

# EtherScope® nXG

## Portable Network Expert

### Multi-technology, all-in-one handheld network analyzer

- Quickly test, verify, troubleshoot, and map Wi-Fi and wired networks
- Faster and easier Wi-Fi site surveys with AirMapper™
- AutoTest enables any technician to find network problems
- Full line-rate Multi-Gig to 10G performance testing & packet capture

### Overview

Deploying and maintaining Wi-Fi and wired network infrastructure without the right tools can be daunting... and costly. The EtherScope nXG enables engineers and technicians to get more done faster, from deployment to maintenance and documentation of their ever-changing Wi-Fi and Ethernet access networks.

With its simple operation, yet in-depth visibility, and the ability to remotely access and control EtherScope nXG, engineers can now fully enable and collaborate with “local hands” of field technicians at remote sites to expedite problem solving.

### Key Features

- Install, test, verify, and troubleshoot technology upgrades, NBASE-T, 10G, and Wi-Fi networks with advanced Android™-based troubleshooting apps and purpose-built test hardware
- Verify up to 10G Ethernet link performance for critical servers, uplinks and key end devices, and validate Wi-Fi network performance
- Empower technicians who may not have access to network management systems or other engineer-level tools to assess and document complex network deployments with multiple VLANs and Wi-Fi SSIDs
- Seamlessly consolidate and manage field test data, and integrate with network management systems via complimentary Link-Live™ Cloud Service



### Now with Network Mapping Capabilities!



Automatically discover and instantly map your wired and Wi-Fi networks using Link-Live; speeds troubleshooting and keeps network documentation up-to-date. Exports to Visio.

### All-in-One Platform Addresses Multiple Technologies

- An Android-based handheld network tester that verifies, discovers, maps, and troubleshoots Wi-Fi and Ethernet network infrastructures
- Native 4x4 Wi-Fi that supports:
  - 802.11a/b/g/n/ac (wave 2) Wi-Fi network connectivity
  - Wi-Fi 6 network visibility
  - Analysis of SSIDs, BSSIDs, channel, client devices, and interference sources
- Ethernet port supports:
  - 10/100/1000Mbps to 2.5/5/10G
  - Verifies loaded power from 90W PoE switch
- Built-in Bluetooth v5/BLE and USB interfaces to discover and configure nearby devices

Main Ethernet Test Ports (RJ-45 & SFP)



Cable Test & Management Ports

USB-C

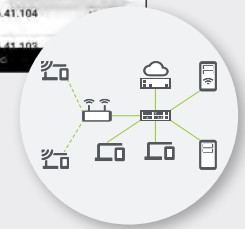


## Key Features *(continued)*

### **Wired + Wi-Fi Network Discovery, Mapping, Analysis, and Security Audits**

Instantly see what is on the network and where it is connected, by switch, slot and port number. Quickly investigate and locate “suspect” devices and identify problems associated with device misconfigurations.

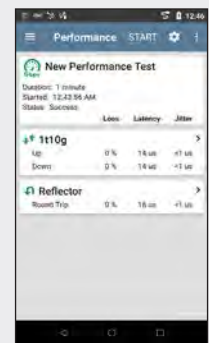
- Discover network devices across multiple VLANs and Wi-Fi SSIDs through four Wi-Fi and Ethernet interfaces upon power up
- Powerful filter and sort function with automatic problem detection identifies issues such as:
  - Duplicate IPs
  - Congested switch ports
  - Oversubscribed Wi-Fi channels/SSIDs
  - Security issues, such as unknown switches, access points with open authentication and unencrypted APs
- Path Analysis shows the switch/router path to any connected device
- Batch authorization workflow makes it easy to identify known vs. unknown devices, enabling “who’s on my network” auditing.



### **10G Line Rate Performance Test and Packet Capture**

Verify network capacity, performance and QoS, and easily capture packets for detailed application analysis.

