



ADSL and VDSL Modem Options for the 990 CopperPro™ Series II Broadband Copper Loop Analyzers

Fluke Networks offers two options for the 990 CopperPro Series II Broadband Loop Analyzers to allow installation, verification and troubleshooting of ADSL and VDSL circuits.

with its PING test. All common connection types are supported, including PPoE, PPoA, DHCP. There is also a transparent bridged mode to allow the golden modem to substitute for the subscriber modem, permitting the user to connect a PC to the DSL line. PING targets can be specified by IP address or domain name.



The 990-GM/2 is a multimode modem that emulates subscriber equipment (ATU-R) and supports ADSL, ADSL2 and ADSL2+. The 990-GM/V emulates both central office and subscriber equipment (VTU-R and VTU-C) and supports VDSL2.

Both are designed to support a wide range of equipment interoperability through the application of unique on-board software. Not only does this assure compatibility with a wide range of DSL equipment from many manufacturers, it also protects your investment by making it possible to update modems as equipment and requirements change.

Both modem modules are housed in a lightweight aluminum enclosure and designed to integrate with the 990 CopperPro for control, power and storage. They can be purchased along with a new 990 CopperPro Series II, or easily added later.

In addition to providing complete DSL connection statistics, the CopperPro Series II Golden Modems can verify IP connectivity

Capabilities

	990-GM/2+	990-GM/V
Technology	ADSL, ADSL2, ADSL2+	VDSL
Emulation	ATU-R (subscriber)	VTU-C and VTU-R (office or subscriber selectable)
Connection	PPoE, PPoE Static, PPoA, DHCP, Static IP, Bridged	
Statistics	Attainable B/R (Bit Rate, kb/s), up and down Actual B/R (interleaved or non-interleaved), Channel 0 and Channel 1 (kb/s), up and down Capacity Channel 0 and Channel 1 (%), up and down Noise margin (dB), up and down Transmit power (dBm), up and down Line attenuation (dB), up and down INP (Impulse Noise Protection), up and down Interleaver delay (ms), up and down PSD (Power Spectral Density, dBm/Hz), up and down Bits/Bin and SNR/Bin graphs Link status Number of syncs CRC errors, NE and FE DSLAM Vendor Network Ping Results	
	ATM HEC Errors, NE & FE	Uncorr. Blk. Err. (Uncorrectable Block Errors), NE & FE
	Uncorr. Blk. Err. (Uncorrectable Block Errors), FE	LOM (Loss of Margin), NE & FE
		Err. Sec. (Errored Seconds), NE & FE
		Sev. Err. Sec. (Severely Errored Seconds), NE & FE



Modem Results	Modem Status	Test Completed	
Parameter	Service Type	G9925a ADSL2+	
	Upstream	Downstream	
Attainable B/R	1315 Kb/s	20072 Kb/s	
Interleave B/R Ch. 0	1312 Kb/s	20072 Kb/s	
Interleave B/R Ch. 1	n/i	n/i	
Capacity Ch. 0	99%	100%	
Capacity Ch. 1	n/i	n/i	
Noise Margin	6.4 dB	7.0 dB	
Transmit Power	11.9 dBm	19.9 dBm	
Line Attenuation	12.0 dB	26.9 dB	
Interleaver Depth	8 frames	64 frames	
Interleaver Delay	11.00 ms	6.50 ms	
PSD	-39 dBm/hz	-44 dBm/hz	

More	Bits / Bin	Save Results	Setups
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The CopperPro Series II Golden Modem Options provide complete connection statistics.



CopperPro Series II Broadband Loop Analyzer for qualification and troubleshooting.



Golden Modem Option for the CopperPro Series II Broadband Loop Analyzer.



Golden Modem Options fit into the existing CopperPro Series II protective case.

Specifications

	990-GM/2+	990-GM/V
Size:	4.2 x 6.6 x 1.3 in. (11 x 17 x 3.3 cm)	
Weight:	12.8 oz. (364 g)	
Operating Temperature:	+12° F to +122° F (-10° C to +50° C)	
Storage Temperature:	-40° F to +158° F (-40° C to +70° C)	
990 II Battery Oper. Time (modem in "Showtime")	Hrs. Typical, 4 Hrs. Continuous	8 Hrs. Typical, 3 Hrs. Continuous
Standards compliance		
ADSL ANSI	ANSI T1.413 Issue 2	
ADSL G.DMT	ITU G.992.1a, b	
ADSL G.Lite	ITU G.992.2ab	
ADSL2	ITU G.992.3a, b, l, m	
ADSL2+	ITU G.992.5a, b	
VDSL1		ITU G.993.1
VDSL2		ITU G.993.2

Ordering info

990-GM/2+	ADSL2+ Golden Modem Option for CopperPro Series II
990-GM/V	VDSL Golden Modem Option for CopperPro Series II
Notes	Includes test leads (Tip, Ring, ground alligator clips and RJ-11 connector), interface cable, packing and quick reference guides. Firmware version 4.1.0 or greater required Not compatible with previous versions of CopperPro

NETWORK SUPERVISION

Fluke Networks
P.O. Box 777, Everett, WA USA 98206-0777

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