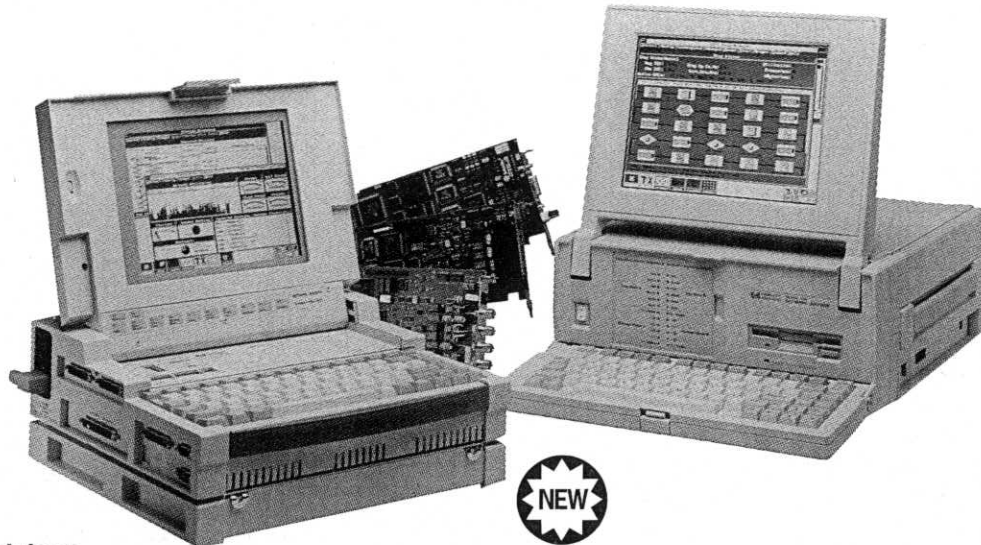# PROTOCOL ANALYZERS
LAN and WAN Internet Advisor, Network Advisor
HP 4957PC

- Portable
- Low cost
- High performance
- PC compatible

- WAN from 50 b/s to 2.048 Mb/s
- LAN interfaces for Ethernet, TR, and FDDI
- LAN and WAN under one handle
- Award-winning products

NEW

HP Internet Advisor

Quickly isolate datacom problems with the portable HP Internet Advisor Series—the integrated protocol analyzers with the most compelling combination of value and performance available. The Internet Advisor combines a complete protocol analyzer for wide- and local-area-network testing with a powerful, ruggedized, 486-based personal computer—all in a lightweight, easy-to-carry package.

Test WAN and internet links from 50 b/s to 2.048 Mb/s over RS-232 and V.35, as well as on T1 and CEPT-E1 interfaces. Perform network troubleshooting on Ethernet and token ring LANs. Monitor and decode data traffic, perform real-time statistical analysis of network traffic (including LAN traffic over WANs), simulation/emulation of network protocols, analyze protocol errors and link utilizations, and perform complete bit-error-rate measurements with the Internet Advisor.

Solving problems is one keystroke away with HP Toolkit. Toolkit makes most measurements accessible from the top level window which can be customized for your specific needs. Prewritten tests are available for all major protocols, including LAN traffic analysis over WAN, and all measurements have built in-help screens.

The undercradle allows additional interfaces and PC cards to be added to the system while maintaining the high level of portability. Various combinations of LAN and WAN interfaces can be integrated with other PC functionality including TIMS and voltmeters under one handle. Future additions include ATM and 100BaseVG AnyLAN interfaces.

WAN Solutions—Unmatched Monitoring and Analysis Power
- Winner of *Data Comm Magazine* Hot Products Award (January, 1994) and Interop '93 European Networking Innovation Award (November, 1993)
- All major interfaces built in; test from 50 b/s asynchronous to 2.048 Mb/s synchronous
- Full monitor and decode of major protocols over any channel, fractional channel, or full T1 or CEPT-E1
- Simulation/emulation of network protocols
- Complete English decodes with customizable displays
- Real-time stamp for captured data or statistics
- Extensive data-filtering capability and real-time statistical analysis
- Guaranteed 100% capture performance during full line loading
- Simultaneous decodes, statistics, triggers, and filters; toggle between statistics and data displays real time, and never miss an event. Full function bit error rate tests to 2 Mb/s.
- Log results to hard disk—statistics, LAN traffic analysis, frame types, errors, etc.
- Remote control and PC data analysis
- Standard 2 MB buffer—lets you truly capture the problem

