J2 6.312 Mb/s Electrical Interface Pod

The HP E5126A J2 6.312 Mb/s Electrical Interface Pod generates and analyzes 6.312 Mb/s PDH frames on the HP E5200A Broadband Service Analyzer. These frames contain ATM cells which are generated and analyzed by the measurement system. This interface pod provides test capability at the physical layer. It supports the 6.312 Mb/s framing format as specified in

- ITU-T G.703
- ITU-T G.704
- ITU-T G.804
- NTT Technical Reference of Cell Relay Interface Ver.1.
- NTT Cell Relay Service UNI Specification Ver 0.1.
- ATM Forum 6,312 kbps UNI Specification

Input and Outputs

Line Code	B8ZS
Load Impedence	Unbalanced, 75 ohms +/- 5%
Transmit Levels	@ 3.156 Mb/s : 6.2 to 13.3 dBm @ 6.312 Mb/s : <-14 dBm as per G.703
Connectors	BNC

Operating Modes

Full Duplex	Full duplex transmitter and receiver operation.
Receive Loopback	Received signal is looped to the transmitter. (No overhead regeneration.)
Transmit Loopback	Transmitted signal is internally looped back to the receiver.

6.312 Mb/s Overhead Generation

MFAS	Automatically inserted "0x194"
M-Bit	In normal operation (no RAI), a repeating HDLC flag pattern (0x7E) is sent. When RAI is "on", a repeating 16 bit sequence of "0xFF00"s are sent.
A-Bit	Fixed to "0".
CRC-5	Automatically calculated and inserted.
X-Bit	Fixed to "1".
TS97 & 98	Fixed to "0xFF".

Alarms and Error Simulation
Alarm Simulation

Alarms	AIS, Payload AIS, RAI
Applicable Modes	Full Duplex Transmit Loopback
Control	On/Off

Error Simulation

CRC-5 Errors	Single shot, Periodic (1 errored CRC-5 in 10^n frame; n=1 to 4)
MFAS Errors	Continuous, Pulse (errored MFAS for n consecutive frames n=1 to 15)
Applicable Modes	Full Duplex Transmit Loopback

J2 Measurements

Measurement	Displayed As C, R, or S
LOS	S
LOF	S
AIS	S
Payload AIS	S
RAI	S
Code Violation	C,R,S
CRC-5	C,R,S
MFAS	C,R,S

Note:
C = Count
R = Ratio
S = Errored seconds

HP E5126 J2 6.312 Mb/s Electrical Interface Pod

Physical Specifications

Size
149mm (W) x 222mm (D) x 44mm (H)
(5.8" x 8.7" x 1.7")

Weight
Approximately 1 kg (2.2lb)

Environmental
Operating temperature 5°C to 45°C
  41°F to 113°F
Storage temperature -40°C to 70°C
  -40°F to 157°F

Humidity
Maximum   90% @ 40°C
  90% @ 103°F
Minimum   15% @ 40°C
  15% @ 103°F

Ordering Information

HP E5126A Interface Pod, J2 6.312 Mb/s Electrical
Option UK6   Factory Calibration Test Data

HP E5200A Broadband Service Analyzer
Option 126   Add J2 6.312 Mb/s Electrical Interface Pod