

# LinkRunner® AT

## Network AutoTester

### Overview

The LinkRunner® AT offers user-configured auto-tests for a wide range of important tasks. This network tester's quick cable test and switch identification facilitates fast problem isolation. Test results can be automatically uploaded to the Link-Live results management cloud service to improve collaboration between network engineers and technicians, creating greater job visibility, project control, and fleet management.

- Discover nearest switch name and port information via CDP/LLDP/EDP and verify link speed/duplex and connectivity to TCP/IP network with AutoTest
- Validate up to 30W 802.3af/at PSE with TruePower™ loaded Power-over-Ethernet (PoE) test
- Verify twisted-pair cable length and wire-map in a snap
- AutoTest that verifies and documents PoE, nearest switch, DHCP, DNS and Gateway service, and key devices connectivity in one go
- Automate reporting and enable collaboration with result upload and management via Link-Live Cloud Service
- Twisted-pair/copper cable test (LRAT-1000 and LRAT-2000 models), fiber optic testing (LRAT-2000 only)



### Key Features



#### Two Models: LRAT-2000 and LRAT-1000

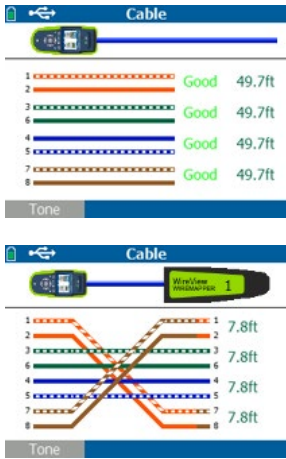
LinkRunner AT is available in two models: LRAT-2000 and LRAT-1000. LinkRunner AT 2000 adds the following exclusive\* features:

- Fiber support\*
- TruePower™ PoE Power Test up to 30W\*
- IPv6 support\*
- Reflector support\*
- More result storage: 50 instead of 10\*
- Uses Li-ION rechargeable battery instead of AA battery pack

\*These exclusive features cannot be added to the LinkRunner AT 1000.



Left: LRAT2000/ Right: LRAT 1000



Cable wiring validation

## Cable length, Wiremap, and Location

Users can easily find opens, shorts, miswires, and split pairs in three different ways:

- On non-terminated cable
- With a WireView Cable Identifier
- Check patch cord with the built-in wiremap port on the side of the LinkRunner AT

### Cable Location

Locate cable runs with toning, switch port advertisement, switch port link light blinking, and remote cable identifiers. Toning supports both analog and digital IntelliTone modes.



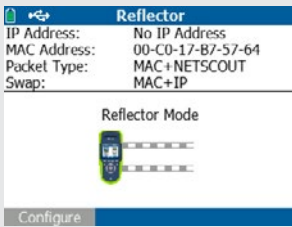
Switch information

## Discover Nearest Switch and VLAN

The LinkRunner AT uses the IEEE Link Layer Discovery Protocol (LLDP), along with the Cisco and Extreme Discovery Protocols (CDP and EDP) to display the nearest switch model, slot, port and VLAN configured.

The LinkRunner AT displays the following critical nearest switch information:

- Switch name and model
- Chassis, slot and port
- Switch IP address
- Voice and Data VLAN IDs
- Duplex and speed (actual and advertised)
- Signal Strength
- Connection (MDI or MDI/X)
- PoE voltage and power (actual and test limit)
- Graphical representation of power on pairs



Packet Reflector Mode

## Packet Reflector

The LinkRunner AT features a packet reflector mode that allows the device to be used remotely during end-to-end network path performance tests to validate LAN and WAN throughput capabilities, up to 1Gbps. The reflector mode can be configured to swap MAC and/or IP addresses. LinkRunner AT 2000 supports packet reflection for:

- OptiView® XG Network Analysis Tablet
- OneTouch™ AT Network Assistant
- EtherScope™ Network Assistant
- MetroScope™ Service Provider Assistant



PoE Setup

## TruePower™ PoE Testing - Power Over Ethernet Testing

LinkRunner AT features the ability to validate TruePower delivery before installing cameras, APs, and phones to ensure a smooth deployment. Quickly validate PoE performance by drawing actual power up to the 802.3at standard 25.5W. Load the circuit to stress switches, cabling and patch panels, all while measuring the voltage and pairs being used.



AutoTest Results

## IP V4/V6 Addressing

Validate the IPv4 DHCP auto-negotiation process, subnet and DHCP server and verify IPv6 Link-Local and Global addressing.



