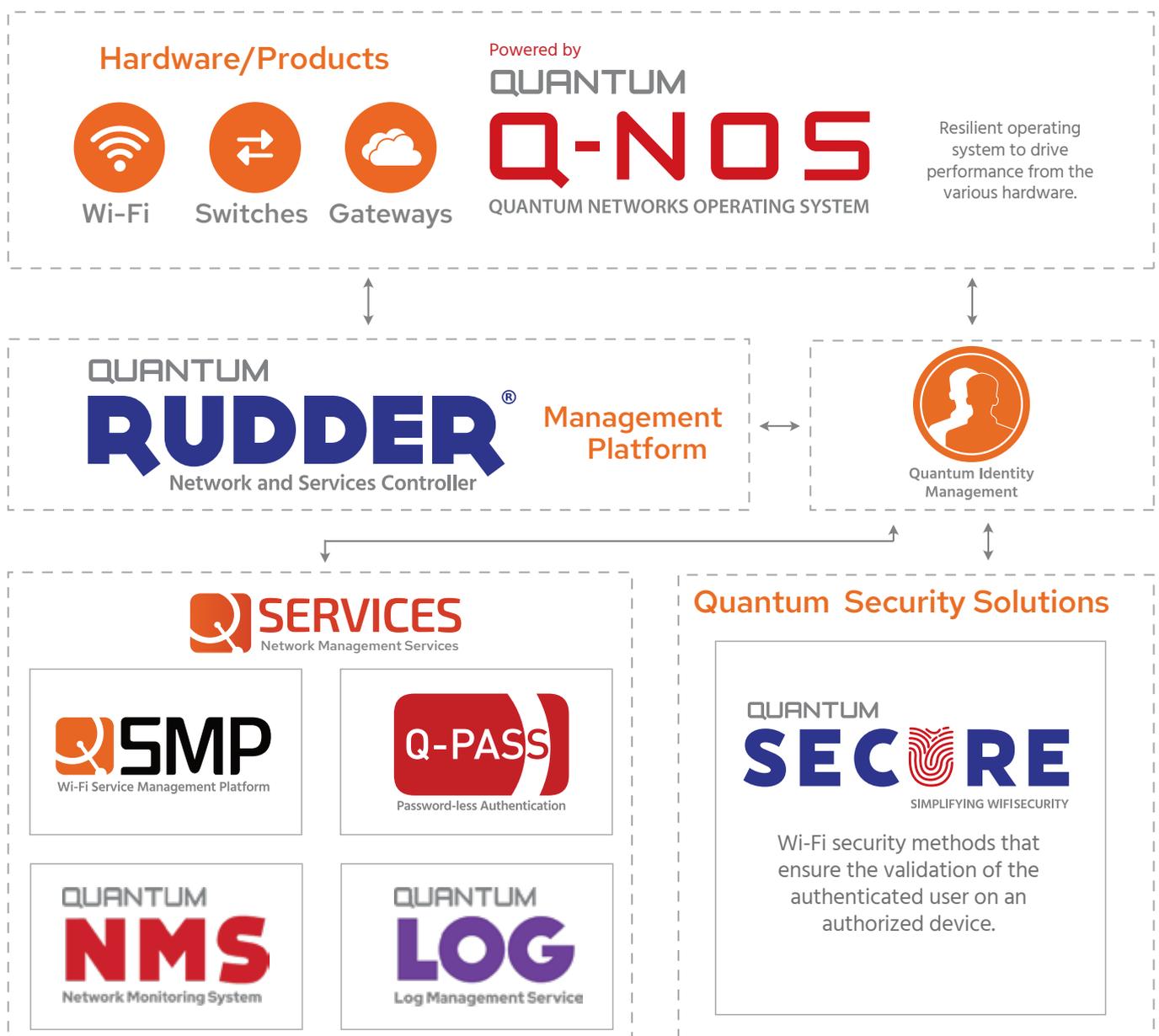## PRODUCT PORTFOLIO

Wi-Fi **Switches** **Gateways** **Q-Services**

Quantum Networks is a leading-edge networking equipment brand providing full-stack cloud-managed solutions. Currently, it offers various models under product rubrics such as Indoor Access Points, Outdoor Access Points, Gateways, Ethernet Switches and Privileged Access Management Solutions. Among its highly innovative technology offerings are Quantum Rudder, Quantum Ace, Quantum UnGrid and Quantum Secure. Quantum cloud-managed solutions allow users to manage their entire network from anywhere across the globe. Quantum Networks is committed to developing creative and intelligent Wireless Networking solutions.

