



# CopperPro™ Series II Broadband Loop Testers for AT&T

*Complete Loop and VDSL Testing and Troubleshooting  
for Project Lightspeed and beyond*

*CopperPro Series II was designed specifically to support AT&T's Project Lightspeed. It ties directly into your existing NetDSL process to support troubleshooting and repair of Failed/ATI pairs. Once repair is complete, the pair is certified to meet AT&T standards, the pair record is updated, and the repair job is closed out – all automatically.*

CopperPro Series II is the latest generation of the leading copper loop test and analysis test sets. It provides a complete range of troubleshooting, fault locating, testing and qualification capabilities, all in a rugged, handheld easy-to-use test set. New features include broadband noise identification for VDSL, advanced TDR capabilities for locating short bridgetaps and other VDSL affecting impairments, and an optional VDSL modem for verifying service connectivity and performance.

### **A complete solution – including impulse noise detection**

CopperPro Series II is a complete solution for testing, troubleshooting and qualifying outside plant copper cables. It contains all the functions you expect: Metallic testing capabilities like voltage, resistance, balance, voice band noise. Fault locating using three terminal opens, RFL or TDR. And an advanced array of voice and broadband noise and interference identification tools, including VDSL spectrum analyzer and impulse noise detection.

*With the new CopperPro Series II, you can:*

- Troubleshoot noise and interference problems and qualify pairs for VDSL. Accurately locate and identify problems, like short bridge taps and impulse noise that impact very high-speed services with CopperPro's enhanced TDR Autotest.
- Repair and certify failed/ATI pairs to Lightspeed standards. Automatically update pair records with companion CP2 Close Out software.
- Assure service connectivity and performance with new ADSL1/2/2+ and VDSL2 test options.



### **Applications**

#### **Project Lightspeed construction and repair:**

Qualify pairs for service. Assure performance and integrity of grounding and bonding. Quickly locate and repair problems that impact high speed services. Document facility conditions.

**Maintenance:** Identify and locate faults and impairments such as bridge taps, load coils and interference. Verify facilities meet requirements for service – length, loss, SNR, balance.

**Installation:** Verify services are configured properly and available. Detect premise wiring problems or interference. Verify service speed and margins.



**NetworkSuperVision for your Local Loop**

**Capabilities for installation and maintenance**

CopperPro makes fast work of installing and maintaining service. The one-button POTS AutoTest helps you quickly document status before and after work is complete. And all the basic tests you expect are there, as well – AC and DC voltage, loop current, circuit noise, balance, leakage and CallerID/ANI. Make fast work of loss and slope tests with its automated dial-up tests. Even a dial set with phone number storage is built in. Verify xDSL connectivity, performance and capacity up to VDSL rates with available option.

**Capabilities for cable construction and repair**

Use CopperPro’s unique TDR AutoTest to both locate and identify faults, including short bridgetaps. But that’s not all. Find shorted or open pairs fast. Count and locate load coils. Locate high resistance faults precisely, no matter the cable make up. Easily identify the source of wideband interference and impulse noise, now up to VDSL bandwidth. Step-by-step instructions make set up a breeze.

**Capabilities for broadband deployment**

CopperPro features the industry’s most comprehensive set of copper and transmission testing tools, all in an easy-to-use package. Verify facility integrity, including noise, balance, grounding and bonding, and identify impairments. Broadband spectrum analyzer makes fast work of identifying interference problems – up to VDSL bandwidths. And xDSL modem options helps you to document sync, speed and other performance parameters for ADSL, ADSL2, ADSL2+ and VDSL.

**CopperPro Series II Support for AT&T Project Lightspeed**

CopperPro Series II integrates seamlessly with AT&T’s NetDSL process. Information on pairs that fail NetDSL testing (Failed ATI) are downloaded as Work Packages to CopperPro’s Job Close-Out application, along with test history and dispatch information.

