

# Network and Service Companion (NSC-100) – Ethernet and Enterprise Test

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

The Network and Service Companion (NSC-100) 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
- Perform 24/7 monitoring sessions for long-term, root cause failure analysis and SLA monitoring



## 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
- Centralized service activation, test and performance management (L2/L3 loopback or TWAMP reflector) – with VIAVI Fusion solution

## Features

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



2019 Broadband Technology Review –  
4.0 Diamond Award Winner



2020 Lightwave Innovation Award –  
4.5 Winner

## Specifications

<b>GPON (Optional)</b>	
ONU/ONT Emulation	Embedded 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 dBm to -8 dBm
Test Results	PON Activation State, Power Level values from the SFP, PON ID, ODN Class, ONT ID
<b>Ethernet (Optional)</b>	
Ethernet	RJ-45
	1G Optical Ethernet SFP
Standard	IEEE 802.3
	1000 Mbps Ethernet
Test Results	Ethernet Frames, IP Connectivity, Web Connectivity, Speed Test
TWAMP Reflector (Optional)	RJ-45 and 1G Optical Ethernet SFP
	TWAMP Light Reflector support
L2/L3 Loopback (Optional)	RJ-45 and 1G Optical Ethernet SFP
	Port Loopback and Source specific VIAVI Loopback support
<b>WiFi (Optional)</b>	
Interfaces	2.4 GHz, 5 GHz
Standard	802.11 a/b/g/n/ac
Antennas	3x3
Test Results	RSSI, PHY Rate, Channel, Band, Standard, Width, IP Connectivity, Web Connectivity, Speed Test
<b>Speed Test (Optional)</b>	
Interface	GPON, Ethernet, WiFi
TCP Throughput Test	Ookla Speedtest, VIAVI TrueSpeed (RFC-6349), VIAVI SpeedCheck
Performance	1 Gbps
Test Results	Delay, Upstream and Downstream Bit Rates
<b>User Interface</b>	
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

## Specifications continued

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-day typical usage
Charge Port	USB-C
USB Host Port	USB-A (USB 3.0)

## Ordering Information

Standard Packages		
PON Package	GPON	NSC100-GPON-BASE
	GPON, Ethernet	NSC100-GPON-PLUS
	GPON, Ethernet, WiFi	NSC100-GPON-PRO
Home Package	Ethernet	NSC100-HOME-PLUS
	Ethernet, WiFi	NSC100-HOME-PRO
Enterprise	Ethernet	NSC100-ENTERPRISE-PLUS
	Ethernet, WiFi	NSC100-ENTERPRISE-PRO
Loopback	Ethernet 1G	NSC100-LOOPBACK-BASE
All	All	NSC100-PLATINUM
Options		
NSC OneCheck GPON Option	NSC-OC-GPON	
NSC OneCheck Ethernet Option	NSC-OC-ETHERNET	
NSC OneCheck WiFi Option	NSC-OC-WIFI	
NSC Ookla Speedtest Option	NSC-SPEEDTEST	
NSC TrueSpeed (RFC-6349) Option	NSC-TRUESPEED	
NSC FTP SpeedCheck Option	NSC-SPEEDCHECK	
NSC Optical Ethernet Option	NSC-OPTICAL-ETHERNET	
NSC TWAMP Reflector Option	NSC-TWAMP-REFLECTOR	
NSC L2/L3 1G Loopback Option	NSC-LOOPBACK-1G	
NSC GPON SFP - ONT Emulation	NSC-GPON-SFP	
Optional Accessory		
NSC Car Charger with Cable	NSC-CAR-CHARGER	
Replacement Parts		
NSC Battery	NSC-BATTERY	
NSC Charger with Cable	NSC-CHARGER	
NSC Hand Strap	NSC-STRAP	
NSC Carrying Case	NSC-CASE	



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