Hardware/Products

Wi-Fi Switches Gateways

Powered by

QUANTUM

Q-NOS

QUANTUM NETWORKS OPERATING SYSTEM

Resilient operating system to drive performance from the various hardware.

QUANTUM

RUDDER®

Network and Services Controller

Management Platform

Quantum Identity Management

QSERVICES
Network Management Services

QSMP
Wi-Fi Service Management Platform

Q-PASS
Password-less Authentication

QUANTUM
NMS
Network Monitoring System

QUANTUM
LOG
Log Management Service

Quantum Security Solutions

QUANTUM
SECURE
SIMPLIFYING WIFISECURITY

Wi-Fi security methods that ensure the validation of the authenticated user on an authorized device.

ADVANTAGE QUANTUM

QUANTUM® NETWORKS

Unified Management

o Wi-Fi
o Switching
o Gateway
o VPN solutions

Scalability

o Management for up to 10,000 Quantum devices
o No limitation on user management

Identity Management

o User database management
o Roles/User group management
o User device management
o MAC randomization solution

Total Cost of Ownership

o Perpetual subscriptions
o No renewals
o No recurring support contracts
o No management cost for life

Solution-based

o Vertical-based custom solutions
o 802.1x-based authentication solutions
o Third-party integrations with Hospital/Hotel/Visitor Management Software

Support Standards

o 24/7 Quantum-backed support
o Clear hardware warranties
o Project-based extendible warranties up to 5 years
o Warranties start from the date of activation of the hardware, not on the supply date

Access Points

WAN Uplinks

Wi-Fi 6

Higher Data Rate

Cloud Managed

- Offers wide range of indoor, outdoor and in-room Wi-Fi 6 Access Points.

- It provides high speed Internet, wide coverage and reliable performance in low to high-density of users.

- Quantum Rudder provides both cloud-managed and on-premise solutions and Quantum Ace mobile application allows administrators to manage Quantum devices.

Indoor Access Points

QN-I-870

| 5 GbE Connectivity | 2.4 GHz – 4x4, 5 GHz – 8x8 MU-MIMO with OFDMA | Up to 5.9 Gbps Data Rate |

QN-I-490

| 2.5 GbE Connectivity | 2.4 GHz – 4x4, 5 GHz – 4x4 MU-MIMO with OFDMA | Up to 5.9 Gbps Data Rate |

QN-I-470

| 2.5 GbE Connectivity | 2.4 GHz – 2x2, 5 GHz – 4x4 MU-MIMO with OFDMA | Up to 2.9 Gbps Data Rate |

QN-I-280

| 2.5 GbE Connectivity | 2.4 GHz – 2x2, 5 GHz – 2x2 MU-MIMO with OFDMA | Up to 3 Gbps Data Rate |

QN-I-270

| 2.5 GbE Connectivity | 2.4 GHz – 2x2, 5 GHz – 2x2 MU-MIMO with OFDMA | Up to 1.7 Gbps Data Rate |

Indoor Access Points

QN-I-210 PLUS

| 1 GbE Connectivity | 2.4 GHz - 2X2, 5 GHz - 2X2 MU-MIMO with OFDMA | Up to 1.7 to 3 Gbps Data Rate |

QN-I-210

| 1 GbE Connectivity | 2.4 GHz - 2X2, 5 GHz - 2X2 MU-MIMO with OFDMA | Up to 1.7 Gbps Data Rate |

QN-I-220

| 1 GbE Connectivity | 2.4 GHz - 2x2, 5 GHz - 2x2 MU-MIMO | Up to 1.2 Gbps Data Rate |

QN-H-245

| 1 GbE Connectivity | 2.4 GHz - 2x2, 5 GHz - 2x2 MU-MIMO with OFDMA | Up to 2.9 Gbps Data Rate |

