

TestPro CV100

Multifunction Cable Certifier

Purpose-Built for Cable Contractors & System Integrators

The changing landscape of enterprise cabling **demands more** from the test equipment you rely on.













Multifunction Testing Solution

The award winning TestPro™ Multifunction Cable Certifier, offers an extensive suite of test function, through hot swappable test adapters.

If you're only looking for copper and fiber optic certification, TestPro offers competitively priced testing kits.

Need a bit more function to better manage smart building deployments or add a new service offering?

TestPro is available in complete smart building test kits, taking the guess work out of trying to figure out which adapter you might be needed.

Additionally, there is only one high-performance TestPro platform, so any kit you purchase, is compatible with all adapters making it easy to add function as needs change.

HIGH LEVEL TESTING SUPPORT SUMMARY



Copper Certification - Certify CAT 5e, 6, 6A, 7, 8.1, 8.2 and see network compliance showing all network types the link is capable of supporting up to 40 Gigabit Ethernet.



Fiber Optic Certification – Tier 1 certification with support for both Singlemode and Multimode. Voltage testing for hybrid powered fiber. Show network compliance for a variety of fiber networks including 100GBASE-LR4, 40GBASE-LR4 and Fiber Channel.



Single Pair Ethernet (SPE) – Support for SPE Cabling standards TIA 568.5 (in draft), ISO/IEC TR 11801-9906-2020 and SPE Field Test standards TIA 5071 (in draft), IEC-61395-4 (in draft) with testing capability up to 1800 meters.



Power over Ethernet – Extensive PoE testing support includes verification of PSE configuration, TruePower load testing reporting actual current/wattage/voltage. Sustained load testing for monitoring power fluctuations.



Multi-Gigabit Link Speed Test – Validate 1 / 2.5 / 5 / 10GigE link speed with SNR based measurement while under both traffic and PoE load.



Wired Network Connectivity Testing - Quick visibility into connected devices with drill down to gain more detail about those devices. Understand connectivity with switch detail including Slot/Port/VLAN, handy troubleshooting tools including Traceroute, ping, cable toner.



Wireless Network Connectivity Testing -See all available Access Points (APs) and their signal strength, verify login to AP, see roaming signal strength, handy troubleshooting tools including Traceroute and ping.



Copper Certification









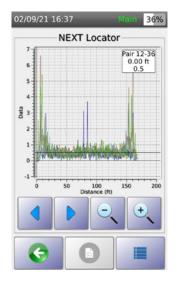
TestPro supports testing and certification for network deployments up to 40 Gigabit Ethernet for Cat 5e, 6, 6A, 7, 8 or Class I/II cabling system. The electrically centered test plug assures the Level 2G/VI accuracy required to support field testing to Cat 8 / Class I/II, and actually exceeds the 2000 MHz requirement, to offer a 3000 MHz platform. As a result, you can feel confident in results over the full frequency range.

TestPro's 6 Second Cat 6A Autotest takes only six seconds and will save you time by getting more links tested faster and with more test detail. TestPro's default Autotest includes all of the measurements you see above. Be aware of competitive tester claims for how fast their test times are, be sure you know what is and is not included in the test time quoted as compared to TestPro. Live WireMap™ provides an immediate indication of cable connection and continuity the moment the cable is connected.

As part of the

6 SECOND

CAT6A++ Autotest,
TestPro will perform all
standard measurements
in addition to extra
parameters such as
DC Resistance
Unbalance, ELTCTL, TCL,
fault location, and more
for both Channel and
Permanent Link.



TestPro offers fault location for Return Loss, NEXT, and Shield aiding in problem identification. Support for MPTL, Patch Cord, Single Pair, GG45, Tera, and Coax is available through hot swappable adapters. At the completion of the Autotest, you get a highly visible Pass or Fail indication, and test results can be automatically saved with a customizable labeling scheme.

TestPro will store over 10,000 results in memory, but when it's time to prepare printed reports, the included TestDataPro PC based software provides a way to organize and manage results and provide printed reports. Prefer to upload as you test, TestDataPro Cloud allows you to offload test results via wired or wireless internet connection.

