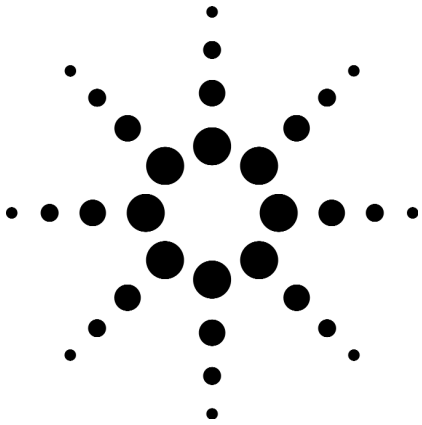
XPI Solutions for Multi-Service/Access

Network Analyzer Family

Data Sheet



Agilent Technologies

Line Interface Module (LIM) Specifications

Network Analyzer LIMs provide physical layer and link layer connectivity to the embedded data acquisition and real-time systems in a Network Analyzer, Distributed Network Analyzer or Distributed Network Analyzer MX analyzer; they also gather physical and link layer statistics. For example, LIMs handling ATM provide real-time AAL-5 functionality on multiple virtual channels in parallel, and provide ATM and AAL error statistics. All LIMs have the hardware resources to generate traffic for their associated network technologies. This feature is available today on LAN interfaces. The WAN generation capability (except thru-mode capability, which is available now) will be activated with a future software upgrade.

Unless otherwise stated, LIMs provide two input ports and two output ports allowing any of the following connection configurations:

- WAN Terminal Mode - uses one input and one output of WAN LIMs, not available in the current release of product.
- WAN Bridged Monitor Mode - uses both inputs and outputs of WAN LIMs for bi-directional monitoring at test access points; high input impedance should normally be selected.
- WAN Jack Monitor Mode - uses both inputs of WAN LIMs only for bi-directional monitoring at protected monitor points.
- WAN Through Monitor Mode - uses both inputs and outputs of WAN LIMs providing bi-directional repeater functionality plus bi-directional monitoring functionality. Each receiver input is terminated.
- LAN Node Mode - uses an interface port of LAN LIMs to transmit and receive
- LAN Monitor Mode - uses both interface ports of LAN LIMs to monitor traffic passively between two devices.

The operation of the physical interface is often critical in determining the cause of network problems. Therefore, the acquisition system tracks errors at the physical layer. Signal events are recorded on the display for both the line (network) side as well as the equipment (user/subscriber) side. The time of the last occurrence of a particular event is recorded as well.

Line status is displayed in real time. All of the events listed in the "Physical layer alarms and statistics" section for each interface below are saved in the buffer and counted in the line status display. These events may be logged to disk.

J6811A STM-1o/OC-3 LIM
(155.520 Mb/s)

General

This LIM plugs into the Network Analyzer, Distributed Network Analyzer and XPI Distributed Network Analyzer MX platforms. The LIM handles ATM and Packet over SONET/SDH at 155 Mb/s.

It has optical interfaces and can be used in single-mode or multi-mode environments; when used in multi-mode environments, 10 dB attenuators should be used on the optical outputs.

Note: both SDH and SONET framing are fully supported in this LIM; the SDH terminology is given first (i.e. SDH/SONET); SONET terminology has recently changed and the new terminology is used here with older terms shown in parenthesis, where appropriate.

Common to Inputs and Outputs:

Framing:
SDH: STM-1, ITU-T G.707
SONET: STS-3c, GR-253
SDH / SONET Frame Scrambling ($x^7 + x^6 + 1$)
ATM Cell Scrambling: conforms to ITU-T I.432.1 ($x^{43} + 1$) and may be turned on (default) or off

Inputs:

Two input and output ports (single-mode/multi-mode compatible)
Connectors: SC-PC
Monitor modes:
- Through monitor mode: uses both inputs and outputs; signal is terminated and regenerated
- Test access point monitor mode; uses inputs only

Sensitivity:
- Typ. -32 dBm
- Min. -28 dBm

Loss of Signal Detect Level:
- -34 dBm

Receiver wavelength range: 1310/1550 nm
Optical power measurement for each LIM port:
- +3 dBm to -42 dBm dynamic range in steps of 0.1 dBm
- +/-0.5 dBm absolute accuracy at 1310 nm
- (can also be used to measure power at 622Mb/s)

