



QT-600-10 10 Gigabit Ethernet Test Head



NetComplete® EtherASSURE™ Service Assurance Portfolio

The Viavi Solutions QT-600-10 carrier-grade, scalable, 10 GE probe delivers test and troubleshooting capabilities required to deploy 10 GE with confidence.

An integral component of the Viavi NetComplete Ethernet Service Assurance solution, the QT-600-10 lowers operations costs with a streamlined service turn-up process that rapidly segments the network to identify problem sources quickly. The QT-600-10 generates detailed test results giving service providers confidence in guaranteeing service-level performance. Service providers can convert this information into proactive measures for positive impact, building greater customer retention, loyalty, and helping to reduced operational costs with fewer multiple-technician deployments to remote locations.

The QT-600-10 works with the NetComplete EtherASSURE test operational support system (OSS), Ethernet Test and Troubleshooting, to manage automated and on-demand tests. The QT-600-10 can characterize customers' service performance before handoff to the end customer. The QT-600-10 supports virtual local area network (VLAN) testing, multipoint and point-to-point 10 G Ethernet services. Adding the 802.1q VLAN tag lets the QT-600-10 emulate end-customer traffic and operate in a Q-in-Q or preserved VLAN environment. The QT-600-10 can control VLAN or IP priority settings using differentiated services (DiffServ) and type of service (ToS) bits. This allows generated traffic to take on customer traffic-pattern characteristics, eliminating the need to coordinate dispatches to multiple remote sites for service turn-up. This capability, in turn, reduces operational costs and ultimately accelerates the service fulfillment process.

The capability for running multiple tests, such as ping, traceroute, 802.1ag/Y.1731 loopback and linktrace, multistream, RFC 2544, and Y.1564 (throughput, latency, frame loss, and back-to-back/committed burst size tests), enables service providers to turn up services rapidly and troubleshoot while isolating faults remotely from a single location.

Input parameters for each QT-600-10 test are highly configurable, giving service providers maximum flexibility when troubleshooting.

Also, in Loopback mode, the QT-600-10 can automatically loop back various edge and customer premises equipment (CPE) devices. Running both Layer 2 and Layer 3 loopback tests between two QT-600-10s and out to the customer premises can quickly segment the network to clearly identify whether problems lie within or outside of the service provider's domain.

Key Benefits

- Expedites time to revenue through centralized test management
- Provides standards-based service-activation testing and troubleshooting
- Automates test access management
- Remotely monitor networks and capture data
- Ensures multivendor interoperability

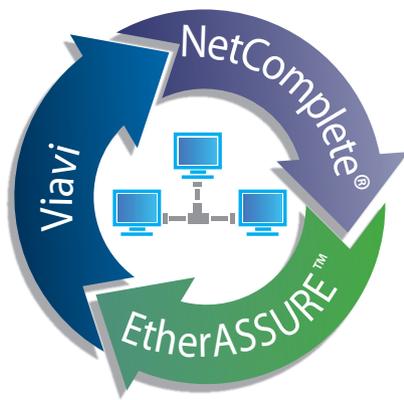
Applications

- Centralized service verification and assurance for:
 - mobile Ethernet backhaul in 3G, 4G, and LTE networks
 - Ethernet business service and cloud connectivity for point-to-point and point-to-multipoint architectures
- Fast, efficient, and reliable service activation for multiple services in parallel based on RFC 2544, Y.1564
- In-service performance monitoring and SLA verification
- Effective fault isolation and network sectionalization including top talker, capture, and decode

Carrier-Class 10 G Ethernet Network Probe

Built for carrier-class networks worldwide, the QT-600-10 is certified for both NEBS Level 3 and CE Mark. Its scalable architecture supports 10 GE using pluggable XFP interface modules.

The QT-600-10 can emulate end-user equipment and actively generate traffic that simulates actual customer traffic patterns. Providers can test and validate connectivity using ping, traceroute, and 802.1ag/Y.1731 loopback and linktrace messages while verifying service turn-up with RFC 2544 and Y.1564 throughput, latency, frame loss, and back-to-back/committed burst size tests. It can also mimic the real service mix by simultaneously testing up to 64 streams and multiple services.