Both Channel and Permanent Link Adapters are included in the TestPro CV100-K50, K51, K60, K61 Kits. TestPro is warranty approved by a long list of cable manufacturers. Check our website for more details.



Fiber Optic Certification

TestPro's fiber optic measurements provide Tier-1 certification as well as customizable limits for both Multimode and Singlemode Fiber Optic premise cabling. Additionally, these adapters include an integrated Visual Fault Locator (VFL) to provide a quick indication of a break in the fiber.

For deployments where hybrid powered fiber is being used, TestPro's fiber adapter provides not only certification of the fiber optic cable, but also provides you with the ability to validate electrical voltage on the adjacent copper pair in this hybrid copper/fiber cable, it is also possible to measure the loop resistance of the pair of copper wires to ensure its integrity. This allows you to measure the electrical input voltage going into a PoE extender that is supplying PoE to end devices, and is a convenience for the technician to have everything needed for testing at their fingertips.

The Multimode adapters support testing of OM5 fiber in addition to earlier generation fiber standards. An Encircled Flux (EF) compliant Multimode source means no need for bulky external adapters.

Both SM and MM Adapters are included in the TestPro CV100-K11, K51, K61 Kits. These Adapters are also sold separately models AD-SM-01E and AD-MM-01E.

As part of the four second Autotest, TestPro will perform the following measurements for both Singlemode and Multimode.

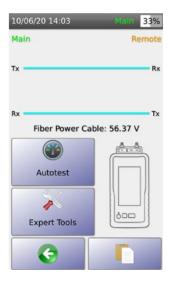
- Dual Ended Loss
- Single Ended Loopback Loss
- Length and Propagation Delay
- Loop Resistance of Copper Pair in Hybrid Powered Fiber
- Optical Power Meter
- 850nm, 1300nm, 1310nm, 1550nm
- LiveWiremap™
- Printed Report Includes Test Data and Compliant Networks



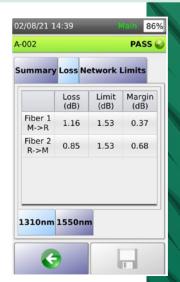


FIBER END-FACE INSPECTION

One of the most common reasons for fiber test failures is a dirty end-face on a fiber connection. Use the USB connected Fiber Scope to ensure the fiber end face is clean before testing.

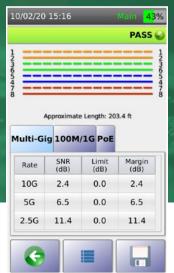


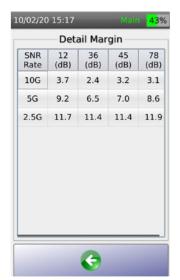


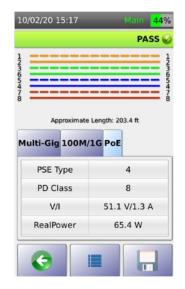


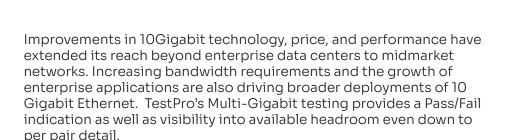












2.5G

5G

10**G**

TestPro's Multi-Gigabit Signal to Noise Ratio (SNR) based test capability puts the link being tested under live network environment conditions with both traffic and PoE load, if a PSE is present. This provides a quick and meaningful assessment of link performance, available headroom, and even alien crosstalk effects on a link.

VALIDATION TEST

- 10/100 Mpbs
- 1 Gbps

POE LOAD TEST

- 802.3 af/at/bt
- UPoE

OOS TEST

- SNR 2.5 Gigabit
- SNR 5 Gigabit
- SNR 10 Gigabit

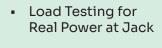
TestPro's Multi-Gigabit Autotest is a quick and easy one button operation to ensure that a cabling link will support the desired network rate.

Multi-Gigabit qualification testing is available in the TestPro CV100 K30, K60, K61 Kits. This Adapter is also sold separately: Model ADNET-CABLE.