QN-H-220

| 1 GbE Connectivity | 2.4 GHz - 2x2, 5 GHz - 2x2 MU-MIMO with OFDMA | Up to 1.2 Gbps Data Rate |

Outdoor Access Points

QN-O-490

| 2.5 GbE Connectivity | 2.4 GHz – 4x4, 5 GHz – 4x4 MU-MIMO with OFDMA | Up to 3.5 Gbps Data Rate |

QN-O-240

| 2.5 GbE Connectivity | 2.4 GHz – 2x2, 5 GHz – 2x2 MU-MIMO with OFDMA | Up to 3 Gbps Data Rate |

QN-O-230

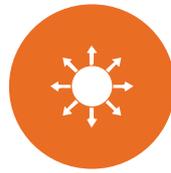| 1 GbE Connectivity | 2.4 GHz – 2x2, 5 GHz – 2x2 MU-MIMO with OFDMA | Up to 1.2 Gbps Data Rate |

Switches

OOB Managment

Enhanced QoS

Layer-3 Functionalities

Fiber Port Speed 1/10/25/40/100G

- Quantum Networks Switches simplify network management, enhance security and offer reliable performance. Our manageable switches range includes Access, Aggregation, Multigig/Core, Data Centre and Industrial switches.

- Options include 8-port, 24-port and 48-port switches to accommodate various network sizes with Versatile Power-over-Ethernet (PoE) Options.

- Experience single point control of network management with Quantum Rudder cloud-based solution and Quantum Ace mobile application.
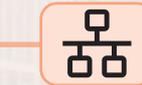
Switching

Enterprise Campuses | Hospitality | Financial Institutions
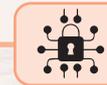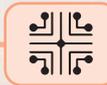
| 1G | 2.5G | 10G | 25G |

Enterprise Switches
Access + Aggration + Multigig

VLAN Diversity

Routing Protocols

Network Security

Management Stacks

Internet Service Providers (ISPs) | Cloud Service Providers

Quality of Service (QoS) Optimization

Advanced Layer-3 Routing Protocols
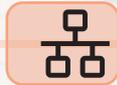
Comprehensive VLAN Support

Enhanced Security Measures

| 10G | 40G | 100G |

Core Switches

Server Farm Connectivity | Top-of-Rack (ToR) Switching

| 25G | 100G | 400G |

Data Centre Switches

Fast Data Transfer

Scalability

Robust Security Protocols

Minimal Latency

| 1G | 10G |

Industrial Switches

-40°C   75°C

Factories and Manufacturing Plants

Reduced TCO

Adaptable Deployment

Performance Excellence

Purposeful Design

Enterprise Switches

Enterprise switches play a pivotal role in meeting the dynamic requirements of both campus and enterprise networks. With robust Layer-2 switching and Layer-3 routing capabilities, these switches are designed to deliver high-performance networking solutions.

Access Switches

Downlinks : 8/12/16/24/48
Uplinks: 2/4 x 1G/10G SFP+
Power Budget: Up to 740 Watt
Switching Capacity: Up to 176 Gbps

QN-SW-225 Series

Downlinks : 24/48
Uplinks: 4x1G/10G SFP+
Power Budget: Up to 1480 Watt
Switching Capacity: Up to 176 Gbps

QN-SW-230-Series

Aggregation Switches

Downlinks : 24/48
Uplinks: 4+2*x25G SFP28
Stacking Port: 2*x25G SFP28
Power Budget: Up to 1440 Watt
Switching Capacity: Up to 396 Gbps

QN-SW-325-Series

Downlinks : 24/48
Uplinks: 4+2*x25G SFP28
Stacking Port: 2*x25G SFP28
Power Budget: Up to 1900 Watt
Switching Capacity: Up to 396 Gbps

QN-SW-330-Series

Multigig Switches

Downlinks: 24/48
Uplinks: 6(4+2*)x25G SFP28
Stacking Port: 2*x25G SFP28
Power Budget: Up to 1440 Watt
Switching Capacity: Up to 540 Gbps