LAN Solutions—Award Winning Capability for Ethernet, Token ring, and FDDI Media
- Winner of *Data Comm Magazine* Tester's Choice Award (January, 1994) and *LAN Times* Best of Times Award (November, 1993)
- Protocol decodes for every major protocol stack including TCP/IP, Novell, 3COM, DECnet, SNA, Banyan, Sun SNS, IBM PC LAN, ISO, AppleTalk, Microsoft LAN Manager, and more.
- Commentators and Vital Signs provide intelligent decodes and statistics that relate network and protocol performance to significant network events
- Superior performance from hardware filters, a RISC processor, and a large, flexible capture buffer allows 100% data capture at full line rates and the capability to run simultaneous, multiple measurements
- Multitasking and a graphical, windows-based user interface allow stimulus/response testing and many other measurements to be run simultaneously, saving time when performing network monitoring and baselining.
- Complete statistics of network and node performance, protocol utilization, and frame length distribution can be viewed as acquired and logged to disk for baselining report generation.
- Node discovery automatically maps MAC and network addresses together with friendly node names into a database, providing a quick indication in the U/I of node status.
- FDDI Ring Manager uses SMT processes to passively or actively construct a map of your network, providing status information of the entire network and all of its nodes.
- Traffic generation from Pings and ARPs to creation of a wide range of network loads

The Hewlett-Packard Internet Advisor combines complete protocol analysis for WAN or LAN with a powerful, ruggedized personal computer, all in a lightweight, easy to carry package. Other interfaces and functionality can be added with the undercradle. The Internet Advisor is available in three configurations:
- The Hewlett-Packard J2300A Series Protocol Analyzer provides complete protocol analysis and BERT testing to 64 Kb/s. The J2300A monitors and decodes data traffic, performs real-time statistical analysis, protocol error analysis, and link utilization, as well as complete Bit Error Rate Test measurements. Data may be captured at rates up to 256 Kb/s and analyzed in a post captured mode.

- The Hewlett-Packard J2301A/J2302A Series Protocol Analyzer provides complete protocol analysis and BERT testing to 2.048 Mb/s. The J2301A/J2302A monitors and decodes data traffic, performs real-time statistical analysis of network traffic (including LAN traffic over WANs), protocol error analysis, and simulation/emulation of network protocols, as well as complete Bit Error Rate Test measurements in a very portable, lightweight package.
- The Hewlett-Packard J2522A/J2523A provide protocol analysis and network monitoring for Ethernet or Ethernet and token ring networks. All of the Network Advisor performance and functionality is built into the J2522A/J2523A.

The Network Advisor includes all the protocol test functionality of Internet Advisor and adds full FDDI test capability. With an outstanding full-color, high-resolution display, the Network Advisor is the premiere monitoring and analysis solution for the data center.

WAN, Ethernet and token ring interfaces are available as PC cards with no trade-offs in functionality or performance.

HP Internet Advisor Series J2300A — 64 Kb/s WAN Configuration

Specifications:
All Major Protocol Analyzer Interfaces Built In: RS-232/V.24, V.35, RS-449/RS422/RS423, and V.10/V.11. ISDN BRI/PRI and X.21 optional
Extensible: Add expansion module to add any two full-sized PC-AT cards
Full RS-232/V.24 Breakout Box
Protocols: X.25, SNA, HDLC, SDLC, Frame Relay, DDCMP, Asynchronous Bisync, IPARS, and ISDN (optional).
Data Rates: 64 Kb/s monitor, simulation, and BERT; fast capture to 256 Kb/s.
Data Analysis Memory: 768 KB capture buffer, 128 KB nonvolatile RAM and 1.44 MB floppy. In addition, circular store data to hard disk.
Extensive Data Filtering Capability
Full Function Bit Error Rate Tests
Full 486 Personal Computer: 486 25 Mhz processor with 4 MB of memory, 85 MB hard drive, built-in integral mouse, serial and parallel ports, and monochrome LCD display.
Weight: 5.8 Kg
Dimensions: 30 × 8.5 × 29 cm (12 × 3.4 × 11.5 in)
Temperature: Operating: 5° to 40° C; Nonoperating: −25° to 60° C
Power Requirements: 87 to 269 VAC, 47 to 63 Hz single phase; 50 watts, max. 75 watts.

