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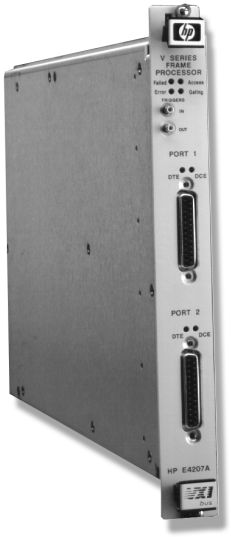
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Find the *Keysight / Agilent E4207A* at our website: *Click HERE*

V-Interface Frame Processor

Agilent Technologies Broadband Series Test System

E4207A



Product Features

- Dual Ports
- Support for V.11, V.24/V.28, V.35, V.36, RS-232C, RS-422, RS-530
- Control for 5 Control Leads
- Operation to 4 Mb/s (External Clock, 2Mb/s Internal Clock)
- Frame-based operation with 20+ real-time measurements
- Sophisticated, high-performance Traffic Generation capability

The Agilent Technologies E4207A Frame Processor is a high-performance hardware module that tests frame-based protocols at speeds up to 4 Mb/s. Two integrated V interfaces and internal RISC-based protocol test engines can each monitor, capture traffic, and generate statistics -- even with heavily loaded links and short frame lengths. The E4207A can also provide sophisticated traffic generation functionality when used with optional test software applications.

A companion product, the E4206A T1/E1 Frame Processor, is functionally similar to the E4207A but has integrated interfaces which support T1 and E1 physical connections.

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Key Features

Real-Time Dual-Port Monitoring and Analysis

Powerful dual-port testing monitors both sides of even heavily-loaded links in real-time. You can view frames in real-time, or capture them for further analysis. The BSTS captures and decodes communications traffic into an English-language display using the same terminology found in standards documents. Errors are automatically detected and highlighted on-screen, complete with explanatory messages. Timestamps correlate events between ports. Sophisticated filters and triggers let you view only traffic of interest, and catch intermittent events. The E4207A has everything you need to see exactly what happened, and when.

High-Performance Traffic Generation

Generates up to eight streams with individually-selectable distributions. For load generation purposes, the E4207A is scalable in two-port increments by adding extra modules up to a maximum of five modules (10 ports) per BSTS E4200 chassis, or a maximum of seven modules (14 ports) per BSTS E4210 chassis.

The protocol data unit (PDU) editor and library functions let you easily create, edit, save, and load PDUs and PDU sequences from files for later re-use. You can edit PDUs with smart fill-in the blank editing screens. Time-saving features such as pull-down menus, field labelling, radio button bit selection, data patterns, and automatic CRC calculation make PDU editing fast and simple.

Extensive Real-Time Measurements

Makes over 20 different real-time statistical measurements, including BOP statistics and frame rate.

Test Both Sides of Frame based/ATM Interworking Devices

Combine the E4207A with other modules from the BSTS' extensive range of line interfaces and test software applications, to test both sides of a Frame based / ATM interworking device or function -- on one tester!

Friendly User-Interface Makes Complex Testing Easy

The state-of-the-art graphical user interface makes it easy to set up, run, save and restore tests. Includes a C-language user programming environment to automate testing or create extremely complex test scenarios.

Typical Applications

Equipment manufacturers and network operators who provide frame based equipment or frame based/ATM internetworking devices need to verify that:

- Protocol implementations are functionally verified as meeting design specifications and interoperating standards
- Equipment and services are stress-tested to verify that they perform well under heavy loads, especially those which result from conditions such as very short frame lengths

The combination of an E4207A Frame Processor and E4216 Frame Relay Test Software or E4213 SMDS DXI Test Software facilitates testing these aspects through error isolation and traffic-generation functions.

User Programming Environment

You can automate repetitive testing or create complex test scenarios by developing your own programs with the UNIX®-based C-language programming environment included with the BSTS.

Simply link your programs to the supplied library of test routines. The user programming library provides programmatic support of all functions available through the graphical user interface. In-depth user and programmers' manuals document test software features and the test routine libraries.

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Configuration & Use With Other BSTS Line Interfaces, Hardware Modules & Test Software

The E4207A V-Interface Frame Processor requires a BSTS chassis with UNIX® controller and the optional Frame based Test Software (Frame Relay, FUNI, SMDS DXI) to perform the tests described in this datasheet.

The E4207A includes two integrated V-series physical interfaces, so line interface modules are not required. The front panel has DB-25 connectors; adaptor cables permit connections to various V interfaces.

A companion product, the E4206A T1/E1 Frame Processor, is functionally similar to the E4207A , but has integrated interfaces which support T1 and E1 physical connections.