Physical Layer line status indications for each LIM port (SDH / SONET):
- Loss of Signal (LOS)
- Loss of Frame (LOF)
- Loss of Pointer (LOP)
- Loss of Cell Delineation (LCD)
- MS-RDI / RDI-L (Line FERF)
- RDI / RDI-P (Path FERF)
- MS-AIS / AIS-L (Line AIS)
- AIS / AIS-P (Path AIS)

Physical Layer line vital counts for each LIM port (SDH / SONET):
- MS-AIS / AIS-L (Line AIS)
- AIS / AIS-P (Path AIS)
- MS-REI / REI-L (Line FEBE)
- REI / REI-P (Path FEBE)
- B1, B2, B3 BIP errors
- Loss of Cell Delineation (LCD)

ATM Layer statistics for each LIM port (network and equipment):
- Total frames (AAL-5 SAR mode) or cells (cell mode)
- Low priority cells
- Cells with header (HEC) errors
- Cells indicating congestion (EFCI)
- Auto-discovery and notification of up to 4096 VCs

ATM Adaptation Layer (AAL) for each LIM port:
- Concurrent real-time AAL-5 reassembly of the first 2000 bytes on up to 1024 virtual channels (user can control which)
- Reassembled AAL-5 frames with trailer CRC-32 errors

ATM statistics collected:
- Received CLP1+0 (low and normal priority, i.e. all) cells per VC
- Received CLP1 (low priority) cells per VC
- Cells with header (HEC) errors per VC
- AAL-5 trailer CRC-32 error statistics per reassembled VC

Packet over SONET/SDH analysis configurations supported:
- IETF PPP in HDLC: RFC 1662 and both current RFC 2615 (x^{43} + 1 scrambled SONET/SDH payload) and obsolete RFC 1619 (unscrambled SONET/SDH payload) versions with version auto-detect based on POH C2 byte value (default) and manual over-ride for scrambling enable/disable
- Cisco HDLC over SONET/SDH
- FCS-16 and FCS-32 auto-detect and manual override

Capture rate: Full line rate (full duplex)

Outputs:
1310nm Class 1 laser (multi-mode fiber compatible with 10 dB attenuator, available separately as J2928A)
Output levels:
Min. -12 dBm
Max. -7 dBm
Clocking:
Recovered (loop)
Currently, only monitor modes are available with this LIM; generation will be available in a future software upgrade.

J6813B E3/T3 (DS3) LIM
(34.368 / 44.736 Mb/s)

General
This LIM plugs into the Network Analyzer, Distributed Network Analyzer and Distributed Network Analyzer MX platforms. The J6813B supports ATM, Frame Relay, HDLC, SDLC and PPP. The module can be configured for use as an E3 or T3 interface.

Common to Inputs and Outputs (E3 and T3):
Two input and output ports
Connectors: 75 Ohm BNC female

When E3 is selected:
Electrical: ITU-T G.703
Line Code: HDB3
Framing:
Frame Relay: ITU-T G.751
ATM: ITU-T G.832
ATM Cell Mapping:
Direct (ITU-T G.804)
ATM Cell Scrambling:
Conforms to ITU-T I.432.1 ($x^{43} + 1$) and may be turned on or off

When T3 is selected:
Electrical: ITU-T G.703
Line Code: B3ZS
Framing:
C-bit and M13 (auto-select on input side)
Fractional DS3:
any DS0 or combination of DS0s within any DS1 within DS3
ATM cell Mapping:
Direct (normal mode, ITU-T G.804)
PLCP (obsolescent mode, ITU-T G.804)
ATM Cell Scrambling:
Conforms to ITU-T I.432.1 ($x^{43} + 1$) and may be turned on or off

Inputs (E3 and T3):
Received pulse amplitude measurement (mVpeak) on each port
Monitor modes:
Terminated/Repeater (75 Ohm unbalanced)
Bridged (high impedance)