HP J2301A and J2302A T1/E1 Advisors

General Specifications
Protocols: X.25, HDLC, SDLC, IP, SNAP, SNA, Frame Relay (ANSI T1606, CCITT I.233, ANSI T1.617, Anex D, F, & G, RFC 1294, CCITT Q.933), T1 ESF Data link Protocol T1.403, SMDS (T1 version only), SS#7, DDCMP, X.21, Bisync, IPARS, and asynchronous
Interfaces: RS-232/V.24, V.35, RS-449/422/423, V.10/V.11, X.21, ISDN Basic Rate, ISDN Primary Rate (CEPT), ISDN U, RJ-48C, mini-bantam, DB-15/RJ-48C, BNC, BR-2, 1.6/5.6. Meets applicable portion of G.703 and G.704 for 2.048 Mb/s interface.
Extensible: Add Ethernet and token ring undercradle (J2306A/J2309A) Add expansion undercradle to add any two PC-AT cards.
Data Rates for All Monitoring Simulation and BERT: Any speed from 50 b/s to 2.048 Mb/s
Bit Error Rate Testing (BERT): Simultaneously measure bit errors, block errors, errored seconds, and G.821 results; available time, errored seconds, degraded minutes, severely errored seconds, and unavailable time.
Full 486 Personal Computer: 486/25 processor with 16 MB of memory, 170 MB hard drive, built in integral mouse, serial and parallel ports, and optional 9.6 Kb/s fax modem. For J2301A only.
Weight: 6.2 kg (14.1 lbs) for WAN only, and 7.8 kg (17.1 lbs) for WAN/LAN
Size: 30 cm W × 8.5 cm H × 29 cm D (12 × 3.4 in × 11.5 in) for WAN, add 3.7 cm (1.5 in) height for WAN/LAN.
Temperature: Operating: 5° to 40° C; Nonoperating: −25° to 60° C
Power Requirements: 87 to 269 VAC, 47 to 63 Hz single phase 53 watts, max 75 watts.

HP J2306A and J2309A Ethernet and Ethernet/ Token Ring Interface Modules

Specifications
Ethernet: AUI and 10Base2 (BNC) connectors at 10 Mb/s
Token Ring: DB-9 connector at 4 or 16 Mb/s
Capture Buffer: Typically 4 MB expandable to about 12 MB

HP J2522A and J2523A LAN Advisors

Specifications:
Ethernet or Ethernet and Token Ring Media Interfaces
Ethernet Connectors: AUI and 10BaseT(RG-45)
Token-Ring Connector: DB-9
All Network Advisor Functionality and Performance Standard
Full 486 Personal Computer: 486/25 processor with 16 MB of memory, 170 MB hard drive, built-in integral mouse, serial and parallel ports, built in Ethernet 10BaseT network interface, and standard color AMLCD
Weight: 5.7 kg (13 lbs)
Size: 30 cm W × 8.5 cm H × 29 cm D (12 in × 3.4 × 11.5 in)
Temperature: Operating: 5° to 40° C; Nonoperating: −25° to 60° C
Power Requirements: 87 to 269 VAC, 47 to 63 Hz single phase 53 watts, max 75 watts

HP J2527A Transmission Impairment Measuring Set (TIMS):

Interface for the Internet Advisor adds complete testing of analog data circuits to the Internet Advisor. The HP J2527A increases installation and maintenance productivity for telephone companies and service providers through its ease of use and portability. Measurements are to IEEE 743 specifications:
- Level/frequency up to 110 Khz
- Noise and noise-to-ground
- Noise-with-tone and signal-to-noise ratio
- Three-level impulse noise
- P/AR

HP Network Advisor — J2219A Mainframe

Specifications
Weight: 11.4 kg (25 lbs) with media interface
Size: 36.3 cm W × 15 cm H × 42.7 cm D (14.3 in W × 5.9 in H × 16.8 D in)
Power: 90 to 132 and 198 to 264 VAC, 47 to 53 and 57 to 63 Hz 100 watts typical
Display: 26.4 cm diagonal (10.4 in) color AMLCD display
DOS Processor Intel 80486 33 MHz with 16 MB memory and 172 MB hard drive. Serial, parallel and external display ports.

HP J2170A Ethernet and Token Ring Interface Module

Specifications
Media Interfaces: Ethernet and Token Ring
Ethernet: AUI and 10Base2 (BNC) connectors
Token Ring: DB-9 at 4 or 16 Mb/s
Standard Capture Buffer: Typically 4 MB expandable to about 12 MB

J2171A Ethernet Interface Module

Specifications
Media Interface: Ethernet
Connectors: AUI and 10Base2 (BNC) connectors
Standard Capture Buffer: Typically 4 MB expandable to about 12 MB

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J2172A Token Ring Interface Module

Specifications
Media interface: Token ring
Connectors: DB-9 at 4 or 16 Mb/s
Standard capture buffer: Typically 4 MB expandable to about 12 MB

J2173B FDDI Single Attach Interface Module

Specifications
Connector: MIC
LEDs: Indicate power level and line state

J2173C FDDI Dual Attach with TPPMD Interface Module

Specifications
Dual attach FDDI with MIC connectors
TPPMD with DB-9
LEDs indicate power level and line state

J2208B – 64 Kb/s WAN Protocol Analyzer Interface Module

Specifications
All Major Protocol Analyzer Interfaces Built In: RS-232/V.24, V.35, RS-449/RS422/RS423, and V.10/V.11. ISDN BRI and PRI and X.21 optional
Protocols: X.25, SNA, HDLC, SDLC, Frame Relay, DDCMP, Asynchronous Bisync, IPARS, and ISDN (optional)
Data Rates: 64 Kb/s monitor, simulation, and BERT; fast capture to 256 Kb/s
Data Analysis Memory: 768 KB capture buffer, 128 KB nonvolatile RAM and 1.44 MB floppy. In addition, circular store data to hard disk.
Physical Package: 1 kg interface module for use with the Network Advisor

