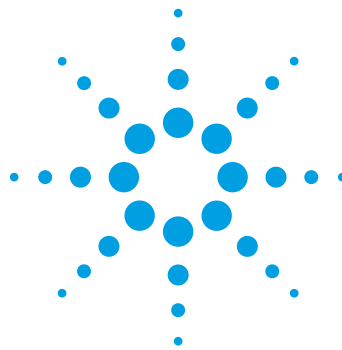




# Agilent Broadband Series Test System

Accelerating the Development and Deployment of Next Generation Networks



## FEATURES

- **ATM Line Interfaces from 1.5 Mb/s to 622 Mb/s**
- **Dual port 10/100 Ethernet module**
- **Dual port Frame Relay modules**
- **Layer 1 up and traffic, signalling and interworking.**

**The Agilent Broadband Series Test System has become the industry-standard test system for network equipment vendors and service providers.**

## LEADING THE FAST PACKET REVOLUTION

The Internet is reshaping our world. Growing volumes of data traffic are rapidly overtaking voice. Forces of change are driving a global 'FastPacket' revolution -- the rapid development of high-speed, packet-based technologies and new network architectures. These trends are creating new test needs for network equipment developers and service providers:

### **Bigger ATM switch fabrics, faster ATM line cards, distributed flow control**

- Retesting of all aspects of Traffic Management at line rates up to 622 Mb/s.
- Verification that multiple ATM traffic contracts can be serviced across a loaded network.

### **Multi-layer hardware-based packet and cell switches**

- Testing multi-layer forwarding performance and cell/packet interworking of next generation switch-routers.

## AGILENT TECHNOLOGIES BROADBAND SERIES TEST SYSTEM

### **First choice broadband test system**

With its attention to measurement accuracy, and its compliance with accepted test methodologies, the BSTS has become the industry-standard broadband test system. Equipment vendors and carriers rely on the BSTS for the following applications:

- functional stimulus-response testing
- system regression testing
- conformance and interoperability verification
- performance benchmarking
- switch evaluation
- rapid fault-finding

### **ATM meets IP**

While ATM continues its momentum, IP has firmly established itself as the dominant end-to-end network protocol. The BSTS is advancing with test solutions for both ATM and IP. With a new wave of innovative solutions for:

- switch-router testing
- ATM traffic management
- ATM signalling
- other test applications

## SWITCH-ROUTER TEST SOLUTIONS

### **IP QoS and Differentiated Services**

The dual-port E6282A Ethernet Frame Processor offers 8 streams per port of real-time layer 2 to layer 7 filtering and QoS/CoS measurement. This allows you to accurately validate packet forwarding and characterize the performance of routers with multi-layer packet forwarding.

### **ATM SIGNALLING TEST SOLUTION**

The BSTS offers the industry's most comprehensive signalling analysis capabilities designed to help you identify the cause of signalling implementation problems and performance bottlenecks.

Signalling applications run on the E4209B Cell Protocol Processor with line interfaces from 1.5 Mb/s to 622Mb/s.

### **Comprehensive Functional Testing**

Functional test products offer independent verification of a wide range of ATM signalling protocols: UNI, ILMI, NNI (B-ISUP, MTP-3b, and B-ICI), PNNI, and VB5.



**Agilent Technologies**

### ATM Forum Conformance Testing

Conformance test suites provide ATM-Forum compliant verification of UNI and ILMI address registration. You can also develop and customize test suites to your needs using a range of automation tools: TTCN, C, and Tcl/Tk

### Performance Measurement and Diagnosis

The E1600A Multiport UNI SVC performance test solution provides extensive performance-related measurements. It not only finds performance bottlenecks, it also helps you identify the cause of the problem.

### IP INTERWORKING

Encodes and decodes are available for:

- IPv4 over ATM, 10/100 Ethernet, Frame Relay and POS
- IPv6 over ATM, 10/100 Ethernet, Frame Relay and POS
- PPP over ATM
- PPP over 10/100 Ethernet

### SOLUTIONS FOR ALL YOUR APPLICATIONS

#### DSL, Cable, and Fiber Access

The BSTS offers an end-to-end test solution for the development and manufacturing of xDSL, Cable, and G.983 ATM-PON (Passive Optical Network) equipment. It includes:

- real-time multi-layer Ethernet and IP testing
- comprehensive ATM capabilities
- support for protocols such as PPP and VB5
- IETF-standard packet performance measurement

#### MPEG Video

The BSTS provides MPEG-2 over ATM protocol decodes and encodes as well as a real-time test application.

#### Frame Relay and WAN Applications

The BSTS offers a comprehensive range of WAN test products.

## ATM Traffic Management Test Solution

The BSTS gives you the most comprehensive standards-based test solution for ATM Forum Traffic Management compliance. It allows you to test all aspects of Service Level Agreements (SLAs).

### Standards-compliant QoS

The E1607/9A ATM Stream Processor uses the industry-standard O.191 test cell and a multi-stream GCRA-compliant scheduler for real-time traffic contract verification. This guarantees accurate industry-accepted test results.

### Real-time Protocol Testing

The BSTS is the only analyzer that can adequately measure the dynamic behaviour of ATM's real-time protocols. This is achieved using the powerful hardware-based test capabilities of the following products:

- E6287A ABR Emulator
- E4219A ATM Network Impairment Emulator
- E6270A OAM Protocol Tester

### ATM and PHY Layer Diagnosis

BSTS line interface modules also perform extensive transmission and ATM layer test functions, allowing you to find and diagnose problems right down to the Physical layer.

For more information on the Agilent Broadband Series Test System visit:

[www.agilent.com/comms/bsts](http://www.agilent.com/comms/bsts)



Applications include:

- native frame relay with LMI support
- frame relay over ATM and HSSI
- frame relay signalling
- FUNI
- SMDS and DXI
- a Frame Relay to ATM interworking Conformance Test Suite

#### Flexible Architecture

The BSTS is a modular, UNIX-based test platform with all the UNIX advantages of power, TCP/IP networking via an Ethernet port, X-Windows remote operation, and multi-user shared access.

The BSTS is available in two system platforms:

- E4210B Form-13: rack-mountable chassis with 11 open slots for modules.
- E4200B Form-7: transportable base with 5 open slots, built-in monitor and keyboard (ideal for field trials).

#### The Agilent Advantage

Agilent service and technical support is second to none. Many customers take advantage of our expertise for technology and product training, consulting, and development of customised test plans and test solutions.