When E3 is selected:
Levels:
Auto gain control for high, low and monitor jack; all unbalanced 1.2Vpeak to 26mVpeak, 34 dB dynamic range
Physical Layer line status indications for each LIM port:
Loss of Signal (LOS)
Loss of Frame (LOF)
Alarm Indication Signal (AIS)
Remote Defect Indication (RDI), formerly known as FERF
Loss of Cell Delineation (LCD)
Physical Layer line vital counts for each LIM port:
Code violations

Out of frame (OOF) events
Remote Defect Indication (RDI), formerly known as FERF
Remote Error Indication (REI), formerly known as FEBE
Bit Interleave Parity (BIP-8)
Payload type mismatch
Loss of Cell Delineation (LCD)

When T3 is selected:

Levels:

Auto gain control for high, DSX-3, low, and monitor jack (min. = DSX -23 dB); all unbalanced 1.2 V peak to 26 mV, 34 dB dynamic range

Physical Layer line status indications for each LIM port:

Loss of Signal (LOS)
Loss of Frame (LOF)
Alarm Indication Signal (AIS)
Remote Defect Indication (RDI), formerly known as FERF
Loss of Cell Delineation (LCD) - directly mapped ATM mode
PLCP OOF (out of frame) - PLCP ATM mode
PLCP RAI - PLCP ATM mode

Physical Layer line vital counts for each LIM port:

Code violations
Frame bit error
P1/P2 parity errors
C-bit parity errors
Remote Error Indication (REI), formerly known as FEBE
Loss of Cell Delineation (LCD) - directly mapped ATM mode
PLCP OOF (out of frame) - PLCP ATM mode
PLCP Frame Bit Error - PLCP ATM mode
PLCP BIP Error - PLCP ATM mode
PLCP REI (remote error indication, formerly FEBE) - PLCP ATM mode

When E3 or T3 is selected:

ATM Layer statistics for each LIM port (network and equipment):

Total frames (AAL-5 SAR mode) or cells (cell mode)
Low priority cells
Cells with header (HEC) errors
Cells indicating congestion (EFCI)
Auto-discovery and notification of up to 4096 VCs

ATM Adaptation Layer (AAL) for each LIM port:

Concurrent real-time AAL-5 reassembly of the first 2000 bytes on up to 1024 virtual channels (user can control which)
Reassembled AAL-5 frames with trailer CRC-32 errors

ATM statistics collected:

Received CLP_{1+0} (low and normal priority, i.e. all) cells per VC
Received CLP_1 (low priority) cells per VC
Cells with header (HEC) errors per VC
AAL-5 trailer CRC-32 error statistics per reassembled VC

Statistics for Frame Relay, HDLC/SDLC, sync PPP for each LIM port:
- Total frames
- Bridged frames
- Bridged broadcast frames
- Bridged multicast frames
- Total octets
- Throughput (kbps)
- Aborted frames
- Short frames
- FCS errors

Statistics for Frame Relay only for each LIM port:
- Forward explicit congestion notification (FECN)
- Backward explicit congestion notification (BECN)
- Discard eligibility (DE)

Capture rate: Full line rate (full duplex)

Outputs (E3 and T3):

Termination:
- 75 Ohm

Levels:
- ITU-T G.703

Clocking:
- Recovered (loop)

Currently, only monitor modes are available with this LIM; generation will be available in a future software upgrade.

J6815B T1/E1 LIM
J6816B E1/T1 LIM
J6817B E1 LIM
(1.544 / 2.048 Mb/s)

General

These LIMs plug into the Network Analyzer, Distributed Network Analyzer and Distributed Network Analyzer MX platforms. All three LIMs handle ATM, Frame Relay, HDLC, SDLC and PPP.

The J6815B LIM has four Bantam connectors and two 8-pin RJ connectors, which can be switched between RJ-48C and RJ-45 pin wiring via the configuration menu. This module can be configured as a T1 (100 Ohm, 1.544 Mb/s, default) or E1 (120 Ohm 2.048 Mb/s) interface.

The J6816B LIM has DB-9 and 8-pin RJ connectors which can be switched between RJ45 and RJ48C wiring via the configuration menu. Converter cables are available to connect the DB9 to 120 Ohm Siemens 3-pin connectors. This module can be configured as an E1 (120 Ohm, 2.048 Mb/s, default) or T1 (100 Ohm, 1.544 Mb/s) interface.