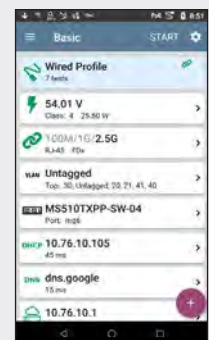
- Simultaneously generate and measure up to four streams of IP-based traffic through the Ethernet test port to:
  - Load the network with up to full 10G line-rate traffic
  - Test for packet loss, delay, and jitter
- Supports popular iPerf network throughput testing for Wi-Fi and Wired networks
- Capture wired or wireless traffic to PCAP files for escalation evidence or analysis, with simple - but powerful - filtering and slicing controls.



### **Verify Complex Networks - Wired and Wireless**

Test automation speeds and simplifies validation and troubleshooting - so more people can solve more problems, faster.

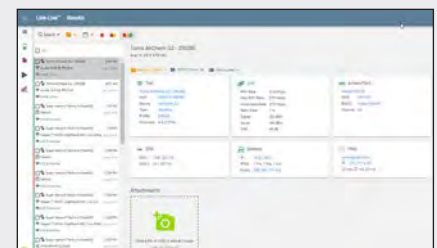
- Out-of-the-box AutoTest profiles for Wi-Fi and wired networks that can be customized for your network
- Execute multiple AutoTest profiles that shorten test time to verify multiple VLANs and Wi-Fi SSIDs
- Define and assign groups of targets to AutoTest profiles to verify performance using ping, TCP Connect, Web, or FTP



### **Simplified Collaboration, Automated Reporting**

Collaborate with staff across your organization with centralized visibility of distributed tests, speeding resolution of remote site issues.

- Complimentary Link-Live Cloud Service stores test result and site data upload for automated reporting and documentation
- Simplifies report generation across media types for network deployment documentation
- Attach photos, user comments to each result, adding context for future changes and troubleshooting
- Available API enables seamless data integration between Link-Live and trouble-ticket or network management systems



## Recent Enhancements

### Network Topology Mapping – Integrated Wired and Wi-Fi Network Diagrams

No more struggling to keep manually drawn maps up to date! EtherScope nXG automatically discovers both your wired and Wi-Fi networks for instant mapping in the complimentary Link-Live Cloud Service. These comprehensive, up-to-the-minute-accurate network diagrams show your network as it is NOW, integrating Layer 2 and Layer 3 topology information, including these connections: switch to host, switch to Access Point, AP to Wi-Fi client, switch to switch, switch to router, and router to router hops.

Easy to use filters and map controls allow you to see exactly what you want, and how you want it displayed. Quickly identify network and device configuration errors, and see ‘unknown’ switches and rogue devices. Element icons are color-coded to identify errors or warnings; double-clicking on any map element brings up its detailed discovery information, including status, problems, interface information, and more (device names, IP addresses, VLANs).

Link-Live makes it easy to collaborate and share maps to anyone who needs access, with no added licensing costs. One click exports your map to Microsoft Visio® where you can easily add notations and modify your map.



Automated Wired and Wi-Fi network mapping



**NOTE:** Customers with AllyCare get access to in-depth map configuration, controls, and export to Visio. For information about AllyCare, go to [support.netally.com/allycare/](https://support.netally.com/allycare/)

### AirMapper™ Site Survey

With the AirMapper app, EtherScope nXG users now quickly and easily gather location-based Wi-Fi measurements and create visual heat maps of key performance metrics in the Link-Live Cloud Service, or, for more detailed analysis and presentation, in AirMagnet Survey PRO. Simple to use, the AirMapper app is ideal for quick site surveys of new deployments, change validation, and performance verification.