QN-SW-425-Series

Downlinks: 24/48
Uplinks: 6(4+2*)x25G SFP28
Stacking Port: 2*x25G SFP28
Power Budget: Up to 1900 Watt
Switching Capacity: Up to 540 Gbps

QN-SW-430-Series

Enterprise QN-SW-225-Series

QN-SW-225-48 PORT

QN-SW-225-48P

48x1G RJ45 Downlinks	4x1G/10G Fiber Uplinks	740 Watts Power Budget

QN-SW-225-48

48x1G RJ45 Downlinks	4x1G/10G Fiber Uplinks	Non-PoE

QN-SW-225-24 PORT

QN-SW-225-24FP

24x1G RJ45 Downlinks	4x1G/10G Fiber Uplinks	740 Watts Power Budget

QN-SW-225-24P

24x1G RJ45 Downlinks	4x1G/10G Fiber Uplinks	400 Watts Power Budget

QN-SW-225-24

24x1G RJ45 Downlinks	4x1G/10G Fiber Uplinks	Non-PoE

QN-SW-225-16 PORT

QN-SW-225-16P-2SFPP

16x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	240 Watts Power Budget

QN-SW-225-16-4SFPP

16x1G RJ45 Downlinks	4x1G/10G Fiber Uplinks	Non-PoE

QN-SW-225-12 PORT

QN-SW-225-12P-2SFPP

12x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	188 Watts Power Budget

QN-SW-225-12-2SFPP

12x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	Non-PoE

QN-SW-225-8 PORT

QN-SW-225-8FPU

8x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	240 Watts Power Budget

QN-SW-225-8FP

8x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	240 Watts Power Budget

QN-SW-225-8P

8x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	120 Watts Power Budget

QN-SW-225-8F

8x1G Fiber Uplinks	2x1G/10G Fiber Uplinks

QN-SW-225-8

8x1G RJ45 Downlinks	2x1G/10G Fiber Uplinks	Non-PoE

Enterprise QN-SW-230-Series

QN-SW-230-48 PORT

QN-SW-230-48FP

| 48x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | 1480 Watts Power Budget |

QN-SW-230-48P

| 48x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | 740 Watts Power Budget |

QN-SW-230-48

| 48x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | Non-PoE |

QN-SW-230-24 PORT

QN-SW-230-24FP

| 24x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | 740 Watts Power Budget |

QN-SW-230-24P

| 24x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | 400 Watts Power Budget |

QN-SW-230-24

| 24x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | Non-PoE |

Enterprise QN-SW-325-Series

QN-SW-325-48 PORT

QN-SW-325-48FP

48x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	1440 Watts Power Budget

QN-SW-325-48P

48x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	740 Watts Power Budget

QN-SW-325-48

48x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

QN-SW-325-24 PORT

QN-SW-325-24FP

24x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	740 Watts Power Budget

QN-SW-325-24P

24x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	400 Watts Power Budget

QN-SW-325-24

24x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

Note:* Dedicated stacking ports can be configured as uplink ports.

Enterprise QN-SW-330-Series

QN-SW-330-48 PORT

QN-SW-330-48FP	QN-SW-330-48

48x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	1900 Watts Power Budget	48x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

QN-SW-330-24 PORT

QN-SW-330-24FP	QN-SW-330-24

24x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	820 Watts Power Budget	24x1G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

Note:* Dedicated stacking ports can be configured as uplink ports.

Enterprise
QN-SW-425-Series

QN-SW-425-48 PORT

QN-SW-425-48FP			QN-SW-425-48		
48x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	1440 Watts Power Budget	48x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

QN-SW-425-24 PORT

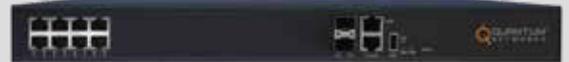| QN-SW-425-24FP			QN-SW-425-24		
24x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	740 Watts Power Budget	24x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

QN-SW-425-8 PORT

QN-SW-425-8FP			QN-SW-425-8		
8x1/2.5G RJ45 Downlinks	2*x10G Fiber Uplinks	240 Watts Power Budget	8x1/2.5G RJ45 Downlinks	2*x10G Fiber Uplinks	Non-PoE

Note: * Dedicated stacking ports can be configured as uplink ports.