J2272A/J2273A – 2.048 Mb/s WAN Protocol Analyzer Interface Module

Specifications
Protocols: X.25, HDLC, SDLC, IP, SNAP, SNA, Frame Relay (ANSI T1606, CCITT I.233, ANSI T1.617, Anex D, F, & G, RFC 1294, CCITT Q.933), T1 ESF Data link Protocol T1.403, SMDS (T1 version only), SS#7, DDCMP, X.21, Bisync, IPARS, and asynchronous.
Interfaces: J2272A: RS-232/V.24, V.35, RS-449/422/423, V.10/V.11, X.21, RJ-48C, mini-bantam, and DB-15. ISDN Basic Rate, ISDN Primary Rate and X.21 are optional.
J2273A: RS-232/V.24, V.35, RS-449/422/423, V.10/V.11, X.21, BNC or BR-2 or 1.6/5.6 high speed interfaces. Meets applicable portion of G.703 and G.704 for 2.048 Mb/s interface. ISDN Basic Rate, ISDN Primary Rate and X.21 are optional.
Data Rates for All Monitoring, Simulation and BERT: Any speed from 50 b/s to 2.048 Mb/s
Bit Error Rate Testing (BERT): Simultaneously measure bit errors, block errors, errored seconds, and G.821 results; available time, errored seconds, degraded minutes, severely errored seconds, and unavailable time.
Physical Package: 1 kg interface module for use with the Network Advisor.

PC Cards

HP J2260A Ethernet PC Card and J2261A Token Ring PC Card

Specifications
Provides: All functionality and performance of Network Advisor in your PC
Ethernet Interface: AUI and 10Base2 (BNC)
Token Ring Interface: DB-9 at 4 or 16 Mb/s
Full Length and Full Height PC Card: 121.9 H mm × 336.6 L mm (4.8 H in ×13.25 L in)
Power Req: 12 watts from +5 volt power supply
Capture Buffer Size: Approx. 4 MB
Host PC Configuration: 386/20 minimum, 486 recommended, MS-DOS 5.0 or higher, 16 MB of memory, 100 MB hard drive, 3.5-in floppy drive, and VGA display.

HP 4957PC – 64 Kb/s PC Card Protocol Analyzer

Specifications
Protocols: X.25, SNA, HDLC, SDLC, Frame Relay (optional), DDCMP, Asynchronous, Bisync, IPARS, and ISDN (optional)
Data Rates: 64 Kb/s monitor, simulation, and BERT; fast capture to 256 Kb/s
Data Analysis Memory: 768 KB capture buffer, 128 KB nonvolatile RAM and 1.44 MB floppy. In addition, circular store data to hard disk.
Package: Full length, 33.4 cm (13.15 in) may be shortened by removing tab 27.9 cm (11 in)
Interfaces: External optional RS-232, V.35, RS-449, ISDN BRI and PRI, X.21

Ordering information	Price
HP J2300A WAN Advisor, V-Series/64 Kb/s	$7,700
HP J2301A T1 Internet Advisor	$10,500
HP J2302A E1 Internet Advisor	$10,500
HP J2305A Soft Carrying Case for Internet Advisor	$200
HP J2306A Ethernet Interface	$10,500
HP J2309A Ethernet and Token Ring Interface	$16,500
HP J2295A PC Card Undercradle (empty)	$400
HP J2522A Ethernet Advisor	$14,950
HP J2523A Ethernet and Token Ring Advisor	$20,950
HP J2527A TIMS Interface	$2,995
Network Advisor	
HP J2219A Mainframe	$7,700
HP J2188A Soft Carrying Case for Network Advisor	$300
HP J2209A Soft Carrying Case for Interface Module	$225
HP J2170A Ethernet/Token Ring Interface Module	$16,500
HP J2171A Ethernet Interface Module	$12,240
HP J2172A Token Ring Interface Module	$12,240
HP J2173B FDDI Single Attach Interface Module	$17,500
HP J2173C FDDI Dual Attach with TPPMD Interface Module	$22,500
HP J2208B 64 Kb/s WAN Interface Module	$7,500
HP J2272A T1 Interface Module	$9,500
HP J2273A E1 Interface Module	$9,500
PC Card Solutions	
HP J2260A Ethernet PC Card	$10,000
HP J2261A Token Ring PC Card	$10,000
HP J2308A Ethernet and Token Ring PC Cards	$16,000
HP 4957PC 64 Kb/s WAN PC Card	$3,300