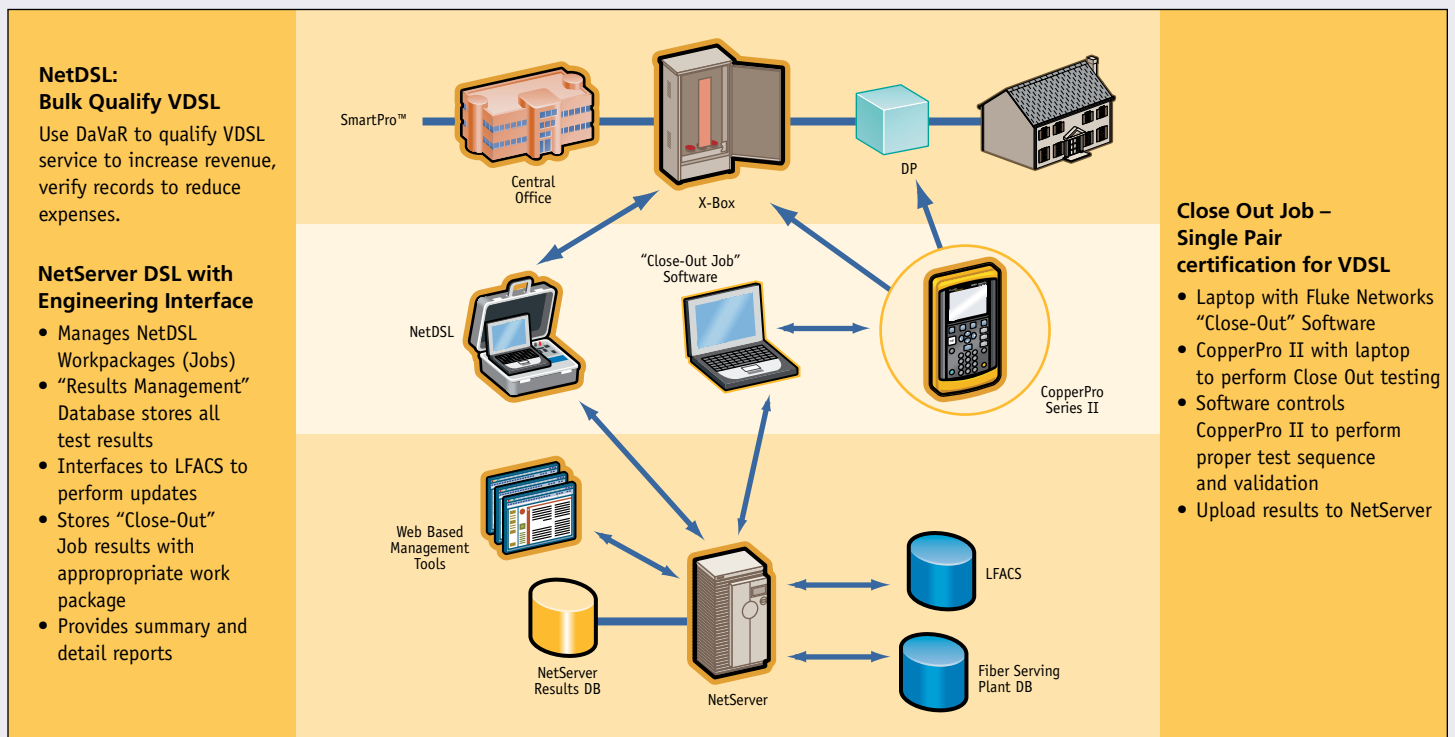
Once dispatched, the technician uses the CopperPro to find and fix problems with the pair. Then, the Job Close-Out application

automatically tests and certifies the pair to AT&T standards and stores away the test data. Once at the work center, collected test data is uploaded to NetServer, pair status is updated in LFACS, and the work order is closed.

All data is stored centrally. All authorized personnel – from management, to engineering, supervisors and technicians – have

visibility of the same data. Processes are consistent and streamlined. Confusion and potential finger pointing are eliminated.

By tying into the NetDSL process, CopperPro Series II eliminates the waste of duplicate tasks or paperwork, and no additional servers, systems or interfaces are needed.