Enterprise QN-SW-430-Series

QN-SW-430-48 PORT

QN-SW-430-48FP

48x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	1900 Watts Power Budget

QN-SW-430-48

48x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

QN-SW-430-24 PORT

QN-SW-430-24FP

24 x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	820 Watts Power Budget

QN-SW-430-24

24 x1/2.5G RJ45 Downlinks	6(4+2*)x25G Fiber Uplinks	Non-PoE

Note: * Dedicated stacking ports can be configured as uplink ports.

Core Switches

QN-CS-4810GF

| 48x10G SFP+ downlinks | 6x100G QSFP28 uplinks | Fan: 2+1 Hot Pluggable |

QN-CS-1610GF

| 16x10G SFP+ downlinks | 2 x100G QSFP28 uplinks | Fan: 2+1 Hot Pluggable |

QN-CS-2410GF

| 24x10G SFP+ downlinks | 6x100G QSFP28 uplinks | Fan: 2+1 Hot Pluggable |

QN-CS-241GF

| 16x1G SFP Ports + 8×1G SFP/RJ45 combo ports | 4X10G SFP+ uplinks | In-built Fan |

Industrial Switches

QN-IS-225-48 PORT

QN-IS-225-48HP-4SFPP-R

| 48x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | 400 Watts Power Budget |

QN-IS-225-48-4SFPP-R

| 48x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | Non-PoE |

QN-IS-225-24 PORT

QN-IS-225-24P-4SFPP-R

| 24x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | 400 Watts Power Budget |

QN-IS-225-24P-2SFPP-D

| 24x1G RJ45 Downlinks | 2x1G/10G Fiber Uplinks | 400 Watts Power Budget |

QN-IS-225-24-4SFPP-R

| 24x1G RJ45 Downlinks | 4x1G/10G Fiber Uplinks | Non-PoE |

QN-IS-225-24-2SFPP-D

| 24x1G RJ45 Downlinks | 2x1G/10G Fiber Uplinks | Non-PoE |

QN-IS-225-8 PORT

QN-IS-225-8 FPU

| 8x1G RJ45 Downlinks | 2x1G/10G Fiber Uplinks | 240 Watts Power Budget | 2xMax PoE (802.3bt) |

QN-IS-225-8FP

| 8x1G RJ45 Downlinks | 2x1G/10G Fiber Uplinks | 240 Watts Power Budget |

QN-IS-225-8

| 8x1G RJ45 Downlinks | 2x1G/10G Fiber Uplinks | Non-PoE |

Data Centre Switches

QN-DS-4825GF

| 48x25G Downlinks | 8x100G Uplinks | 1+1 Hot Swappable PSU |

QN-DS-2425GF

| 24x25G Downlinks | 6x100G Uplinks | 1+1 Hot Swappable PSU |

QN-DS-32400GF

| 32x400G QSFP-DD | 5+1 Hot Pluggable Fan | 1+1 Hot Swappable PSU |

QN-DS-32100GF

| 32x100G QSFP28 | 5+1 Hot Pluggable Fan | 1+1 Hot Swappable PSU |

Transceiver

Hot Pluggable

High Performance

Low Power Consumption

RoHS

RoHS compliant (lead free)

- The small, modular optical interface transceivers offer a convenient and cost effective solution for an array of applications in the data centre campus, metropolitan-area access and ring network, storage area network and long-haul network.

- Supporting various form factors, media types, and throughput, Quantum Network provides connectivity options to meet many different network architectures and deployment scenarios.

- The portfolios of Quantum Transceiver are fully compliant with industry standards.