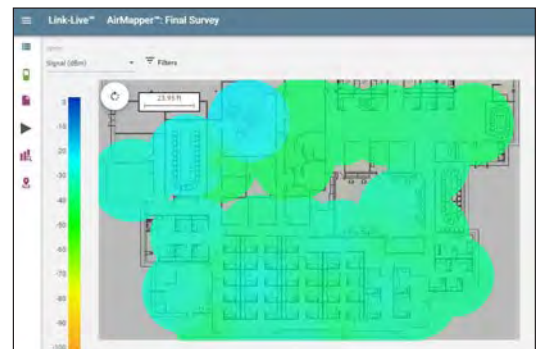
- Complete faster and easier Wi-Fi site surveys with an entirely mobile platform
- Perform enterprise-grade surveys without the need of a dongle or tethered device with a hardware-based platform for accurate and complete data collection
- Collaborate—easily visualize and share survey data through Link-Live Cloud Service
- Version 1.4 enables simultaneous passive and active surveys to gather critical site metrics and validate client experience and roaming with one survey
- Pass survey data to AirMagnet Survey PRO for more advanced analysis, planning and reporting



AirMapper Site Survey App



**NOTE:** Enhanced site survey visualizations and filtering are available to customers with AllyCare support on their EtherScope nXG. For information about AllyCare, go to [support.netally.com/allycare/](https://support.netally.com/allycare/)



Visualize survey data in cloud-based Link-Live Service, or in AirMagnet Survey PRO for additional analysis

## Multi-Gig Link Validation

With the expanding deployment of Multi-Gig switching (typically to feed greater bandwidth to Wi-Fi 6 access points), users are finding that their cable plant may not support the desired speed. Cable quality, length, installation workmanship, and noise in the environment all can contribute to “downshifting” to lower-than-expected speeds.

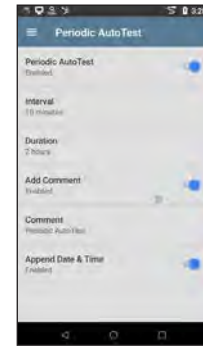
- **Cabling SNR Measurement** – EtherScope nXG can now verify copper media for Multi-Gig capability (1 / 2.5 / 5 / 10Gig), and provide root cause diagnosis when link speed downshifting occurs.



Cabling SNR measurement validates Multi-Gig links

## 24-Hour Monitoring for Intermittent Issues

**Periodic AutoTest** – In this mode, AutoTest runs at specified intervals (from 1 minute to 24 hours) and sends the results to Link-Live to view the results over time. This is an effective way to “monitor” aspects of your network for an extended period, or to help diagnose intermittent issues without having to manually execute multiple tests. Results are automatically timestamped and can be prefixed with a user-entered comment for grouping or organization. Test results can be quickly analyzed in Link-Live using the filtering and sorting functions. Email notifications can warn you when errors are found.



Monitor your network for intermittent issues

## Simplified “Access-Anywhere” Remote Control

EtherScope nXG permits remote control via VNC, which is easy when your workstation is on the same network. But connecting to distant sites on different networks is difficult or impossible, particularly behind NAT firewalls. Now, users can instantly connect to remote units through the Link-Live Cloud Service – anywhere in the world – for collaborative and remote troubleshooting.



**NOTE:** This feature is only available to customers with AllyCare support on their EtherScope nXG. For information about AllyCare, go to [support.netally.com/allycare/](https://support.netally.com/allycare/)

## Optical Power Meter

When connected with fiber, the AutoTest Link card has been augmented with the ability to set a reference and display the current power reading relative to that reference. This is useful for saving the power level at the source as a reference, then measuring the fiber power loss at the far end.



