EXD-350

NETWORK TESTING-ACCESS

An advanced, highly economical installers' tool, ideal for ADSL 1/2/2+ deployments

- Compact, easy to use
- Tests ADSL, ADSL2 and ADSL2+ services
- IP ping test (PPPoE, PPPoA, LLC-Bridge, LLC-Router) in stand-alone and Through mode operation
- Digital multimeter (voltage, resistance, capacitance) for basic line troubleshooting
- Load coil counter detection
- Carrier load information (bits/bin)
- Status LEDs

Assessing ADSL2+ Service Performance

Ideal for ADSL2+ link installation and maintenance, the EXD-350 Advanced ADSL2+ Tester allows technicians to test copper loop quality, verify ADSL2+ performance and validate Internet connectivity.

EXFO's EXD-350 offers a quick and thorough method for installing ADSL2+ circuits. This test set not only verifies service and connectivity to the DSLAM, but also performs upstream and downstream performance measurements such as actual data rates, attenuation and noise margin. The EXD-350 facilitates the deployment of ADSL2+ services, making the technician's job easier than ever before.

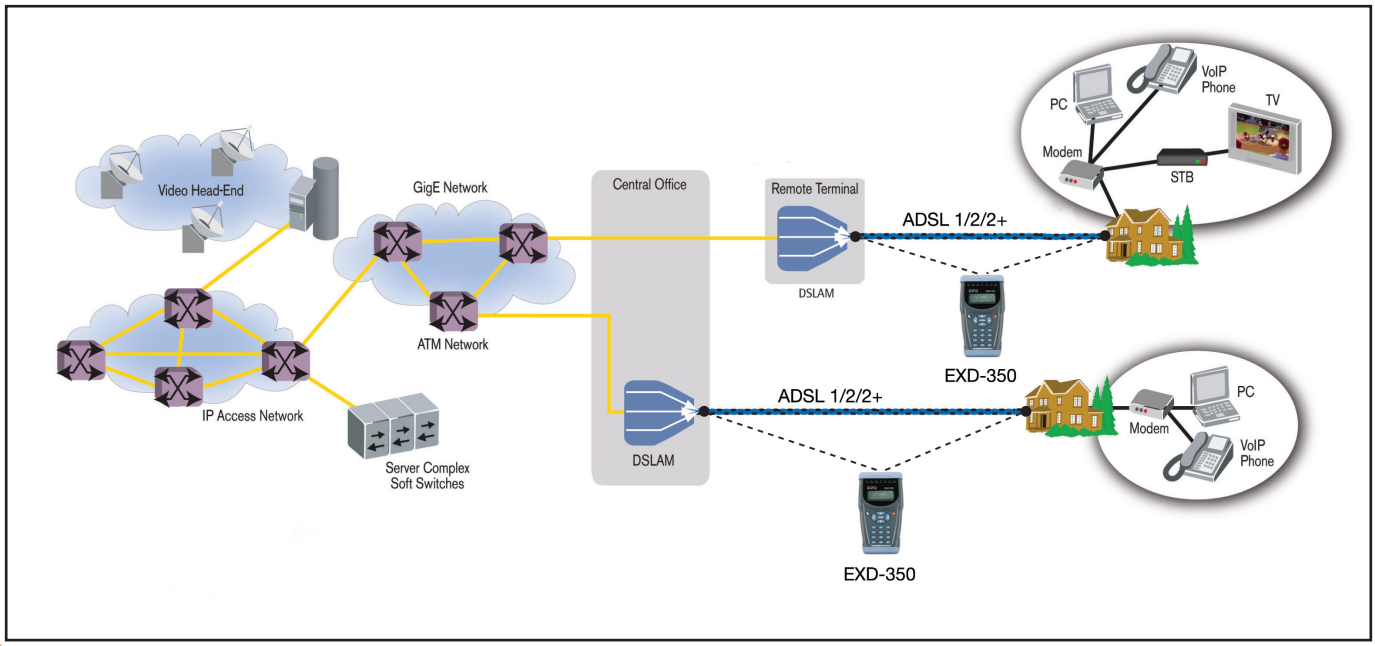
Thanks to the EXD-350's standard, built-in digital multimeter, technicians can determine circuit quality using voltage, resistance and capacitance measurements. In addition, the EXD-350 provides distance-to-fault information whether testing against a short or open circuit ("shorts" and "opens" meter).

The EXD-350 also has a load coil detection feature–load coils prevent DSL delivery and must be removed from the circuit–to assist technicians in determining a circuit's ability to carry DSL services.