Power Over Ethernet (PoE) Validation





- Current, Wattage, Voltage
- PSE Detection
- PSE Type
- PD Class
- PoE Cable Pairs
- Sustained Power Load Monitoring



TestPro excels at validating PoE with the most comprehensive test functionality available and in compliance with TIA 1152A, IEEE 802.3 af/at/bt standards, and UPoE. What sets TestPro apart is the ability to validate Real Power load at the jack where and end device

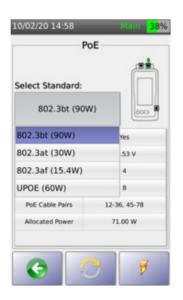
will be deployed. TestPro emulates a Powered Device (PD), such as a WAP or Camera by setting it to the specific standard applicable to that device. TestPro negotiates with the Power Source Equipment (PSE) to request information about the switch and the highest level of power load from the PSE for the selected standard.

For those pesky intermittent power issues, TestPro allows for sustained loading testing over longer periods, through external loads. This allows you to monitor live for any power fluctuation that drops below the required level threshold.

TestPro can also characterize the cabling links for DC resistance unbalance parameters either as part of a standard cable certification Autotest or as a one-off quick test.

PoE load testing is available in the TestPro CV100-K30, K60, K61 Kits. This Adapter is also sold separately: Model AD-NET-CABLE.

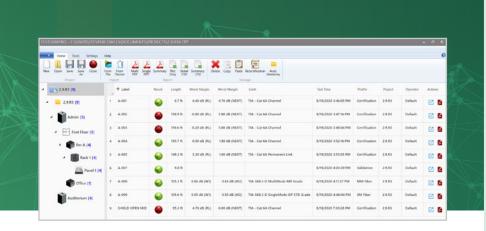


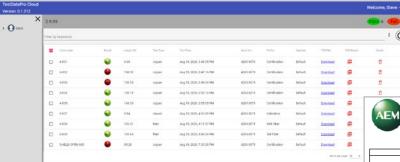




| | | Value | | | |
|------------|---------|--------------------|--|--|--|
| Voltage | - | 55.49 V | | | |
| Current | | 0.01 A | | | |
| RealPower | | 0.46 W | | | |
| Pair | SNR | TONC | | | |
| Pair | SINIC | TONC | | | |
| Pair 12 | 12.7 dB | 1.3 dBm | | | |
| | | 1.3 dBm 1.3 dBm | | | |
| 12 | 12.7 dB | 1.3 dBm | | | |

TestDataPro - Results Management





TESTDATAPRO PC BASED

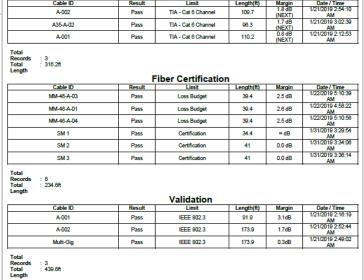
- Allows you to define projects and categorize test results into logical groupings
- Provides multiple reporting formats and options such as a single summary report or full reporting
- Allows software-based recertification if original test was done with wrong test standard selected

TESTDATAPRO CLOUD

- Allows immediate offload of test results to database via wired or wireless connection
- Allows visual of pass/fail results
- Allows printing of single .pdf reports

Summary Report

Cable Certification



TestDataPro supports both PC and cloud-based options, and come standard with all models of TestPro. Printed test reports for copper and fiber optic include a listed of compliant network support based on the performance of the cable tested. Printed reports are provided for Copper & Fiber certification as well as the combined Multi-Gigabit/PoE Autotest. The Multi-Gigabit/PoE Autotest is a path to a new service offering you can provide to increase your revenue potential.

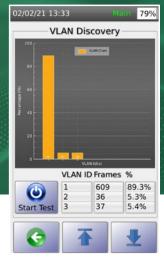




Wired & Wireless Connectivity Testing









Useful for moves/adds/changes as well as general troubleshooting, TestPro will connect to a live network through the AD-NETCABLE adapter, or wireless using the optional Edimax Wi-Fi USB adapter.