The J6817B LIM has 75 Ohm BNC connectors. This module can be configured only as an E1 (2.048 Mb/s) interface. Third party vendors make conversion cables from this ISO BNC connector to the 'small Siemens BNC (1.6/5.6 mm)', 'large Siemens BNC', 'British Telecom BNC', etc.

Common to Inputs and Outputs:

Two input and output ports

When T1 is selected (not applicable with J6817B):

Interface termination:
- 100 Ohm balanced

Line Code:
- ATM: B8ZS
- Other WAN: B8ZS, AMI

Framing:
- Extended Super Frame (ESF) with CRC-6
- D4 (Super Frame)

Fractional (ATM and Frame Relay), any multiple of 56 kb/s or 64 kb/s channels
- Unframed 1.544 Mb/s

ATM Cell Mapping:
Direct (ITU-T G.804)
ATM Cell Scrambling:
Conforms to ITU-T I.432.1 ($x^{43} + 1$) and may be turned on or off

When E1 is selected:
Interface termination:
120 Ohm balanced (J6815B, J6816B); 75 Ohm unbalanced (J6817B)
Line Code:
ATM: HDB3
Other WAN: HDB3, AMI
Framing:
ITU-T G.704 alternate framing with or without CRC-4
Fractional (ATM and Frame Relay), any multiple of 64 kb/s channel
Unframed at 2.048 Mb/s
ATM Cell Mapping:
Direct (ITU-T G.804)
ATM Cell Scrambling:
Conforms to ITU-T I.432.1 ($x^{43} + 1$) and may be turned on or off

Inputs:
Received pulse amplitude measurement (dBdsx)

When E1 is selected:
Monitor modes:
Terminated (120 Ohm)
Bridged (High Impedance)
Monitor Jack: -20 dB and -30 dB
Physical Layer line vital counts for each LIM port:
Code violations
Loss of frame (LOF) events
Frame bit error
CRC-4 error
Loss of Cell Delineation (LCD)
Physical Layer line status indications for each LIM port:
Loss of Signal (LOS)
Loss of Frame (LOF)
Alarm Indication Signal (AIS)
Remote Alarm Indication (RAI), formerly known as FERF
Loss of Cell Delineation (LCD)

When T1 is selected:
Monitor modes:
Terminated (100 Ohm)
Bridged (High Impedance)
Monitor Jack (20dB)
Interface types (and input sensitivities):
DSX-1 (+6 dB to -10 dB)
Network Interface (+6 dB to -36 dB)
Physical Layer line status indications for each LIM port:
Loss of Signal (LOS)
Loss of Frame (LOF)
Alarm Indication Signal (AIS)
Remote Alarm Indication (RAI), formerly known as FERF
Loss of Cell Delineation (LCD)
Physical Layer line vital counts for each LIM port:
Code violations
Loss of frame (LOF) events
Frame bit error
ESF CRC-6 error
1s density
Excess 0s
Loss of Cell Delineation (LCD)

When E1 or T1 is selected:

ATM Layer statistics for each LIM port (network and equipment):
- Total frames (AAL-5 SAR mode) or cells (cell mode)
- Low priority cells
- Cells with header (HEC) errors
- Cells indicating congestion (EFCI)
- Auto-discovery and notification of up to 4096 VCs

ATM Adaptation Layer (AAL) for each LIM port:
- Concurrent real-time AAL-5 reassembly of the first 2000 bytes on up to 1024 virtual channels (user can control which)
- Reassembled AAL-5 frames with trailer CRC-32 errors

ATM statistics collected:
- Received CLP_{1+0} (low and normal priority, i.e. all) cells per VC
- Received CLP_1 (low priority) cells per VC
- Cells with header (HEC) errors
- AAL-5 trailer CRC-32 error statistics per reassembled VCs

Statistics for Frame Relay, HDLC/SDLC, sync PPP for each LIM port:
- Utilization in percent
- Total frames
- Bridged frames
- Bridged broadcast frames
- Bridged multicast frames
- Total octets
- Throughput (kbps)
- Aborted frames
- Short frames
- FCS errors

Statistics for Frame Relay only for each LIM port:
- Forward explicit congestion notification (FECN)
- Backward explicit congestion notification (BECN)
- Discard eligibility (DE)

Capture rate: Full line rate (full duplex)

Outputs:

Termination:
- 120 Ohm when E1 is selected
- 100 Ohm when T1 is selected

Levels:
- ITU-T G.703

Clocking:
- Recovered (loop)

Currently, only monitor modes are available with this LIM; generation will be available in a future software upgrade.

