VIAVI Solutions

Data Sheet

VIAVI

Network and Service Companion (NSC-200)

Enterprise Ethernet Test

Empower techs with the simplest, most comprehensive, fastest (one-minute) service activation test and troubleshooting solution.

The NSC-200 is a test solution for Ethernet, Enterprise and Data Center Networks. It combines active Ethernet and WiFi testing capabilities enabling service activation and troubleshooting tests on all network layers.

- Simplify the Ethernet turn-up and troubleshooting process by enabling Ethernet tests on network Layers 2, 3, and 4.
- Identify and prevent customer affecting throughput issues by running active throughput tests (Speedtest, TrueSpeed RFC6349).
- Validate business services as standalone unit, or as remote loopback device when combined with the T-BERD/MTS-5800 for Y.1564 and RFC2544 tests.
- Optimize WiFi coverage and performance; get network improvement recommendations when performance is below expectation.
- Perform 24/7 monitoring sessions for long-term, root cause failure analysis and SLA monitoring.

2019 Broadband Technology Review – 4.0 Diamond Award Winner

2020 Lightwave Innovation Award – 4.5 Winner

Benefits

- Support of Fiber, Ethernet and WiFi in one solution
- Flexible multi-tool for enterprise and fixed-line/mobile fronthaul service installation, performance measurements and troubleshooting
- Drive compliance of both direct and contracted staff with centralized, cloud-based workflow and result management
- Remote control for leave-behind use case enables long-term testing and failure analysis
- Service activation up to 10 Gbps, test and performance management (L2/L3 loopback up to 10G, TWAMP reflector)
- Centralized test system (VIAVI Fusion) leveraging NSCs as remote controlled test agents

Features

- Ethernet test interfaces up to 10G
- Ethernet testing up to Layer 4 (TCP/UDP) and up to 10 Gbps
- 3x3 WiFi antenna with 2.4 and 5 GHz
- StrataSync and Mobile Tech enabled
- Job Manager

Specifications

GPON (Optional)		
ONU/ONT		VIAVI GPON SFP
Interface		SC/APC
Standard		G.984.2 GPON compliant
		G.988 OMCI compliant
Upstream (1310 nm) Tx Signal Power Range		0.5 dBm to 5.0 dBm
Downstream (1490 nm) Rx Signal Power Range		-28.0 dBm to -8.0 dBm
Test Results		PON Activation State, Power Level values from the SFP, PON ID, ODN Class – according to ITU-T G.984 and G.988 standards
XGSPON (Optional)		
ONU/ONT		VIAVI XGSPON SFP
Interface		SC/APC
Standard		G.9807.1 XGSPON compliant
		G.988 OMCI compliant
Upstream (1270 nm) Tx Signal Power Range		4.0 dBm to 9.0 dBm
Downstream (1577 nm) Rx Signal Power Range		-28.0 dBm to -9.0 dBm
Test Results		PON Activation State, Power Level values from the SFP, PON ID, ODN Class – according to ITU-T G.9807 and G.988 standards
Ethernet (Optional)		
Ethernet		RJ-45 (10M/100M/1G Ethernet)
		1G Ethernet SFP, 1/2.5/5/10G Ethernet SFP+, 10G Ethernet SFP+
Standard		IEEE 802.3
		1 Gbps, 2.5 Gbps, 5 Gbps and 10 Gbps Ethernet
Test Results		Ethernet Frames, IP Connectivity, Ping, Traceroute, Web Connectivity, Speed Test up to 10 Gbps
TWAMP Reflector (Optional)		RJ-45, 1G Ethernet SFP
		TWAMP Light Reflector support
Port/L2/L3 Loopback (Optional)		RJ-45, 1G Ethernet SFP, 10G Ethernet SFP+
		Port Loopback and Source specific VIAVI Loopback support
WiFi (Optional)		
Interfaces		2.4 GHz, 5 GHz
Test Results	WiFi Expert (Passive Mode)	Up to 802.11 a/b/g/n/ac/ax (WiFi 6 8x8) · Signal strength (RSSI), Channel, Standard, Width, Channel Noise, Total Airtime, Noise Airtime, Estimated Throughput, Recommendations
	OneCheck WiFi (Connected Mode)	Up to 802.11 a/b/g/n/ac/ax (WiFi 6 8x8 with NSC connected as WiFi 5 3x3) · Signal strength (RSSI), Standard, Width, Max Router PHY Rate Up to 802.11 a/b/g/n/ac (WiFi 5 3x3) · Adds IP/Web connectivity, Throughput Tests
WiFi Radio		802.11 a/b/g/n/ac 3x3

Throughput / Performance Test (Optional)	
Interface	Ethernet, WiFi
TCP Throughput Test	Ookla Speedtest VIAVI TrueSpeed (RFC-6349) VIAVI SpeedCheck iPerf
Performance	10 Gbps for Ookla Speedtest, TrueSpeed, SpeedCheck, iPerf
Test Results	Delay, Upstream and Downstream Bit Rates
User Interface	
Communication Interface	Bluetooth v5.0
Smart Device Support (recommendation)	Mobile Tech app
	Android 8 or newer
	iOS 12 or newer
VIAVI Instrument Support	ONX-580, ONX-CATV
General	
Size	116 x 190 x 52 mm (4.6 x 7.5 x 2.0 in)
Weight	0.8 kg (1.7 lb)
Operating Temperature Range	Non-Charging: -10°C to 50°C
	Battery Charging: 0°C to 40°C
Storage Temperature Range	-20°C to 60°C
Operating Humidity Range	10% to 90% RH, non-condensing
Operating Altitude	4000 m max
DC Input Power	15V @ 3A, USB-C Power Delivery (PD)
Battery	32 W/hr Li-Ion rechargeable battery
	Field replaceable
Battery Life	1-week typical usage for installation technicians
Charge Port	USB-C
USB Host Port	USB-A (USB 3.0)