WIRED CONNECTIVITY TESTING

- Auto-discovery reports connected devices and details
- See latency and delay with Ping and Traceroute
- Understand in-depth connected switch detail including slot/port/VLAN
- See graphical breakdown of VLAN
- Traceroute and Ping troubleshooting tools
- Quick Autotest runs a suite of tests for you and provides a complete test report

WIRELESS CONNECTIVITY TESTING

- Auto-discovery reports visible access points including channel and signal strength
- Login to access point to verify connectivity
- Check roaming signal strength
- Traceroute and Ping troubleshooting tools
- Supports 2.4 and 5GHz

Wired Network Connectivity testing is available in the TestPro CV100 K30, K60, K61 Kits. This Adapter is also sold separately: Model AD-NET-CABLE.

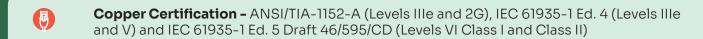
Wireless Network Connectivity testing is available in all models of TestPro CV100 via the optional Edimax EW-7822ULC Dual Band MuMimo Wi-FI USB adapter. These adapters are region specific and can be purchased on Amazon or any preferred retailer.

A handy savable Autotest function gives you the option to let the tester do all the work for you and automatically runs tests for:

- Device Information
- LAN Speed
- Network Map
- Ping Tests to your defined URLs
- Discovered Devices
- VLAN Discovery
- Switch Detail



Test Standards Compliance & Conformity



- Fiber Optic Certification TIA-568-C.3, TIA-568.3-D and ISO/IEC 14763-3 Ed 2.1
- Single Pair Ethernet (SPE) SPE Cabling Standards: TIA 568.5 (in draft), ISO/IEC TR 11801-9906-2020. SPE Field Test standards: TIA-5071 (in draft), IEC-61395-4 (in draft). IEEE Single Pair Ethernet Application standards supported: 1000BASE-T1, IEEE 802.3bp; 100BASE-T1, IEEE 802.3bw; 10BASE-T1, IEEE 802.3cg.
- Power over Ethernet IEEE 802.3 af/at/bt, UPoE
- Multi-Gigabit Link Speed Testing IEEE 802.3 up to 10GBASE-T
- Wired Network Connectivity Testing CDP, LLDP
- a Wireless Network Connectivity Testing - IEEE 802.11N & IEEE 802.11AC maximum wireless speed up to 300Mbps on 2.4GHz band or up to 866Mbps on 5GHz band



Adapters & Accessories

| | | 11 |
|--------------------|--|-----|
| Part Number | Description | UOM |
| AD-SM-K01E | SINGLEMODE FIBER TEST KIT FOR TESTPRO | SET |
| AD-MM-K01E | MULTIMODE FIBER TEST KIT FOR TESTPTO | SET |
| AD-SPE-IEC 63171-6 | SINGLE PAIR ETHERNET ADAPTER IEC 63171-6 | SET |
| AD-M12-X | M12 X-CODED ADAPTER PAIR | SET |
| MM-ST-K01 | TestPro ST Connector Interface Kit -MM | SET |
| MM-SC-K01 | TestPro SC Connector Interface Kit -MM | SET |
| MM-FC-K01 | TestPro FC Connector Interface Kit -MM | SET |
| SM-ST-K01 | TestPro ST Connector Interface Kit -SM | SET |
| SM-SC-K01 | TestPro SC Connector Interface Kit -SM | SET |
| SM-FC-K01 | TestPro Fc Connector Interface Kit -SM | SET |
| MM-LC-CORD-K01 | LC Reference Cord Kit for TestPro -MM | SET |
| SM-LC-CORD-K01 | LC Reference Cord Kit for TestPro -SM | SET |
| PROBE_FIBER_INSP | FIBER INSPECTION PROBE | EA |
| MPO_INSP_TIP | MPO TIP FOR USE W/ FIBER INSPECTION PROBE | EA |
| AD-NET-CABLE | MULTIGIG AND POE ADAPTER PAIR | SET |
| AD-CAT6A-CH | CAT6A CHANNEL ADAPTER PAIR | SET |
| AD-CAT6A-PL | CAT6A PERMENANT LINK ADAPTER PAIR | SET |
| AD-COAX-KIT | 75 OHM COAX ADAPTER KIT | SET |
| ACC-6A-PL-PLUG | REPLACEABLE PLUG FOR AD-CAT6A-PL | SET |
| AD-5E-PCORD | CAT-5E PATCH-CORD TEST ADAPTER PAIR | SET |
| AD-6-PCORD | CAT-6 PATCH-CORD TEST ADAPTER PAIR | SET |
| AD-6A-PCORD | CAT-6A PATCH-CORD TEST ADAPTER PAIR | SET |
| AD-8.2-TERACH | CAT8.2 TERA CHANNEL ADAPTER PAIR | SET |
| AD-8.2-TERAPL | CAT8.2 TERA PERM LINK ADAPTER PAIR | SET |
| AD-8.2-GG45CH | CAT8.2 TERA CHANNEL ADAPTER PAIR | SET |
| AD-8.2-GG45PL | CAT8.2 TERA PERM LINK ADAPTER PAIR | SET |
| AD-COAX-KIT | Pair of Adapters for Testing Coax | SET |
| AD-BAREWIRE | Pair of Adapters for Connecting to Bare Wire | SET |
| OP-CAT6A | CAT6A LICENSE FOR TESTPRO CV100 | SET |
| UP-K05-K50 | UPGRADE FROM K05 TO K50 | SET |
| UP-K30-K60 | UPGRADE FROM K30 TO K60 | SET |
| ACC-HARD-CASE | HARD CARRY CASE FOR TESTPRO | EA |
| ACC-SOFT-CASE | SOFT CARRY CASE FOR TESTPRO | EA |
| ACC-POWER-AD | AC POWER ADAPTER FOR TESTPRO | EA |
| | | |