J6818A ATM25 LIM
(25.6 Mb/s)

General

This LIM plugs into the Network Analyzer, Distributed Network Analyzer and Distributed Network Analyzer MX platforms. The LIM interfaces handle ATM at 25.6 Mb/s.

Common to Inputs and Outputs:

Main Specifications: ATM Forum af-phy-0040.000, ITU-T I.432.5
Ports: Two bi-directional, one towards the equipment and the other towards the network: 100 Ohm (for UTP-3 cable) and 120 Ohm (for UTP-5 cable)
Test configuration modes:
- Terminal (towards network or equipment - available in a future software upgrade) and
- Monitor (both directions for protocol analysis with repeater functionality in each direction)

Connectors: RJ-45 (UTP)
Line Code: NRZI
Symbol Coding: 4B5B
Line Symbol Rate: 32 Mbaud
Cell Mapping: Symbolic direct (i.e. no framing)
Cell Scrambling: Conforms to af-phy-0040.000 ($x^{10} + x^7 + 1$)

Inputs:

Physical Layer Alarms and Statistics:
- Invalid symbol
- Short cell
- Loss of signal (LOS)
- Loss of Timing Synchronization
- Timing synchronization frequency

ATM Layer statistics for each LIM port (network and equipment):
- Total frames (AAL-5 SAR mode) or cells (cell mode)
- Low priority cells
- Cells with header (HEC) errors
- Cells indicating congestion (EFCI)
- Auto-discovery and notification of up to 4096 VCs

ATM Adaptation Layer (AAL) for each LIM port:
- Concurrent real-time AAL-5 reassembly of the first 2000 bytes on up to 1024 virtual channels (user can control which)
- Reassembled AAL-5 frames with trailer CRC-32 errors

ATM statistics collected:
- Received CLP_{1+0} (low and normal priority, i.e. all) cells per VC
- Received CLP_1 (low priority) cells
- Cells with header (HEC) errors
- AAL-5 trailer CRC-32 error statistics per reassembled VC

Capture rate: Full line rate (full duplex)

Outputs:

Clocking:
- Recovered from line (loop), recovered from X8 8 kHz time synchronization source.

Currently, only monitor modes are available with this LIM; generation will be available in a future software upgrade.

J6820A V-Series LIM

(up to 10 Mb/s)

General

This LIM plugs into the Network Analyzer, Distributed Network Analyzer and Distributed Network Analyzer MX platforms. Connection to supported interfaces is by means of separately supplied external monitor/simulate cables, each specific to a particular V-series interface.

Monitor/Simulate Cables (J6757A)
- option #001: V.35
- option #002: RS-449/V.36
- option #003: V.10/V.11 (for X.21)
- option #004: RS-232C
- option #005: EIA-530

Detail:

Bit rates:
- 2400 b/s to 8.192 Mb/s on V.35, Sync or Sync NRZI;
- 2400 b/s to 10 Mb/s on V.36/RS-449/422/423/EIA-530 and X.21, Sync or Sync NRZI
- 300 b/s to 256 kb/s on V.24/V.28/RS-232C

Lead status:
- RTS, CTS, DTR, DSR, and CD (V.24/V.28/RS-232C and V.35)
- CS, RS, RR, TR, and DM (V.10/V.11 and V.36/RS-449/422/423)

Statistics for Frame Relay, HDLC/SDLC, sync PPP for each LIM port:
- Utilization in percent
- Total frames
- Bridged frames
- Bridged broadcast frames
- Bridged multicast frames
- Total octets
- Throughput (kbps)
- Aborted frames
- Short frames
- FCS errors

Statistics for Frame Relay only for each LIM port:
- Forward explicit congestion notification (FECN)
- Backward explicit congestion notification (BECN)
- Discard eligibility (DE)

