

VIAVI

Network and Service Companion (NSC-100)

Residential and Small Business Test

Empower techs with the simplest, most comprehensive, fastest 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 minute.
- 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. Get network improvement recommendations when performance is below expectation.



2019 Broadband Technology Review –
4.0 Diamond Award Winner



2020 Lightwave Innovation Award –
4.5 Winner

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)
- PON power levels
- Future proofed for next gen PON (replaceable SFP+ ONT emulation)
- Job Manager

¹GPON IP Connectivity, Web Connectivity, and Throughput Performance Test, optional, custom ONT profile development required.

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 – according to ITU-T G.984 and G.988 standards |
| Ethernet (Optional) | |
| Ethernet | RJ-45 (10M/100M/1G Ethernet) |
| | 1G Ethernet SFP, 10G Ethernet SFP+ |
| Standard | IEEE 802.3 |
| | 1 Gbps Ethernet, 10 Gbps Ethernet |
| Test Results | Ethernet Frames, IP Connectivity, Web Connectivity, Speed Test |
| 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 |
| 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, Channel Noise, Airtime, Estimated WiFi Throughput |
| Throughput / Performance Test (Optional) | |
| Interface | GPON, Ethernet, WiFi |
| TCP Throughput Test | Ookla Speedtest |
| | VIAVI TrueSpeed (RFC-6349) |
| | VIAVI SpeedCheck |
| Performance | 1 Gbps for Ookla Speedtest, TrueSpeed, SpeeCheck 2 Gbps for Ookla Speedtest (1+1) |
| 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 | NSC100-GPON-BASE | GPON |
| | NSC100-GPON-PLUS | GPON, Ethernet , Speedtest |
| | NSC100-GPON-PRO | GPON, Ethernet, WiFi , Speedtest |
| Home Package | NSC100-HOME-PLUS | Ethernet , Speedtest |
| | NSC100-HOME-PRO | Ethernet, WiFi , Speedtest |
| Enterprise | NSC100-ENTERPRISE-PLUS | Ethernet, TrueSpeed |
| | NSC100-ENTERPRISE-PRO | Ethernet, WiFi, TrueSpeed |
| Loopback | NSC100-LOOPBACK-BASE | Ethernet 1G |
| | NSC100-LOOPBACK-PLUS | Ethernet 10G |
| All | NSC100-PLATINUM-1G NSC100-PLATINUM-10G | All |

Ordering Information continued

| Options | |
|---------------------------|---|
| NSC-OC-GPON | NSC OneCheck GPON Option |
| NSC-OC-ETHERNET | NSC OneCheck Ethernet Option |
| NSC-OC-WIFI | NSC OneCheck WiFi Option |
| NSC-SPEEDTEST | NSC Ookla Speedtest Option |
| NSC-TRUESPEED | NSC TrueSpeed (RFC-6349) Option |
| NSC-SPEEDCHECK | NSC HTTP SpeedCheck Option |
| NSC-SPEEDTEST-2G | NSC Ookla Speedtest 2G Option |
| NSC-WIFI-EXPERT | NSC WiFi Expert Option |
| NSC-OPTICAL-ETHERNET | NSC Optical Ethernet Option |
| NSC-TWAMP-REFLECTOR | NSC TWAMP Reflector Option |
| NSC-LOOPBACK-1G | NSC L2/L3 1G Loopback Option |
| NSC-LOOPBACK-10G | NSC L2/L3 10G Loopback Option |
| NSC-FUSION-CLIENT | NSC Fusion Client Option |
| NSC-SFP-ELEC-1G | NSC 1G Electrical Ethernet SFP NSC |
| NSC-SFP-ELEC-10G | 10G Electrical Ethernet SFP+ |
| NSC-SFP-850-SR-1G-10G | NSC 1G and 10G Optical Ethernet SFP+ 850 nm SR |
| NSC-SFP-1310-SR-1G-10G | NSC 1G and 10G Optical Ethernet SFP+ 1310 nm SR |
| NSC-SFP-1550-SR-1G-10G | NSC 1G and 10G Optical Ethernet SFP+ 1550 nm SR |
| NSC-GPON-SFP | NSC GPON SFP - ONT Emulation |
| Optional Accessory | |
| NSC-CAR-CHARGER | NSC 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 |



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