APD-8

8-Channel FRAD / X.25 PAD

RAD

FEATURES

- 8-channel async FRAD / X.25 PAD
- Async data rate up to 115.2 kbps
- SLIP/PPP supported on all async ports

- One synchronous Frame Relay / X.25 link operating at data rate of up to 2 Mbps
- Telnet client / server to support terminal / server applications

- SNMP management via RADview PC/UNIX platforms
- FLASH memory for software upgrade

APD-8

8-Channel FRAD / X.25 PAD

■ DESCRIPTION

- APD-8 is a FRAD / X.25 PAD that enables connection of up to 8 async channels to Frame Relay or X.25 networks.

- Each async port operates at up to 115.2 kbps and can run the SLIP/PPP protocol.

- The main link can operate at data rates of up to 2 Mbps.

- Typical applications include:
  - Transfering async data over X.25/FR networks
  - Reliable async over Frame Relay using encapsulation of X.25 over Frame Relay (Annex G)
  - IP PAD facilities allowing easy migration of terminal / server applications to an IP environment, while improving its durability (see *Figure 1*)

FRAME RELAY

- APD-8 provides access to public or private Frame Relay networks. Async data is sent directly over the Frame Relay or encapsulated over X.25 / Frame Relay (Annex G), to achieve maximum reliability (see *Figure 2*).

- A unique funneling mechanism adjusts feeder throughput to CIR levels.

- LMI and ANSI PVC management protocols are supported and operation is in compliance with ANSI T1.606, T1.618, T1.617, Annex D, and ITU Rec. Q.922 Annex A.

X.25

- X.25-configured links support permanent virtual circuits (PVCs) or switched virtual circuits (SVCs). Link packet size is up to 4096 bytes.

- APD-8 supports both mandatory and additional ITU X.25 facilities.

- Dial-up X.25 links are supported via a dial-up modem controlled by a DTR signal or V.25 bis commands.

- APD-8 supports X.25 multicasting.

X.32

- APD-8 supports X.32 protocol for a dial-up X.25 link. This enables users to access an X.25 network remotely, via a dial-up modem with X.32, or to use the backup dial-up link for an X.25 or Frame Relay network.
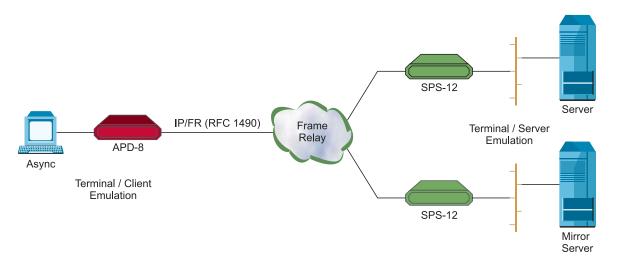
■ APPLICATIONS

Figure 1. Terminal / Server Emulation Application

ASYNC ACCESS

- All async channels can act according to X.3, X.28 and X.29 profiles, at traffic speeds of up to 115.2 kbps. Async traffic can be packetized directly over Frame Relay network, or packetized over the X.25 network. All channels are configured and monitored by the management agent of APD-8.

- Each one of the APD-8 ports can be configured to SLIP or PPP modes, operating at data rates of up to 115.2 kbps.

ISDN

- PPP, Frame Relay, or X.25 can be transmitted over an ISDN physical interface ('S' interface).

- APD-8 supports dialed and leased lines.

- ISDN support includes up to 128 kbps (Bundle two B channels).

- APD-8 supports Connection On Demand (COD), which enables the opening of the ISDN line only when real data is available. When an inactivity period occurs, the ISDN session is terminated. This is an added cost saving feature.

NETWORK MANAGEMENT

- APD-8 contains an SNMP agent, which enables remote configuration, collection of statistics / status reports, and diagnostics. The management agent can be programmed to periodically send statistics / status reports to a maximum of five management stations.

- Configuration, monitoring and controlling of all network resources can be performed from a RADview-PC or RADview-HPOV/UNIX SNMP management station.

- A management station can be connected directly to APD-8 using PPP or SLIP.