For more information: www.aem-test.com | Enquiries: customercare@aem-test.com

Technical Specifications

TESTPRO PLATFORM (All Versions)

Each platform in a kit comes with a certificate of Calibration traceable to NIST.

SIZE

- 200mm X 105mm X 50mm
- 7.87in X 4.13in X 1.97in

DISPLAY

 5" TFT color touch screen, resolution 800 x 480 pixels

BATTERY

- Li-lon
- 3.7V / 13,200 mAh
- 9 hr battery life typical

POWER ADAPTER

- 5V, 3A (supplied)
- 5-12V (supported)
- 2.1mm DC jack

PLATFORM OPERATING SYSTEM

Linux

USB INTERFACES

- USB flash drive storage
- MicroUSB for connecting to PC

RJ-45 SIDE PORT

10/100/1G network connectivity test port

TEST ADAPTER TO PLATFORM INTERFACE

- High-frequency connector rated for 5000 insertion cycles
- Hot-swappable

MEASUREMENT ENGINE

- 9-channel dual-ended mixed-mode RF and DC measurement engine
- Industry's highest performance patent-pending measurement architecture for data cable testing

FREQUENCY RANGE

■ 0.1 – 3,000 MHz

COPPER TESTING (K50, K60)

MEASUREMENT TIME

- CAT6A auto-test (including TCL and resistance unbalance tests): 6 sec
- CAT 8 Class II auto-test: 30 sec

WIREMAP

 All possible wire connection situations identified, as long as two wires are connected end-to-end on any pins

DC RESISTANCE

- Range: 0 to 50 Ω
- Pair-to-pair and within pair resistance unbalance measurement meets TIA 1152A specs

TONE GENERATOR

730Hz and 1440 Hz

DUAL-ENDED RF MEASUREMENTS IL, RL, NEXT, ACR-F, TCL

- All mandatory and optional RF measurements as per TIA and ISO/ IEC standards
- Single-pair link testing license with supported length for dual ended testing greater than 1,000 m

LENGTH (PROPAGATION DELAY) MEASUREMENT

- Dual ended test: 0 600m with 0.1m resolution
- (0 6,000 nsec with 1 nsec resolution)
- Delay skew measurement with 1 nsec resolution

SUPPORTABLE CABLING

- 4-pair twisted pair cable
- 1-pair twisted pair cable
- Coax cable
- Optical cables (SM/MM pair)

TDR-RL

- 0-100 m (resolution: 1 m)
- Distance-to-fault

TDR-NEXT

0-100 m (resolution: 1 m)