Ordering Information

Standard Packages		
PON Package	NSC200-GPON-BASE	GPON
	NSC200-GPON-PLUS	GPON, Ethernet, Speedtest
	NSC200-GPON-PRO	GPON, Ethernet, WiFi, Speedtest
	NSC200-XGSPON-BASE	XGSPON
	NSC200-XGSPON-PLUS	XGSPON, Ethernet, Speedtest
	NSC200-XGSPON-PRO	XGSPON, Ethernet, WiFi, Speedtest
	NSC200-GPON-XGSPON-BASE	GPON, XGSPON
	NSC200-GPON-XGSPON-PLUS	GPON, XGSPON, Ethernet, Speedtest
	NSC200-GPON-XGSPON-PRO	GPON, XGSPON, Ethernet, WiFi, Speedtest
Home Package	NSC200-HOME-PLUS	Ethernet, Speedtest
	NSC200-HOME-PRO	Ethernet, WiFi, Speedtest
Enterprise	NSC200-ENTERPRISE-PLUS	Ethernet, TrueSpeed
	NSC200-ENTERPRISE-PRO	Ethernet, WiFi, TrueSpeed
Loopback	NSC200-LOOPBACK-BASE	Ethernet 1G
	NSC200-LOOPBACK-PLUS	Ethernet 10G
All	NSC200-PLATINUM-1G NSC200-PLATINUM-10G	All

Options		
Test Applications	NSC-OC-GPON	NSC OneCheck GPON
	NSC-OC-XGSPON	NSC OneCheck XGSPON
	NSC-OC-ETHERNET	NSC OneCheck Ethernet
	NSC-OC-WIFI	NSC OneCheck WiFi
	NSC-WIFI-EXPERT	NSC WiFi Expert
Speed Tests	NSC-TRUESPEED-1G	NSC TrueSpeed (RFC-6349) over 1GE port up to 1Gbps
	NSC-SPEEDTEST-1G	NSC Ookla SpeedTest over 1GE port up to 1Gbps
	NSC-SPEEDCHECK-1G	NSC SpeedCheck over 1GE port up to 1Gbps
	NSC-IPERF-1G	NSC iPerf Test over 1GE port up to 1Gbps
	NSC-TRUESPEED-2G	NSC TrueSpeed (RFC-6349) over 2.5/5/10GE port up to 2Gbps
	NSC-SPEEDTEST-2G	NSC Ookla SpeedTest over 1+1/2.5/5/10GE ports up to 2Gbps
	NSC-SPEEDCHECK-2G	NSC SpeedCheck over 2.5/5/10GE port up to 2Gbps
	NSC-IPERF-2G	NSC iPerf Test over 2.5/5/10GE port up to 2Gbps
	NSC-TRUESPEED-5G	NSC TrueSpeed (RFC-6349) over 2.5/5/10GE port up to 5Gbps
	NSC-SPEEDTEST-5G	NSC Ookla Speedtest over 2.5/5/10GE port up to 5Gbps
	NSC-SPEEDCHECK-5G	NSC SpeedCheck over 2.5/5/10GE port up to 5Gbps
	NSC-IPERF-5G	NSC iPerf Test over 2.5/5/10GE port up to 5Gbps
	NSC-TRUESPEED-10G	NSC TrueSpeed (RFC-6349) over 2.5/5/10GE port up to 10Gbps
	NSC-SPEEDTEST-10G	NSC Ookla Speedtest over 2.5/5/10GE port up to 10Gbps
	NSC-SPEEDCHECK-10G	NSC SpeedCheck over 2.5/5/10GE port up to 10Gbps
	NSC-IPERF-10G	NSC iPerf Test over 2.5/5/10GE port up to 10Gbps

Ordering Information continued

Options continued		
Enterprise	NSC-LOOPBACK-1G	NSC L2/L3 1G Loopback
	NSC-LOOPBACK-10G	NSC L2/L3 10G Loopback
	NSC-FUSION-CLIENT	NSC Fusion Client
	NSC-TWAMP-REFLECTOR	NSC TWAMP Reflector
	NSC-OPTICAL-ETHERNET	NSC Optical Ethernet
SFP	NSC-SFP-ELEC-1G	NSC 1G Electrical Ethernet SFP
	NSC-SFP-ELEC-10G	NSC 10G Electrical Ethernet SFP+
	NSC-SFP-ELEC-AUTO-10G	NSC 2.5G, 5G and 10G Autoneg Electrical Ethernet SFP+
	NSC-SFP-ELEC-1-2.5-5-10G	NSC 1G, 2.5G, 5G and 10G Electrical Ethernet SFP+
	NSC-SFP-850-1G-10G	NSC 1G and 10G Optical Ethernet SFP+ 850 nm SR
	NSC-SFP-1310-1G-10G	NSC 1G and 10G Optical Ethernet SFP+ 1310 nm LR
	NSC-SFP-1550-1G-10G	NSC 1G and 10G Optical Ethernet SFP+ 1550 nm ER
	NSC-SFP-GPON	NSC GPON SFP
	NSC-SFP-XGSPON	NSC XGSPON SFP+
Optional Accessory		
	NSC-CAR-CHARGER	Car Charger with Cable
Replacement Parts		
	NSC-BATTERY	NSC Battery
	NSC-CHARGER	NSC Charger with Cable
	NSC-STRAP	NSC Hand Strap
	NSC-CASE	NSC Carrying Case

VIAVI Solutions

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

To reach the VIAVI office nearest you,
visit viavisolutions.com/contact

nsc200-ethernet-ds-xpf-nse-ae
30193263 901 0422