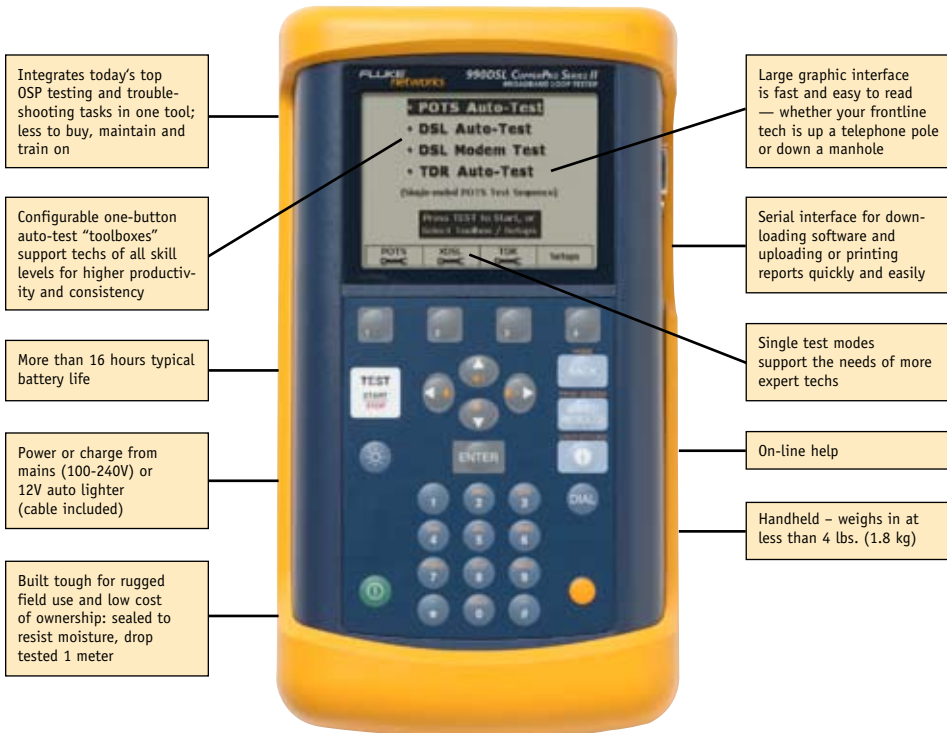
FLUXE Networks NetServerDSL ENGINEERING INTERFACE

Office: 972985 Pair: 201-800  
Cable Name: 1201R File: 0126

Pair	SP	Result	SP	SN	Pair	Fault Code	Stat	ERR	Net (Mag/Res)	Out	WR/Res	Leads	In Res. (20m)	Up Length (37)	Distance	Res. (OH)	PL (dB)	YS Long BAL. (OH)	YD Long BAL. (OH)	Legates (dBm)	
201	201	201602	AKM1	1024.081920	?		OK	+8.5 DCB													
201	201		AKM2	1228.014960	?		OK	-0.4 DCB													
201	201		AKM2	1228.014960	?		OK	-1.8 DCB													
202	202		AKM1	1024.081920	?		WR	24.71 DCB	0.78 Mag/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m
202	202		AKM2	1228.014960	?		WR	4.22 DCB	11.74 Mag/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m	0.22 Res/20m
202	202		AKM2	1228.014960	?		WR	-0.1 DCB	1.91 Mag/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m
203	203		AKM1	1024.081920	?		WR	0.0 DCB	41.2 Mag/20m	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR	18.3128 KR
203	203		AKM2	1228.014960	?		WR	0.0 DCB	44.2 Mag/20m	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR	18.4184 KR
203	203		AKM2	1228.014960	?		WR	0.0 DCB	1.91 Mag/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m	0.17 Res/20m
204	204	204051	AKM1	1024.081920	?		WR	0.0 DCB	7.28 Mag/20m	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR	17.7708 KR
204	204		AKM2	1228.014960	?		WR	0.0 DCB	0.81 Mag/20m	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR
204	204		AKM2	1228.014960	?		WR	0.0 DCB	4.71 Mag/20m	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR	13.7708 KR
205	205		AKM1	1024.081920	?		WR	0.0 DCB	1.97 Mag/20m	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR
205	205		AKM2	1228.014960	?		WR	0.0 DCB	0.81 Mag/20m	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR	15.8954 KR
205	205		AKM2	1228.014960	?		WR	0.0 DCB	172.7 Mag/20m	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR	3.15 KR
206	206	206018	AKM1	1024.081920	?		WR	0.0 DCB	2.18 Mag/20m	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR	17.8846 KR
206	206		AKM2	1228.014960	?		WR	0.0 DCB	4.81 Mag/20m	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR
206	206		AKM2	1228.014960	?		WR	0.0 DCB	3.84 Mag/20m	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR	16.8954 KR
207	207		AKM1	1024.081920	?		WR	0.1 DCB	21.01 Mag/20m	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR	11.3038 KR
207	207		AKM2	1228.014960	?		WR	-0.3 DCB	6.42 Mag/20m	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR
207	207		AKM2	1228.014960	?		WR	0.0 DCB	0.42 Mag/20m	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR	12.4752 KR