Warranty & Support Options

Hardware

All BSTS hardware components are warranted for a period of 3 years. Products must be returned to an authorized Agilent service center for service. At the time of purchase, you may select warranty option W01, a no-charge option which converts the standard 3-year return to Agilent warranty to a 1-year on-site warranty.

Software

Agilent Broadband Series Test System software and firmware products are supplied on transportable media such as disk, CD-ROM or integrated circuits. The warranty covers physical defects in the media, and defective media is replaced at no charge during the warranty period. When installed in an Agilent Broadband Series Test System, the software/firmware media has the same warranty period as the product.

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Product Numbers

- **E4207A** V-Interface Frame Processor
- **E4111A #002** RS-232 M/M/F cable
- **E4111A #101** V.11 T Adaptor Cable for the E4207A
- **E4111A #102** V.35 T Adaptor Cable for the E4207A
- **E4111A #103** V.36 T Adaptor Cable for the E4207A
- **E4206A** T1/E1 Frame Processor
- **E4216A** B-ISDN Frame Relay Test Software
- **E4209B** Cell Protocol Processor
- **E4200B** BSTS Form-7 Transportable Chassis
- **E4210B** BSTS Form-13 Mainframe Chassis
- **E4213B** B-ISDN DXI Test Software
- **E6275A** B-ISDN FUNI Test Software

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Technical Specifications

Real-Time Dual-Port Monitoring

Multiport Monitoring	• Multiport Monitoring • Single- or dual-port capability • Synchronized timestamps correlate events from two physical ports • Protocol viewer works with live traffic or plays back captured data • 4 MB capture buffer per port
Modes	• Passive monitor • Network termination to emulate data communication equipment (DCE) • Terminal equipment to emulate data terminal equipment (DTE)
Clock Sources	• Normal • External DCE loopback • External DTE loopback
Frame Errors	• Aborted frames • Frame does not have an integral number of octets • Frame is too large • Invalid frame check sequence (FCS)or cyclical redundancy check (CRC- CCITT)
Pattern Matching	• Passes or blocks frames which match a 64-byte user-defined pattern
Trigger Actions	• Start/stop collecting statistics • Start/stop capture • Generate a trace statement • Display a message • Notify user program • Pulse external trigger output
Trigger Controls	• Delayed trigger activation • Specify delay in frames of 0 to 100 milliseconds

High-Performance Traffic Generation

Traffic Streams and Controls	• Generate up to eight simultaneous streams • Selectable throughput in kb/s and percent load parameters for each stream • Constant, burst or random traffic distributions with distribution parameters individually selectable for each stream
Traffic Options (Stream 1 only)	• Embed 48-bit timestamps • Embed 32-bit sequence numbers • Truncate frame length to specified number of octets • Increment frame length over a specified range • Randomly select frame length from within a specified range
Error Insertion	• Send aborted frames • Send non-octet aligned frames • Invalid frame check sequence (FCS)
Control Lead Configuration	• Assert 105 RS (DTE mode) • Assert 108 TR (DTE mode) • Assert 106 CS (DCE mode) • Assert 107 DM (DCE mode) • Assert 109 RR (DCE mode)

Emulation

LMI Emulation	• Stimulate LMI Heartbeat Polling in GUI • Support T1.617, T1617a, Q.933 • 2 simultaneous channels on selectable DLCIs • Live status monitoring and PVC services

Real-Time Measurements

BOP Measurements	• Bits per second • Number of frames • Frames per second • Minimum, average and maximum frame length • Number of aborted frames • Number of non-octet-aligned frames • Number of frames matching a user-defined 64-byte pattern • Number of frame check sequence (FCS) errors

User Programming

Sample Programs	• V interface port setup • Delay measurement • LMI Emulation • Lost frame, delay measurements, and payload integrity check for Frame Relay / ATM interworking

Applicable Standards

V.35	• ITU V.11, V.24, V.28, V.35, V.35 • EIA RS-232C, RS-422, RS-530

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Agilent Technologies Broadband Series Test System

The Agilent Technologies BSTS is the industry-standard ATM/BISDN test system for R&D engineering, product development, field trials and QA testing. The latest leading edge, innovative solutions help you lead the fast-packet revolution and reshape tomorrow's networks. It offers a wide range of applications:

- ATM traffic management and signalling
- Packet over SONET/SDH (POS)
- switch/router interworking and performance
- third generation wireless tesing
- complete, automated conformance testing

The BSTS is modular to grow with your testing needs. Because we build all BSTS products without shortcuts according to full specifications, you'll catch problems other test equipment may not detect.

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