AutoTest Results

## Key Service and Device Connectivity

LinkRunner AT can perform either a Ping or a TCP port open test to verify connectivity. The test conducted will reveal connection and response time to the default Gateway, preferred DNS server, and alternate DNS server. LinkRunner AT can connect to as many as 10 user-defined target devices, servers or services, testing using Ping, or a user-defined TCP port number. If a URL is used as the target, results will include response time and an IP address.



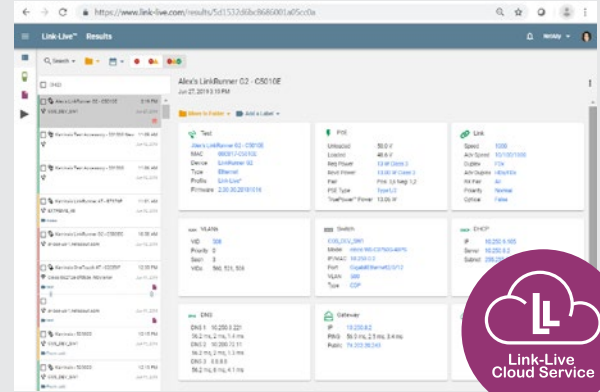
Configuration Settings

## 802.1x Authentication

Verify access to secure networks using 802.1x and MAC Access Control Lists (ACL). The included LinkRunner AT Manager Software can be used to enable 802.1x and download certificates.

## Automated Test Results Management

Serving as a centralized test results and device management system, the free Link-Live cloud service transforms team workflows with the ability to quickly and easily log, document, and report test activity from all LinkSprinter, LinkRunner AT, LinkRunner G2, AirCheck G2, and OneTouch AT hand-held network testers. Once the instrument is connected to the Link-Live Cloud service, your test results are automatically uploaded to the dashboard for project management and reporting. You have the option of uploading additional files, screenshots, images, profiles, packet captures, location information, and comments anytime. Also, certain NetAlly instruments with AllyCare Support can receive firmware updates “over the network” from Link-Live as they become available.



An API is available to retrieve and integrate data from Link-Live into other management platforms, such as your trouble-ticket application or network management system. This gives you the ability to easily provide proof-of-performance and better manage jobs and staff efficiency.

This unified dashboard of both wired and Wi-Fi network connectivity results enables you to:

- Reduce results management overhead for multiple testers and users
- Enables seamless collaboration between site personnel and remote experts
- Simplify report generation across media types for network deployment documentation
- Attach photos, user comments to each result, adding context for future changes and troubleshooting
- For asset management, ability to associate serial numbers of installed devices, and/or cable/walljack label to specific test results

## Ordering Guide

Model Number/Name	Description
<b>LRAT-1000</b>	Includes: (1) LinkRunner AT - 1000 tester with AA battery pack, 4 AA batteries, USB cable, Quick Start Guide, and small soft carrying case.
<b>LRAT-2000</b>	Includes: (1) LinkRunner AT - 2000 tester with Li-ION battery, Wireview wire mapper #1, RJ-45 coupler, USB cable, Quick Start Guide, and small soft carrying case
<b>LRAT-2000-KIT</b>	Includes: LinkRunner AT 2000 tester with Li-ION battery, Wireview wire mappers #1-#6, RJ-45 coupler, USB cable, holster, IntelliTone™ 200 Pro LAN Probe, and small soft carrying case.
<b>LINKSOLUTIONS-KIT</b>	Includes: (1) LinkRunner AT 2000 tester, (2) LinkSprinter network testers, (1) LinkRunner AT holster, and (2) LinkSprinter holsters.
<b>ACKG2-LRAT2000</b>	Includes: (1) AirCheck G2 Wireless Tester, AC charger, (2) USB cable, Quick Start Guides, external directional antenna, holster, automobile charger, (1) LinkRunner AT 2000 tester with Li-ION battery, AC charger, IntelliTone™ PRO 200, Wireview Cable ID #2-6, large folding test kit pouch, holster, RJ-45 coupler, and (2) soft carrying case.

## Support

Model Number/Name	Description
<b>LRAT-1000-1YS</b>	1 year AllyCare Support for LRAT-1000
<b>LRAT-1000-3YS</b>	3 year AllyCare Support for LRAT-1000
<b>LRAT-2000-1YS</b>	1 year AllyCare Support for LRAT-2000
<b>LRAT-2000-3YS</b>	3 year AllyCare Support for LRAT-2000
<b>LINKSOLUTIONS-KIT-1YS</b>	1 year AllyCare Support for (1) LRAT-2000 and (1) LSPRNTR-300
<b>LINKSOLUTIONS-KIT-3YS</b>	3 year AllyCare Support for (1) LRAT-2000 and (1) LSPRNTR-300
<b>ACKG2-LRAT2000-1YS</b>	1 year AllyCare Support for ACKG2-LRAT2000
<b>ACKG2-LRAT2000-3YS</b>	3 year AllyCare Support for ACKG2-LRAT2000

