Single or Dual Port Passive Monitoring using the HP E5129A ATM 25.6 Mb/s Interface Pod
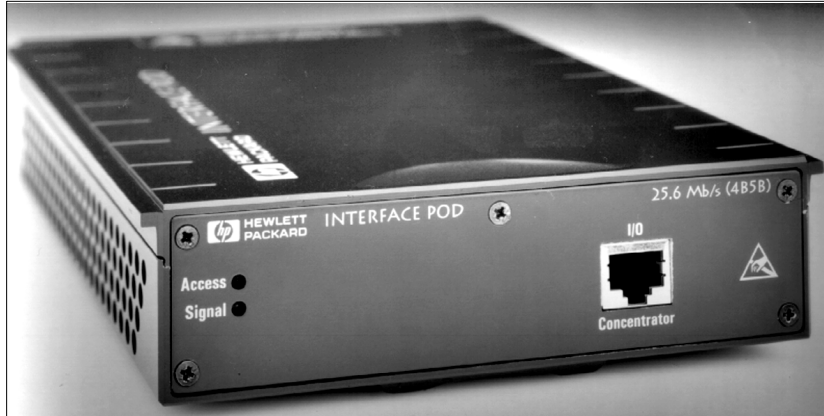

HP E5129A ATM 25.6 Mb/s Interface Pod

Product Features

Bandwidth

Max: 25.126 Mb/s
Min 100b/s (Foreground)

Network Modes

UNI (user-Network)
NNI (Network-Network)

HEC

Automatically generated

Fill Cells

Idle or unassigned
Line Format
NRZI

Line Encoding

4B5B (32Mbaud line symbol rate)

Scrambling/Descrambling

10-bit pseudo random number generation according to ITU-T/ I.432

Introduction

These notes provide details on:

- the three connector cables that are supplied with the HP E5129A ATM 25.6 Mb/s Interface Pod
- how to perform passive monitoring

In order to comply with EMC regulations, you must use one of the three connection cables that are supplied to connect the interface pod to the system under test.

Passive monitoring involves monitoring traffic in one direction, while allowing traffic in the other direction to pass through.

Note that monitoring traffic in both directions requires two ATM 25.6 Mb/s Interface Pods (one for each analyzer port).

In order to perform passive monitoring, you need to obtain a junction box. This application note provides the wiring details for:

- a junction box for performing passive monitoring in one or both directions with equipment that uses ATM Forum Standard connectors
- a junction box for performing passive monitoring in one or both directions with equipment that uses IBM ATM 25.6 connectors

Connector cable configurations

The interface pod comes with three cables:

- cable number E1619-64300 connects a user device to the network (2 to 3 in the table below)
- cable number E1619-64301 connects the interface pod to a user device (1 to 2 in the table below)
- cable number E1619-64302 connects the interface pod to the network equipment (1 to 3 in the table below

The ends of each of the cables are labelled to show which ends to connect to the various equipment types.

The following tables detail the pin configurations for the three connector types.

Pin 8

Pin 1

RJ45 Connector

Table 1

Interface Pod Connector

Pin	Signal
1	
2	
3	RxA
4	TxA
5	TxB
6	RxB
7	
8	

Table 2

Interface Pod Connector

Pin	Signal
1	TxA
2	TxB
3	
4	
5	
6	
7	RxA
8	RxB

Table 3

Interface Pod Connector

| Pin	Signal
1	RxA
2	RxB
3	
4	
5	
6	
7	TxA
8	TxB

The junction box

The junction box for equipment that uses ATM Forum standard connectors, is wired as per the following diagram. The junction box uses RJ45 connector sockets for all connectors.

| 3 4 5 6 | 3 4 5 6 | 1 2 7 8 | 1 2 7 8 |
| E5129A-1 | E5129A-2 | TE | NT |
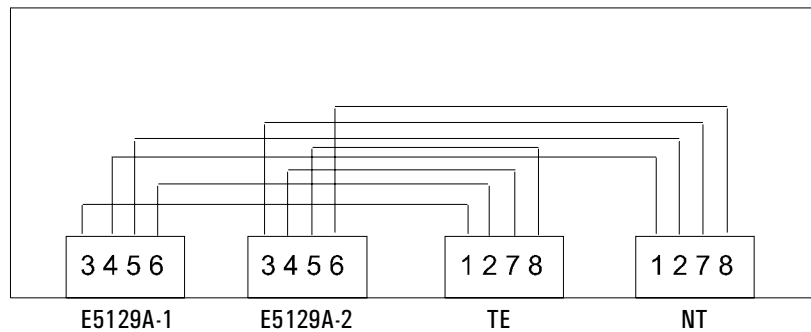
RJ45 connector sockets

The junction box for equipment that uses IBM ATM 25.6 connectors is wired as per the diagram below. As previously, the junction box uses RJ45 connector sockets for all connectors.

| 3 4 5 6 | 3 4 5 6 | 3 6 4 5 | 3 6 4 5 |
| E5129A-1 | E5129A-2 | TE | NT |
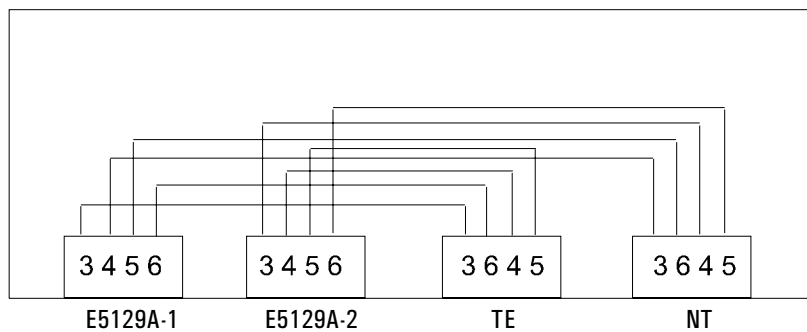
RJ45 connector sockets

Passive monitoring

To perform passive monitoring, you need to obtain a four-port junction box. This section describes the junction box configuration, and how to use it to connect to the system under test.

When using the junction box to connect to the system under test, use "straight through" cables to connect all devices. With the junction box, you do not need to use adaptor cables.

To monitor traffic from Terminating Endpoint (TE) to Network Termination (NT)

1. Connect the user device to the TE port on the junction box, and the network equipment to the NT port on the junction box

2. Connect the HP E5129A ATM 25.6 Mb/s Interface Pod to the HP E5129A-1 port on the junction box

3. Fit a loopback connector to the HP E5129A-2 port. The loopback connector you use must:
   - connect pin 3 to pin 4
   - connect pin 5 to pin 6

4. Configure the interface pod to Receive Loopback mode.

To monitor traffic from Network Termination (NT) to Terminating Endpoint (TE)

1. Connect the user device to the TE port on the junction box, and the network equipment to the NT port on the junction box

2. Connect the HP E5129A ATM 25.6 Mb/s Interface Pod to the HP E5129A-2 port on the junction box

3. Fit a loopback connector to the HP E5129A-1 port. As previously, the loopback connector you use must connect pin 3 to pin 4 and connect pin 5 to pin 6

4. Configure the interface pod to Receive Loopback mode.

To monitor traffic in both directions simultaneously

1. Insert an HP E5129A ATM 25.6 Mb/s Interface Pod into both of the analyzer's ports

2. Connect one HP E5129A ATM 25.6 Mb/s Interface Pod to the HP E5129A-1 port on the junction box

3. Connect the other HP E5129A ATM 25.6 Mb/s Interface Pod to the HP E5129A-2 port on the junction box

4. Configure both interface pods to Receive Loopback mode.