- APD-8 SNMP agent supports private and standard MIBs, including MIB II with RFC 1213, RFC 1381 and RFC 1382 for X.25, and RFC 1315 for Frame Relay.
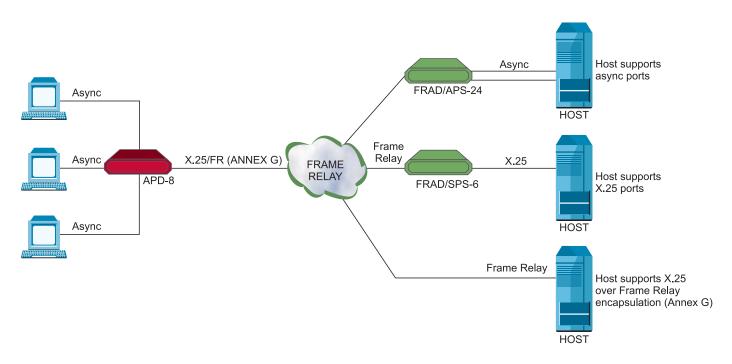
Figure 2. Reliable Async over Frame Relay

APD-8

8-Channel FRAD / X.25 PAD

■ SPECIFICATIONS

SYNCHRONOUS LINK

- **Data Rate**
  Up to 2 Mbps

- **Interface**
  V.24/RS-232, X.21, V.35,
  V.36/RS-449, RS-530, IBE
  (see *Ordering*)

- **Connector**
V.24/RS-232:	25-pin D-type, female
X.21:	15-pin, female
V.35:	34-pin, female
RS-530:	25-pin D-type, female
V.36/RS-449:	37-pin, D-type, female, via adapter cable
IBE:	'S' interface, RJ-45

- **Protocols**
  X.3, X.25, X.28, X.29, X.32:
    All comply with ITU

  Frame Relay:
    LMI and ANSI PVC
    management protocols.
    Complies with ANSI T1.606,
    T1.617 Annex D, T1.618 and
    ITU Rec. Q.922 Annex A

ASYNCHRONOUS CHANNELS

- **Number of Channels**
  Eight

- **Interface**
  V.24/RS-232

- **Connectors**
  RJ-45

- **Data Rate**
  75 bps to 115.2 kbps

- **Flow Control**
  XON/XOFF
  CTS/RTS

- **Channel Logon Messages**
  Welcome
  Bulletin (defined by the user)

- **Command Modes**
  X.28, X.29

GENERAL

- **Indicators**
PWR	ON when unit is powered (green)
ERR	ON when failure in operation is detected (red)
OVF	ON when overflow is detected (red)
TEST	ON momentarily at power-up or RESET (red)
SYNC	ON when synchronization in the protocol layer is achieved (green)
ACTIV	ON when data is transmitted on the line (yellow)

- **Control**
  Reset

- **Switches**
  Front panel: Reset
  Rear panel: Power

- **Physical**
Height:	4.4 cm / 1.7 in
Width:	21.9 cm / 8.5 in
Length:	24.6 cm / 9.5 in
Weight:	1.8 kg / 3.9 lb

- **Environment**
  Temperature: 0-50°C (32-122°F) Humidity: Up to 90%, non-condensing

- **Power**
  115 or 230 VAC (±10%),
  50/60 Hz, 15W

■ ORDERING

APD-8/*/#
8-port FRAD / X.25 PAD

- ***** Specify optional DC power
  supply:
    24 for 24 VDC
    48 for 48 VDC
- **#** Specify main link interface:
    V24T for V.24/RS-232 (DTE)
    V24C for V.24/RS-232 (DCE)
    V35T for V.35 (DTE)
    V35C for V.35 (DCE)
    V36T for V.36 (DTE)
    X21T for V.21 (DTE)
    530T for RS-530 (DTE)
    IBE for ISDN BRI 'S' interface
    IBU for ISDN BRI 'U' interface
    DDS for integral CSU/DSU
    UTP for 10BaseT interface

RAD
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  211-100-06/99

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