## Accessories

Model Number/Name	Description
<b>PWR-CHARGER</b>	AC Charger replacement
<b>WBP-LION-GREEN</b>	LinkRunner AT Lithium Ion Replacement Battery
<b>LRAT-AA-GREEN</b>	LinkRunner AT AA Battery Pack
<b>LRAT-HOLSTER</b>	LinkRunner AT Holster
<b>SFP-1000SX</b>	SX Gig Fiber SFP transceiver with DDM (850 nm, Multimode)
<b>SFP-1000LX</b>	LX Gig Fiber SFP transceiver with DDM (1310 nm, Singlemode)
<b>SFP-1000ZX</b>	ZX Gig Fiber SFP transceiver (1550 nm, Singlemode)
<b>SFP-100FX</b>	100BASE-FX Fiber SFP transceiver with DDM (Multimode)
<b>WIREVIEW 1</b>	Wireview wire mapper #1
<b>WIREVIEW 2-6</b>	Wireview wire mappers #2-#6
<b>MS-AUTO-CHG</b>	Auto Lighter Charger Adapter

## Specifications

General	
<b>Dimensions</b>	3.5 in x 7.8 in x 1.9 in (8.9 cm x 19.8 cm x 4.8 cm)
<b>Weight</b>	18 oz (0.5 kg)
<b>Battery</b>	Removable, rechargeable lithium-ion battery pack (18.5 Watt-hrs)
<b>Battery Life</b>	Typical operating life is 6 hours; Typical charge time is 3 hours
<b>External AC Adapter/Charger</b>	AC input 90 to 264V AC 48 to 62 Hz input power DC output 15V DC at 1.2 Amps
<b>Display</b>	2.8 in color LCD (320 x 240 pixels)
<b>Keypad</b>	12-key elastomeric
<b>Tone Generator</b>	IntelliTone™ digital tone: [500 KHz]; analog tones: [400 Hz, 1 KHz]
<b>Media Access; Copper</b>	RJ-45: 10BASE-T, 100BASE-TX, 1000BASE-T and PoE (IEEE 802.3af and 802.3at)
<b>Media Access; Fiber</b>	SFP Adapter Port supports 100BASE-FX and 1000BASE-LX/ SX/ZX (LRAT-2000 Only)
<b>Cable Tests</b>	Pair lengths, opens, shorts, splits, crossed, straight through, and cable ID

## Specifications *continued*

<b>Power over Ethernet (PoE)</b>	"Single ended testing: User-defined testing to IEEE 802.3at class 0, 1, 2, 3, 4 without LLDP negotiation, or 4 with LLDP negotiation The following PSE PoE parameters are measured: Pairs used Received class PSE type Unloaded voltage(V) Loaded voltage (V) (LRAT-2000 with TruePower™) Unloaded power (W) (LRAT-1000) Loaded power (W) (LRAT-2000 with TruePower™)"
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### Environmental

<b>Operating Temperature</b>	32°F to 113°F (0°C to +45°C) NOTE: The battery will not charge if the internal temperature of the tester is above 122°F (50°C).
<b>Operating relative humidity (% RH without condensation)</b>	90% (50°F to 95°F; 10°C to 35°C) 75% (95°F to 113°F; 35°C to 45°C)
<b>Storage temperature</b>	-4°F to 140°F (-20°C to +60°C)
<b>Shock and vibration</b>	Random, 2 g, 5 Hz-500 Hz (Class 2) 1 m drop
<b>Safety</b>	EN 61010-1 2nd edition
<b>Safety (LR-AT 2000 only)</b>	EN/IEC 60825-1:2007, EN/IEC 60825-2:2004+ A1:2007 (LRAT- 2000 only)
<b>Altitude</b>	4,000 m; Storage: 12,000 m

<b>EMC</b>	IEC 61326-1: Basic Electromagnetic Environment; CISPR 11: Group 1, Class A
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### LinkRunner Manager Software

<b>Supported Operating Systems</b>	Windows® Vista, Windows® XP, Windows® 7, Windows® 8, Windows® 10
<b>Processor</b>	400 MHz Pentium processor or equivalent (minimum); 1 GHz Pentium processor or equivalent (recommended)
<b>RAM</b>	96 MB (minimum); 256 MB (recommended)
<b>Hard Disk</b>	Up to 500 MB of available space may be required
<b>Display</b>	1024 x 768 high color, 32-bit (recommended)

### Certifications and Compliance



Conforms to relevant European Union directives



Conforms to relevant Australian Safety and EMC standards.

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simplicity • visibility • collaboration

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