The EXD-350 Advanced ADSL2+ Tester

APPLICATIONS

- Installation and troubleshooting of ADSL1/2/2+ services
- ATU-R modem troubleshooting via Terminate and Through mode operation
- Detection and isolation of copper loop faults
- Port verification for DSLAM commissioning



EXD-350 connection points in the network

ADSL2+ ATU-R MODEM

Chipset	Conexant
Emulation	ATU-R
Line coding	DMT (discrete multitone)
Standards	T1.413 Issue 2 ITU-T G.994.1, ITU-T G.992.1 annex A or annex B ITU-T G.992.2 ITU-T G.992.3 annex A or annex B ITU-T G.992.5 annex A or annex B
Measurements	Upstream and downstream parameters for: Actual bit rates Maximum bit rates Noise margin Attenuation Output power ATU-C and ATU-R vendor ID
Link errors	FEC, CRC, HEC
Link alarms	LOS, LOF, LOP, LCD
Bits/Bin	Tabular display
Encapsulations	PPPoE supporting static and DHCP addressing PPPoA supporting static and DHCP addressing IPoE supporting routed/bridge mode and static and DHCP addressing
Ping test	Destination IP address, number of pings sent/received and round-trip delay for average, min/max
Through mode support	Provide test in through mode operation
Login support	Using PAP/CHAP authentication, username, password, display local and gateway IP addresses
ATM	F4/F5 OAM loopback

DMM MEASUREMENTS

DC Voltage Measurement			
	Range (V)	0 to 300	
	Resolution (V)	1	
	Accuracy	±1 % of reading ±2 V	
	Connection	T-R, T-G, R-G	
AC Voltage Measurement			
	Range (V)	0 to 250	
	Resolution (V)	1	
	Accuracy	±3 % of reading ±3 V	
	Connection	T-R, T-G, R-G	
DC Current Measurement			
	Range (mA)	0 to 200	
	Resolution (mA)	1	
	Accuracy	±2 % of reading ±1 mA	
	Connection	T-R, T-G, R-G	
Resistance Measurement			
	Range (ohm)	Resolution (ohm)	Accuracy
	0 to 2000	1	±2 % of reading ±3 ohm
	2000 to 20,000	10	±2 % of reading ±20 ohm
	20,000 to 200,000	100	±2 % of reading ±100 ohm
	200,000 to 2,000,000	1000	±2 % of reading ±1000 ohm
	Connection	T-R, T-G, R-G	
	Displays	Resistance, distance in meter/feet	
Insulation Resistance Measurement			
	Range (Mohm)	100	
	Resolution (Mohm)	0.1	
	Accuracy	±10 % of reading ±0.2 Mohm	
	Testing voltage (V)	100	
	Connection	T-R, T-G, R-G	
Capacitance Measurement			
	Range	Resolution	Accuracy
	4 nF to 40 nF	10 pF	±10 % of reading ±50 pF
	40 nF to 400 nF	100 pF	±2 % of reading ±200 pF
	400 nF to 4 µF	1 nF	±2 % of reading ±2 nF
	Connection	T-R, T-G, R-G	
	Displays	Capacitance, distance in meter/feet	
Load Coil Detection			
	Load coil count (max)	5	

GENERAL SPECIFICATIONS

Display	4 line x 16 character backlit display LEDs for power, modem sync, WAN status, POTS status
Connectors	RJ-11 DSL test port RJ-45 Ethernet port for Through mode testing RJ-11 RS232 serial port
Batteries	Rechargeable NiMH
Battery life	90 on/off cycles and tests from a full charge, depending upon usage and conditions
AC operation	Input: 115/230 V, 50/60 Hz (via external adapter) Output: 9 V at 600 mA
Temperature	
operating	0 °C to 40 °C (32 °F to 104 °F)
storage	−20 °C to 70 °C (−4 °F to 158 °F)
Humidity	Up to 85% non-condensing
Size (H x W x D)	180 mm x 100 mm x 45 mm (7 in x 3.9 in x 1.8 in)
Weight	0.65 kg (1.4 lb)
Results	Stores up to 50 results into NVRAM

ACCESSORIES

- RJ-11 to telco clips test cable
- RS-232 cable
- AA NiMH batteries
- AC/DC power adapter with interchangeable plugs
- Operating manual
- Softpack carrying case

ORDERING INFORMATION

EXD-350-X

Model

EXD-350-A = Annex A for ADSL1/2/2+ over POTS
EXD-350-B = Annex B for ADSL1/2/2+ over ISDN

Example: EXD-350-A

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