Capture rate: Full line rate (full duplex)

J6830A 10BaseT, 10/100BaseTX LIM
J6831A 10/100BaseFX LIM
J6832A 1000BaseX LIM

General

These LIMs plug into the Network Analyzer, Distributed Network Analyzer and Distributed Network Analyzer MX platforms. The J6830A LIM handles Ethernet and Fast Ethernet over unshielded twisted pair (UTP) cable. The J6831A LIM handles Fast Ethernet over multi-mode optical cable. The J6832 LIM accommodates a pair of GBIC interface adapters for handling Gigabit Ethernet over short reach (SX), long reach (LX) optical fiber, UTP-5 cable, or any combination of these; a pair of SX GBICs (Short range Gigabit Interface Connectors) is included with this LIM. All LIMs are capable of analysis and simulation. Other types of conforming GBIC may be supported (though not supplied by Agilent), such as CX.

J6830A specific:

Connectors: two RJ-45 (UTP)
Auto-sensing 10/100 Ethernet ports for 10BaseT and 100BaseTX
A second RJ-45 port allows testing of full duplex Ethernet between two network elements.

J6831A specific:

Connectors: two duplex SC multi-mode 1300nm

J6832A specific:

GBIC Interfaces supported (any combination of the following):
J5491A SX GBICs (850 nm multi-mode) – included with the J6832A LIM
J5492A LX GBICs (1310 nm mono-mode)
J5495A T GBICs (UTP copper)

All LIMs:

Line and MAC statistics:
- bytes transmitted (total and per second)
- bytes received (total and per second)
- errors (total and per second)
- broadcasts (total and per second)
- multicasts (total and per second)
- frames transmitted (total and per second)
- frames received (total and per second)
- % transmitted
- % received
- local collisions
- remote collisions
- late collisions
- remote late collisions
- runts
- frames with bad FCS
- misaligned frames

Dribbles
Runts (good FCS)
Jabbers
Jabbers (good FCS)
Full rate, full duplex capture

Physical Specifications

J6800A Network Analyzer

Size:	
(depth x width x height)	356 x 402 x 142 mm (14 x 15.8 x 5.6 inches)
Weight:	9 kg (20 lb.)

J6801A Distributed Network Analyzer

Size:	
(depth x width x height)	307 x 259 x 61 mm (12.1 x 10.1 x 2.4 inches)
Weight:	2.3 kg (5.3 lb.)

J6802A Distributed Network Analyzer MX

Size:	
(depth x width x height)	370 x 440 x 88 mm (14.6 x 17.3 x 3.5 inches)
Weight:	6.6 kg (14.5 lb.)

J6805A Distributed Network Analyzer ME

Size:	
(depth x width x height)	300 x 240 x 72 mm (11.8 x 9.5 x 2.8 inches)
Weight:	3.9 kg (10.5 lb.)

Power Requirements

J6800A Network Analyzer

External: 100 - 240 V ~, 50 - 60 Hz, 2.5A

J6801A Distributed Network Analyzer

External: 100 - 240 V ~, 50 - 60 Hz, 2.0A

J6802A Distributed Network Analyzer MX

External: 100 - 240 V ~, 50 - 60 Hz, 2.5A

J6805A Distributed Network Analyzer ME

External: 100 - 240 V ~, 50 - 60 Hz, 3.0A

Temperature

Operating:	+5° to +40° C (+41° to +104° F)
Non-operating:	-25° to +60° C (-13° to +140° F)

Humidity

Operating:	20% to 80%, Non-condensing
Non-operating:	10% to 90%, Non-condensing

Altitude

Operating:	4,570m (15,000 ft)
Non-operating:	12,200m (40,000 ft)

Regulatory Compliances

EMC:	**Europe**: Low Voltage and EMC Directives (CE marked) IEC 61326-1 **Canada**: ICES-001 (marked) **Australia/New Zealand**: AS/NZS 2064.1 (C-Tick marked)
Safety:	IEC 61010-1 (CE marked) UL 3111 CSA C22.2 No.1010.1 (CSA-C/US marked)

www.agilent.com

Agilent Ordering Information

J6781A	Network Troubleshooting Center
J6800A	Network Analyzer
J6801A	Distributed Network Analyzer
J6802A	Distributed Network Analyzer MX
J6805A	Distributed Network Analyzer ME
J6840A	Network Analyzer Software
J6835A	Network Analyzer Software Edition Agent