Optical power meter

## Models & Accessories

Model Number/Name	Description
<b>EXG-200</b>	Includes: (1) EXG-200 mainframe with Li-ION battery, G3-PWRADAPTER, SFP+MR-10G850, Inline RJ-45 coupler, WireView wire mapper #1, <i>Quick Start Guide</i> , and small softcase.
<b>EXG-200-1YS</b>	1 Year AllyCare Support for EXG-200, EXG-200-KIT, EXG-200-LRG2-KIT (covers EXG-200 only)
<b>EXG-200-3YS</b>	3 Year AllyCare Support for EXG-200, EXG-200-KIT, EXG-200-LRG2-KIT (covers EXG-200 only)
<b>EXG-200-KIT</b>	Includes: (1) EXG-200 mainframe with Li-ION battery, G3-PWRADAPTER, G3-HOLSTER, SFP+MR-10G850, SFP+MR-10G1310, RJ-45 inline coupler, (1) Test Accessory, WireView wire mappers #1-#6, External Directional Antenna, IntelliTone™ 200 Probe, <i>Quick Start Guide</i> , and medium softcase.
<b>EXG-200-KIT-2PK</b>	Includes: (2) EXG-200-KIT
<b>EXG-200-LRG2-KIT</b>	Includes: (1) EXG-200-KIT and (1) LinkRunner G2 (LR-G2)
<b>EXG-LR10G-KIT</b>	10G Performance Test Kit Includes: EXG-200-KIT and LR10G-100 (LinkRunner 10G). Purchase EXG-200-1YS and LR10G-100-1YS for 1 year AllyCare Support or EXG-200-3YS and LR10G-100-3YS for 3 years AllyCare Support.

## Models & Accessories

Model Number/Name	Description
<b>EXG-200-CE</b>	EtherScope nXG CE - Controlled Edition for Secure Environments. Includes: EXG-200-CE mainframe with Li-ION battery, G3-PWRADAPTER, SFP+MR-10G850, Inline RJ-45 coupler, WIREVIEW 1, <i>Quick Start Guide</i> , and small softcase. Use EXG-200-1YS or EXG-200-3YS for purchasing AllyCare Support.
<b>EXT-ANT</b>	External Directional Antenna
<b>G3-PWRADAPTER</b>	AC Charger replacement/spare for EXG-200 mainframe with country power cords.
<b>G3-HOLSTER</b>	Holster for G3 EXG-200 mainframe
<b>SFP+MR-10G850</b>	SFP+ Optical Transceiver Module, SX/SR, 1G/10G, 850nm, Multimode
<b>SFP+MR-10G1310</b>	SFP+ Optical Transceiver Module, LX/LR, 1G/10G, 1310nm, Singlemode

## Specifications *(For full specifications, please refer to the product data sheet)*

General	
<b>Dimensions</b>	4.05 in x 7.67 in x 2.16 in (10.3 cm x 19.5 cm x 5.5 cm)
<b>Weight</b>	1.68 lbs. (0.77 kg)
<b>Battery</b>	Removable, rechargeable lithium-ion battery pack (7.2 V, 6.4 A, 46 Wh)
<b>Battery Life</b>	Typical operating life is 3-4 hours; Typical charge time is 3 hours
<b>Display</b>	5.0-inch color LCD with capacitive touchscreen (720 x 1280 pixels)
<b>Host Interfaces</b>	(1)RJ-45 and (1)SFP Analysis ports; (1) RJ-45 Cable Test and Management Port RJ-45 Cable Test and Management Port; (1)USB Type-A Port and (1)USB Type-C On-the-Go Port SMA Connector (for External Directional Antenna)
<b>Charging</b>	USB Type-C 45-W adapter: 100-240 Vac, 50-60 Hz; DC Output Power 15 V (3 A) RJ-45: 802.3at PoE (25W) or higher
<b>Media Access</b>	Copper: 10M/100M/1G/2.5G/5G/10G Fiber SFP Adapters: 1G/10GBASE-X
<b>Supported IEEE Standards</b>	Wired: 802.3/ab/ae/an/bz/i/u/z Wi-Fi: 802.11a/b/g/n/ac PoE: 802.3af/at/bt, Class 0-8 and UPOE
<b>Cable Test</b>	Pair lengths, opens, shorts, split-pairs, crossed, straight through, and WireView ID

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