

Acterna FIREBERD® 6000 Communications Analyzer HSSI Interface

Now, in addition to providing HSSI transmission testing, the FIREBERD 6000 Communications Analyzer provides frame relay test capability for high speed links. The high speed frame relay market is growing worldwide as more customers demand frame relay access at fractional T3/E3 rates. Service providers are meeting that demand by providing NxT1 and fractional T3/E3 service to their customers. Once again, the FIREBERD 6000 is ready to meet new fast packet turn-up testing requirements.

Because of the growth in popularity of 45 Mbit/s and 34 Mbit/s frame relay service, especially among Internet service providers (ISPs), many CSU/DSUs are now providing a HSSI interface at the customer side to provide access to these high speed links. In addition, switch and router manufacturers must be able to interconnect frame relay switches at higher speeds, and ultimately send the traffic over a T3/E3 backbone. The FIREBERD 6000 accommodates turn-up testing for these applications and more.

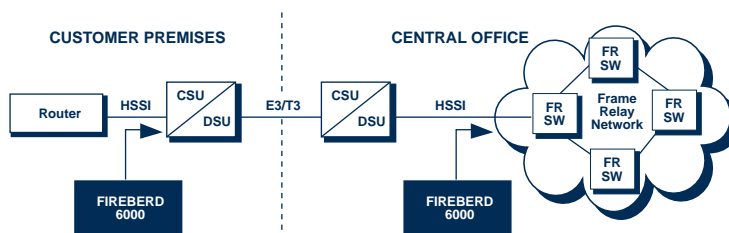
Highlights

- Verify physical layer integrity through bit error rate testing (BERT)
- Generate frame relay traffic over multiple DLCIs at an aggregate rate of 8 Mbit/s
- Verify HSSI frame relay service at line speeds up to 52 Mbit/s
- Perform high speed DTE emulation
- Verify proper functionality of switches, routers, and CSU/DSUs
- Perform frame relay tests with the same instrument used for ATM, T3, DDS, T1/FT1, and other WAN services
- Characterize the latency of your network



Applications

The FIREBERD 6000 is the industry leader in frame relay turn-up testing. It is the right tool for manufacturers of routers, switches, and CSU/DSUs for their R&D, production test, quality assurance, and engineering groups. Service users and service providers can use the FIREBERD 6000 equipped with the HSSI option to test frame relay switches prior to deployment, perform PVC testing during frame relay installation, and prove end-to-end connectivity prior to service turn-up.



The HSSI option provides test access for frame relay turn-up testing at fractional T3/E3 rates.

Features

- Perform test frame generation (fixed rate and burst modes for emulating specific traffic patterns), while controlling status of FECN, BECN, C/R, and DE bits
- Gather frame relay statistics on one DLCI or on all DLCIs (out-of-service only)
- Gather PVC status messages and determine PVC state (out-of-service only)
- Generate BERT patterns to verify error-free transmission
- Generate and auto-respond to a variety of CSU loop codes
- Transmit frames at the committed information rate (CIR) and verify acceptable quality of service (8 Mbit/s maximum frame transmission rate)
- Perform lost frame analysis
- Perform link management emulation (ANSI T1.617 Annex D, ITU Q.933 Annex A, and LMI)
- Simultaneously display physical and data link layer results

Specifications

Transmitter

Balanced, Differential ECL
 Voh: -0.90 ± 0.12 V
 Vol: -1.75 ± 0.16 V
 Vdiff: 0.85 ± 0.26 V
 trise/tfall: 0.50 to 2.30 ns
 Termination: 330 ohms low inductance resistance
 Signal Type: Non Return to Zero (NRZ) encoded
 Transmission Rate: Up to 52 Mbit/s

Receiver

Termination: 110 ohms differential
 Signal Level: 1.0 V to 150 mV peak-to-peak differential
 Mode Input Range: -2.85 V to -0.5 V

Connector

2 row, 50 pin HSSI connector

Temperature Range

Operating: 0° to 50°C (32° to 124°F)
 Storage: -30° to 75°C (-22° to 167°F)

Operating Range

50 Hz to 52 MHz

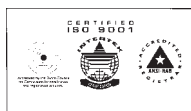
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Product Information

<i>Model No.</i>	<i>Description</i>
FB6000A	FIREBERD 6000 Communications Analyzer
42219A	HSSI Interface
Option 6010	Frame Relay New Unit Option ¹
Option 6011	Frame Relay Factory Upgrade ¹

¹ Must be installed to perform frame relay testing; Rev. R.1 software required.



NOTE: Specifications, terms, and conditions are subject to change without notice.

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