Line Interface Modules (LIMs)

J6811A	STM-1o/OC-3 LIM (SC-PC optical connectors - includes a pair of 10dB attenuators)
J6813B	E3/T3 (DS3) LIM (unbalanced 75 Ohm BNC connectors)
J6815B	T1/E1 LIM (balanced 100 Ohm RJ-45 and WECO Bantam connectors)
J6816B	E1/T1 LIM (balanced 120 Ohm DB-9 and RJ-45 connectors)
J6817B	E1 BNC LIM (unbalanced 75 Ohm BNC connectors)
J6818A	ATM25 LIM (RJ-45 connectors)
J6820A	V-Series LIM (requires J6757A cable(s))
J6830A	10Base-T and 10/100BaseTX Ethernet LIM
J6831A	10/100Base-FX Ethernet LIM
J6832A	1000Base-X Ethernet LIM (includes pair of SX GBICs)

Software Applications

J5425A	Switch Advisor
J5434A	SAN Network Analyzer
J5479A	Voice Quality Tester (VQT) 10/100 Interface
J6842A	3G UMTS W-CDMA Test Software
J6844A	Telephony Network Analyzer
J6845A	3G cdma2000 Test Software
J6848A	Report Center
J6849A	One-time Software Upgrades

Accessories

J1990A	LAN Analyzer Tap
J6750A	Alternative hard disk drive for the J6800A
J6751A	Alternative hard disk drive for the J6802A
J6753A	Additional combo 56K modem with 10/100Base-TX network interface PC-Card
J6757A	Monitor/Simulate Cables (five cable options)
J6761A	Deluxe wheely case for the J6800A (not suitable for airline bag checking)
J6762A	Wheeled transit case for the J6800A
J6763A	Transit carry case for the J6801A and J6805A
J6764A	Wheeled transit case for the J6802A
J6771A	Rack Mount Kit for the J6801A
J6775A	Rack Mount Kit for the J6805A

Warranty and Support Services

Hardware	1-year
	Agilent instrument warranty and service plans
	Agilent instrument phone support plan
	Agilent instrument software support plan
Software	90-day media replacement

Together with Agilent, gain the Extreme Productivity Improvements that your business demands!

www.agilent.com/comms/XPI

Online assistance: www.agilent.com/find/assist
By internet, phone or fax, get assistance with all your test and measurement needs.

Argentina	+54 11 5811 7115
Australia	1 800 629 485
Austria	+43 (01) 25 125 7006
Belgium	+32 (0) 2 404 9340
Brazil	+55 11 4197 3600
Canada-English	877 894 4414
Canada-French	877 894 4414
China	800 810 0189
Denmark	+45 70 13 15 15
Finland	+358 (0) 10 855 2100
France	+33 (0) 825 010 700
Germany	+49 (0) 18 05 24 63 33
Hong Kong	800 930 871
India	1600 112 929
Ireland	+353 1890 924 204
Israel	+972 3 6892 500
Italy	+39 02 92 60 8484
Japan	0120 421 345
Luxemborg	+32 (0) 2 404 9340
Malaysia	1800 888 848
Mexico	+52 01800 506 4800
Netherlands	+31 (0) 20 5472111
Norway	+47 23 25 3720
Philippines	1800 1651 0170
Poland	+48 22 723 0066
Russia	+7 095 797 3963
Singapore	1800 375 8100
South Korea	080 769 0800
Spain	+34 91 631 3300
Sweden	0200 88 22 55
Switzerland-German	+41 (0) 1 735 9300
Switzerland-Italy	+39 (0) 2 92 60 8484
Switzerland-French	+33 (0) 825 010 700
Taiwan	0800 047 866
Thailand	1800 226 008
United Kingdom	+44 (0) 7004 666666
USA	800 452 4844

Product specifications and descriptions in this document are subject to change without notice.

Printed in U.S.A. February 6, 2003

5988-4176EN

Agilent Technologies