Companion CP2-Close Out software is thoroughly compatible with existing AT&T NetServer files and formats. So, CopperPro Series II job close out test results are available through existing Complement Summary and Filter Detail reports, as shown above.

### CopperPro Series II Product Features



### CopperPro testing capabilities

- DCV and ACV measurement
- Shorts, grounds and loop resistance with distance conversion
- Resistive fault location (Wheatstone and K-Test)
- Load coil counter with estimated distance to fault and impedance vs. frequency graph
- Leakage stress test to 200V
- Loop device counter
- Tracing tone with four modes
- Voice frequency noise – metallic and power influence
- Voice frequency loss
- Voice frequency longitudinal balance
- Voice frequency tone generator
- Automated POTS AutoTest
- Dial set and non-intrusive line monitor
- Voice frequency terminated and dial-up test macros (SmartStrap, MyHelper, FED, SASS, DATU, SmartPro)
- Multimode TDR with auto test: pair 1 test, compare pair 1 and 2, difference between pair 1 and 2, pair 1 monitor, pair 2 to pair 1 crosstalk, compare pair 1 to stored trace
- Broadband noise and level spectral analysis with interference masks (VDSL bandwidth)
- Broadband loss impulse noise reduction (VDSL bandwidth)
- ADSL, ADSL2+, VDSL2 and XDSL AutoTest for pair qualification, varies by model
- Optional ADSL1/2/2+ Modem (ATU-R)
- Optional VDSL Modem (ATU-R and ATU-C)
- Wideband terminated test macros (Terminator, SmartStrap, MyHelper, FED)



## Preliminary Ordering Information

Model	Description	AT&T PID Number
990VDSL/AT&T	990VDSL CopperPro Next Gen with WB and TDR, Special for AT&T	310117593
990/VDSL/UPG/AT&T	Upgrade 990DSL CopperPro to 990VDSL with WB and TDR, Special for AT&T	310117601
CP2-Close Out/AT&T	CP2-Close Out/AT&T, Lightspeed Close-Out Test SW, CopperPro Series II, AT&T Special	310117627
990-CF-18/AT&T	Panasonic Laptop Computer, Special for AT&T	OTA-2006-0469

## Accessories/Replacement Items

Model	Description
668225	CopperPro Battery Pack NiMH
2563584	Replacement Shielded Test Lead Set
2118212	CopperPro Charger Power Supply
284174	CopperPro Power Cord AC Line
800695	Charger Adapter 12V Lighter
1576950	CopperPro Strap Shoulder w/Strand
944806	Cable Serial Data
1312370	Gauge Wire
1320505	Cord RFL Strapping
GLD-990DSL	Gold Priority Support for 990VDSL



*Specifications and availability subject to change.*

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**Fluke Networks** operates in more than 50 countries worldwide. To find your local office contact details, go to [www.flukenetworks.com/contact](http://www.flukenetworks.com/contact).

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