Transceivers

100G

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTQSP100-LR4	Single-mode	802.3bm	1310	10000
QN-UTQSP100-SR4	Multi-mode	802.3bm	850	100
QN-UTQSP100-ER40	Single-mode	802.3bm	1550	40000
QN-UTQSP100-ZR80	Single-mode	802.3bm	1550	80000

40G

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTSP40-LR4	Single-mode	802.3ba	1310	10000
QN-UTSP40-SR4	Multi-mode	802.3ba	850	100

25G

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTSP28-LR	Single-mode	802.3by	1310	10000
QN-UTSP28-SR	Multi-mode	802.3by	850	100
QN-UTSP28-ER40	Single-mode	802.3by	1550	40000
QN-UTSP28-ZR80	Single-mode	802.3by	1550	80000

10G BASE-T Copper

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTSPP-10BT	--	802.3an	--	100**

** It's for cat6a and cat 7.

Transceivers

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTSPP-LR	Single-mode	802.3ae	1310	10000
QN-UTSPP-SR	Multi-mode	802.3ae	850	300
QN-UTSPP-ER40	Single-mode	802.3ae	1550	40000
QN-UTSPP-ZR80	Single-mode	802.3ae	1550	80000

1000 BASE-T Copper

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTSFP-1BT	--	802.3ab	--	100

Model Number	Fiber Type	IEEE Standards	Wavelength (nm)	Maximum Cable Distance (mtrs)
QN-UTSFP-LX	Single-mode	802.3z	1310	10000
QN-UTSFP-SX	Multi-mode	802.3z	850	500
QN-UTSFP-LX-BXD*	Single-mode	802.3z	1490nm-TX /1310nm-RX	10000
QN-UTSFP-LX-BXU*	Single-mode	802.3z	1310nm-TX /1490nm-RX	10000
QN-UTSFP-ER40	Single-mode	802.3	1310	40000
QN-UTSFP-ZR80	Single-mode	802.3	1550	80000

*It's a bi-directional SFP Transceiver.

Gateways

Data Usage Analytics

Manage and Monitor Multiple WAN

Application Policing

Site-to-site VPN

- Quantum Networks Gateway supports multiple WAN.

- VPN for branch connectivity and link load balancing.

- Anywhere, Anytime Manageability of Gateway devices can be handled centrally using Quantum Rudder or Quantum Ace mobile application.

Gateways

QN-S-400

| 4 x ETH, 2 x USB WAN Interface | 4 x ETH, 1 x SFP, 4 x SFP+LAN Interface | Stateful Firewall |

QN-S-200

| 2 x ETH, 2 x USB WAN Interface | 4 x ETH, 2 x SFP, 2 x SFP+ LAN Interface | Stateful Firewall |

QN-S-100

| 2 x ETH, 1 x USB WAN Interface | 4 x ETH, 1 x SFP LAN Interface | Stateful Firewall |

QN-S-50

| Wi-Fi | 1 x FE WAN, 1 x FE LAN | Firewall |

Q-services

Network and Services Controller

Manage and troubleshoot your network from anywhere with our cloud-based solution. Enjoy ultimate flexibility and freedom.

Managed Cloud Controller	Rudder Appliances (On-Prem)	Rudder Virtual Appliance (On-Prem)

QUANTUM RUDDER®
Network and Services Controller

Quantum Service Management Platform

QSMP offers secure, scalable and fully managed cloud-based Wi-Fi guest services. Simplify and streamline guest onboarding with QSMP.

QISMP
Wi-Fi Service Management Platform

Zero Trust Network Access

QPASS secures your enterprise with reliable, scalable cloud infrastructure supporting 802.1X Radius standards. Protect wireless and wired networks from unauthorized access.

Q-PASS
Zero Trust Network Access

Quantum Access Manager

Quantum Access Manager is a cloud-hosted platform to provision, deploy and audit access to all computing resources. Easily manage wireless, wired, VPN and web access for enterprise users, guests, BYOD and IoT devices.

Quantum Access Management

Network Monitoring System

Q-NMS is a powerful SaaS platform for centralized network monitoring and fault management. Ensure IT infrastructure uptime, support diverse devices and streamline remote configuration with Q-NMS. Optimize your network efficiently.

QUANTUM NMS
Network Monitoring System

Log Management Service

Q-Log provides enterprise-scale Log Management services for secure collection, storage, analysis and archival of logs. Ensure compliance, encryption and efficient storage solutions with Q-Log. Gain actionable insights while meeting regulatory requirements.

QUANTUM LOG
Log Management Service

Quantum Identity Management

Quantum Identity Management

QIM, integrated with Rudder, allows administrators to create and manage user accounts and groups and assign them to Quantum services like SECURE and SECURE+