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Find the *Keysight / Agilent J3759B* at our website: *Click HERE*

ATM and WAN Interface Specifications (continued)

E3 (34.368 Mb/s) J3759B

General
This interface comprises a plug-in module (J3759B) suitable for plugging into the J2300C/D/E Advisor mainframe and the J2900A High Speed undercradle. The J3759B supports both ATM and frame-based technologies such as Frame Relay (CIR & SLA), HDLC, PPP in addition to BERT. This module can also be configured for use as a DS3 (44.736 Mb/s) interface; see below for details.

Common to Inputs and Outputs:
Connectors: 75 Ohm BNC female
Electrical: ITU-T G.703
Line Code: HDB3
Framing:
- Frame Relay: ITU-T G.751
- ATM Direct: ITU-T G.832
- ATM PLCP: ITU-T G.751

Cell Mapping:
- Direct (normal mode, ITU-T G.804)
- PLCP (obsolete mode, ETSI 300 214)

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

Inputs:
Two ports
Levels:
- Auto gain control for high, low and monitor jack; all unbalanced 1.2Vpeak to 26mVpeak, 34 dB dynamic range

Received pulse amplitude measurement (mVpeak)
Monitor modes:
- Terminated/Repeater (75 Ohm unbalanced)
- Bridged (high impedance)

Physical Layer Alarms and Statistics:
- Loss of Signal (LOS)
- Loss of Frame (LOF)
- Line code violations
- Alarm Indication Signal (AIS)
- 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)

ATM Statistics:
- Auto-discovery of up to 1024 VCs and collection of statistics on each
- Average utilization in percent
- Instantaneous utilization in percent
- Maximum utilization in percent
- Total cells received
- Idle/unassigned cells received
- Busy (assigned) cells received
- Header ("HEC") errors

Frame Relay Statistics:
- Average utilization in percent
- Instantaneous utilization in percent
- Maximum utilization in percent
- Minimum utilization in percent
- Total frames
- Total octets

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ATM and WAN Interface Specifications (continued)

Average throughput (bps)
Instantaneous throughput (bps)
Maximum throughput (bps)
Minimum throughput (bps)
Aborted frames
Short frames
FCS errors
ATM QoS measurements (to ITU-T O.191):
ATM traffic contract conformance (policing)measurements:
Frame Relay SLA traffic measurements (to FRF.13)
Frame Relay CIR measurements
Capture buffer size: 64 Mbyte (approximately 1,000,000 cells)
Capture buffer timestamp resolution: 100 ns
Capture rate: Full line rate
Analyze bit error ratio (BER) patterns in the physical layer
frame payload or in the ATM cell payload:
1111, 1010, 1100, PRBS 2^{15} - 1, PRBS 2^{20} - 1, PRBS 2^{23} - 1

Outputs:

Two ports, 75 Ohm unbalanced
Levels:
ITU-T G.703
High (1.0 Vpeak)
137 m / 450 ft (0.62 Vpeak)
275 m / 900 ft (0.26 Vpeak)
Clocking source (Tx bit clock and ATM QoS):
Recovered (loop)
Internal (± 20 ppm)
Alarm generation:
Remote Defect Indication (RDI), formerly known as FERF
Alarm Indication Signal (AIS)
Simulate line or equipment
Generate ATM Test Cell traffic (to ITU-T O.191) shaped to traffic contract
Generate from cell table
Generate Frame Relay SLA traffic (to FRF.13)
Generate bit error ratio (BER) patterns in the physical layer
frame payload or in the ATM cell payload:
1111, 1010, 1100, PRBS 2^{15} - 1, PRBS 2^{20} - 1, PRBS 2^{23} – 1
Transmission of 4000 byte BER user pattern in WAN

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ATM and WAN Interface Specifications (continued)

DS3 (44.736 Mb/s) J3759B

General

This interface comprises a plug-in module (J3759B) suitable for plugging into the J2300C/D/E Advisor mainframe and the J2900A High Speed undercradle. The J3759B supports both ATM and frame-based technologies Frame Relay (CIR & SLA), HDLC, PPP in addition to BERT. This module can also be configured for use as an E3 (34.368 Mb/s) interface; see above for details.

