

Network and Service Companion (NSC-100) – Residential and Small Business PON Test

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

The Network and Service Companion (NSC-100) allows techs and contractors to validate both network and service layers before sharing their test results with customers and providers.

- Simplify the closeout test process and analysis for both inexperienced and expert techs with one-button, one-screen result tests, all run under 1 or 2 minutes.
- Prevent customer complaints or find the root cause of issues by testing at every access point (GPON, Ethernet, WiFi) for a clear and fast demarcation – the way your customer experiences it.
- Optimize WiFi coverage and performance; educate end users with simple room-by-room analysis.



Benefits

- Simply test everything anywhere – PON, Ethernet, WiFi
- Verify true customer experience and physical network layer on all GPON¹, Ethernet and WiFi test interfaces
- Confirm PON service delivery is good before troubleshooting the premises
- Share reports directly via email
- Drive compliance of both direct and contracted staff with centralized, cloud-based workflow and result management

Features

- GPON, Ethernet and WiFi tests, including throughput test
- 3x3 WiFi antenna with 2.4 and 5GHz
- PON data analysis (PON-ID)
- Future proofed for next gen PON (replaceable SFP+ ONT emulation)



2019 Broadband Technology Review –
4.0 Diamond Award Winner



2020 Lightwave Innovation Award –
4.5 Winner

Specifications

GPON (Optional)	
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
Ethernet (Optional)	
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
WiFi (Optional)	
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
Speed Test (Optional)	
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
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

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	