NetComplete EtherASSURE solution SAMComplete™

Identifier	Mbps
VLAN.1	14.40
VLAN.3	12.04
VLAN.2	11.60
VLAN.4	10.80
VLAN.5	10.00

NetComplete EtherASSURE solution NETMON

Simplified, Error-Proof Testing

The QT-600-10 seamlessly integrates with the EtherASSURE test and troubleshooting OSS so providers can create and manage centralized tests to ensure that standardized, consistent test procedures are followed, reducing user errors. Through its scheduling capability, operators can run repeatable test campaigns at specific times and intervals to assess network and service-level quality. Test results can be automatically e-mailed and can also serve as a baseline for future comparison over time. Its customer-mapping function lets operators create and run tests against customer services rather than against specific QT-600-10 probes for a simpler, more intuitive testing process with fewer errors.

Centralized Testing and Automated Test Access

The QT-600-10 optimizes resources by scheduling and queuing tests to run as resources become available. Automated test access and management control is achieved by configuring the service provider's switch using the QT-600-10, expediting and simplifying the workflow process. In addition, the QT-600-10 manages service turn-up end-to-end by automatically looping edge and CPE devices and test equipment, such as another QT-600-10 in the network, and third-party network interface devices (NIDs).

Specifications

Test and Troubleshooting	
Emulation tests	
RFC 2544	
Y.1564 (SAMComplete)	
Loopback	
Ping	
Ping reply	
Traceroute	
Multistream	
CFM (802.1ag) Loopback	
CFM (802.1ag) Linktrace	
PPP Service Check	
Monitoring tests	
Network Monitor	
Capture	
General	
Electrical and optical	
RJ45	
XFP	
Other interfaces	four USB ports
Size H x W x D	1 RU supports 19- and 23-in rack-mounts 44 x 427 x 330 mm (1-3/4 x 16-13/16 x 13 in)
Weight	5.56 kg (12.3 lb)
Temperature Operating Storing	0 to 50°C (32 to 122°F) –40 to 60°C (–40 to 140°F)
Power	AC (110/220 V) DC (–48 V); dual DC power feed
Power consumption	70 W
Certifications	NEBS Level 1, CE, CSA, UL, WEEE, and RoHS

Ordering Information

Description	Part Number
DC Chassis	
QT-600-10 NEBS –48 V powered XFP dual-port Ethernet probe	QT600-10
QT-600-10 Bracket NEBS ETSI 21-inch rack mount	QT600-10-21RMKIT
QT-600-10 Bracket NEBS 23-inch rack mount	QT600-10-23RMKIT
AC Chassis	
QT-600-10 AC powered XFP dual-port Ethernet probe	QT600-10G-AC
QT-600-10 AC QT-600-10 detachable power supply cord; Europe	QT600-10-AC-EUR
QT-600-10 AC QT-600-10 detachable power supply cord; Australia	QT600-10-AC-AUS
QT-600-10 AC QT-600-10 detachable power supply cord; UK	QT600-10-AC-UK
QT-600-10 AC QT-600-10 detachable power supply cord; North America	QT600-10-AC-NA
QT-600-10 detachable power supply cord; Switzerland	QT600-10-AC-CH
QT-600-10 AC bracket ETSI 21-inch rack-mount kit	QT600-10-AC-21RMKIT
QT-600-10 AC 23-inch rack-mount kit	QT600-10-AC-23RMKIT
Optical Interfaces	
QT-600-10 Plug-in module XFP optical transceiver 10 G 850 nm 8.5 to 11.31 Gbps	QT600-10-850XFP
QT-600-10 Plug-in module XFP transceiver 10 G 1310 nm 8.5 to 11.31 Gbps	QT600-10-1310XFP
QT-600-10 Plug-in module XFP transceiver 10 G 1550 nm 8.5 to 11.31 Gbps	QT600-10-1550XFP
Software Options	
QT-600-10 Metro Ethernet base	QT600-10-MEBS
QT-600-10 Second port activation	QT600-10-2P
QT-600-10 NETMON and Packet Capture	QT600-10-NTMN
QT-600-10 Asymmetrical test	QT600-10-ASYMM
QT-600-10 16 Tests/streams per port	QT600-10-16TEST
QT-600-10 32 Tests/streams per port	QT600-10-32TEST
QT600-10 option for TWAMP PM generation	QT600-10-PMGEN



Contact Us **+1 844 GO VIAVI**
(+1 844 468 4284)

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visit viavisolutions.com/contacts.

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