Common to Inputs and Outputs:

Connectors: 75 Ohm BNC female
Electrical: ITU-T G.703
Line Code: B3ZS
Framing:
  Frame Relay: C-bit and M13 (auto-select on input side)
  ATM: C-bit framing
Cell Mapping:
  Direct (normal mode, ITU-T G.804)
  PLCP (obsolescent mode, ITU-T G.804)
Cell Scrambling:
  conforms to ITU-T I.432.1 ($x^{43} + 1$) and may be turned on or off

Inputs:

Two ports,
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
Received pulse amplitude measurement (mVpeak) (WAN only)
Monitor modes:
  Terminated/Repeater (75 Ohm)
  Bridged (high impedance)
Physical Layer Alarms and Statistics:
  Loss of Signal (LOS)
  Loss of Frame (LOF)
  Alarm Indication Signal (AIS)
  Remote/yellow X-bit
  Line code violations
  Far End Block Error (FEBE)
  Idle
  P1/P2 parity errors
  C-bit parity errors
  Far End Alarm and Control (FEAC):
    DS3 Line
    LOS/HBER
    Out of Frame (OOF)
    AIS received
    Idle signal received
    Service failure
    No service failure
    Common equipment failure
    Line loopback activate
    Line loopback de-activate
  PLCP sync loss
  PLCP yellow (Path FERF)
  PLCP BIP
  PLCP FEBE
  Loss of Cell Delineation (LCD)

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ATM and WAN Interface Specifications (continued)

ATM Statistics:
- Auto-discovery of up to 1024 VCs and collection of statistics on each
- Average utilization in percent
- Instantaneous utilization in percent
- Total cells received
- Idle/unassigned cells received
- Busy (assigned) cells received
- Header ("HEC") errors

Frame Relay Statistics:
- Average utilization in percent
- Instantaneous utilization in percent
- Maximum utilization in percent
- Minimum utilization in percent
- Total frames
- Total octets
- Average throughput (bps)
- Instantaneous throughput (bps)
- Maximum throughput (bps)
- Minimum throughput (bps)
- Aborted frames
- Short frames
- FCS errors

ATM QoS measurements (to ITU-T O.191):
- CLR, CMR, CER, CDV, CTD, SECBR

ATM traffic contract conformance (policing) measurements
Frame Relay SLA measurements (to FRF.13)
Frame Relay CIR measurements
Capture buffer size: 64 Mbyte (approximately 1,000,000 cells)
Capture buffer timestamp resolution: 100 ns
Capture rate: Full line rate
Analyze bit error ratio (BER) patterns in the physical layer
frame payload or in the ATM cell payload:
1111, 1010, 1100, PRBS 2^{15} - 1, PRBS 2^{20} - 1, PRBS 2^{23} - 1

Outputs:

Two ports, 75 Ohm unbalanced
Transmit levels/line build-out (±100 mV):
- High (0.85 V peak)
- DSX (0.45 V peak)†
- Low (0.36 V peak)†
- 900ft. (0.12 V peak)†

† selectable in frame mode (FR, PPP, HDLC) only

Clocking source (Tx bit clock and ATM QoS):
- Recovered (loop)
- Internal (± 20 ppm)

Alarm generation:
- Remote/Yellow (X-bits),
- Alarm Indication Signal (AIS)
- Idle

Simulate line or equipment
Generate ATM Test Cell traffic (to ITU-T O.191) shaped to traffic contract
Generate from cell table
Generate Frame Relay SLA traffic (to FRF.13)
Generate bit error ratio (BER) patterns in the physical layer
frame payload or in the ATM cell payload:
1111, 1010, 1100, PRBS 2^{15} - 1, PRBS 2^{20} - 1, PRBS 2^{23} – 1
Transmission of 4000 byte BER user pattern in WAN

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