IMPEDANCE

- 0-1000 Ω
- 0.1Ω resolution in 90-110 Ω range

FIBER OPTIC (K11, K51, K61)

COMMON TO BOTH MM AND SM

 Supplied Test Interface: interchangeable FC on TX port and interchangeable LC on RX port

VFL LIGHT SOURCE

Wavelength 650nm

VOLTMETER

Measurement range: 0-60V DC

OPTICAL POWER METER

Measurement range: -3 dBm to -30 dBm

SPECIFICATONS APPLICABLE TO AD-MM-01E MULTIMODE ADAPTER

WAVELENGTHS

• 850nm, 1300 nm

LIGHT SOURCE

LED

TRANSMIT POWER

-20 dBm typical

ENCIRCLED FLUX

 Compliant to IEC- 61280-4 and TIA-526-14-C-2015 as per supplier data sheet

LENGTH MEASUREMENT

- Range: up to 2 km (subject to maximum 10dB link loss)
- Length measurement resolution:
 0.1m

DUAL ENDED LOSS

 Dual ended loss measurement: 0 to -10 dB

SPECIFICATIONS APPLICABLE TO AD-SM-01E SINGLEMODE ADAPTER

WAVELENGTHS

• 1310nm, 1550nm

LIGHT SOURCE

Fabry-Perot Laser

OPTICAL POWER

-2dBm typical

LENGTH MEASUREMENT

- Length measurement range: up to 20 km (subject to maximum 20dB link loss)
- Length measurement resolution: 0.1m

DUAL ENDED LOSS

Dual ended loss measurement: 0 to

POWER OVER ETHERNET (K30, K60, K61)

- PoE source type detection
- Load test up to 90W
- Identification of PoE pairs
- Sustained load monitor

MULTI-GIGABIT ETHERNET

(K30, K60, K61)

AUTO-TEST PARAMETERS

- Signal to Noise Ratio at each speed across each pair
- Cable diagnostics
- PoE detection

NETWORK TESTING

- Ethernet network discovery
- Traceroute
- Traffic generator
- Ping
- Wi-Fi: Identify SSID's and measure RSSI

TestPro Selection Guide

| Test Function | TestPro CV100 K61 | TestPro CV100 K60 | TestPro CV100 K51 | TestPro CV100 K50 | TestPro CV100 K30 | TestPro CV100 K11 |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| CAT 5e/6/6A Channel and Permanent Link Certification with Detailed Printed Reports | ✓ | ✓ | ✓ | ✓ | | |
| CAT 5e/6/6A Channel Certification with View-Only Test Results | | | | | \checkmark | |
| DC Resistance Unbalance | ✓ | \checkmark | ✓ | ✓ | ✓ | |
| Wiremap with Distance-to-Fault | ✓ | \checkmark | ✓ | ✓ | ✓ | Yes, Limited* |
| MM and SM Fiber Certification | ✓ | | ✓ | | | ✓ |
| Hybrid Powered Fiber Voltage Test | ✓ | | ✓ | | | ✓ |
| PoE Load and Validation Testing | ✓ | \checkmark | | | ✓ | |
| Multi-Gig Autotest | ✓ | \checkmark | | | ✓ | |
| Multi-Gig (2.5 / 5 / 10G) SNR | ✓ | \checkmark | | | ✓ | |
| 100/1000BASE-T SNR Testing | ✓ | \checkmark | ✓ | ✓ | ✓ | ✓ |
| BASE-T Network Connectivity (Traceroute, Ping, etc) | ✓ | \checkmark | ✓ | ✓ | ✓ | ✓ |
| Wireless Network Connectivity** (AP Availability, Signal Strength, Ping, etc) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

^{*}K11 - BASET Autotest via side Ethernet port provides wiremap with approximate length/distance to fault testing into a connected switch or into Remote TestPro ** Requires Edimax EW-7822ULC Wi-Fi USB Adapter purchased separately from Amazon or other component provider of your choice.

Optional test adapters available to text test duction for CAT 8.1, CAT 8.2, Coax, MPTL, Patch Cord, SPE, Bare Wire and more. If you need to test it, we can support it!