



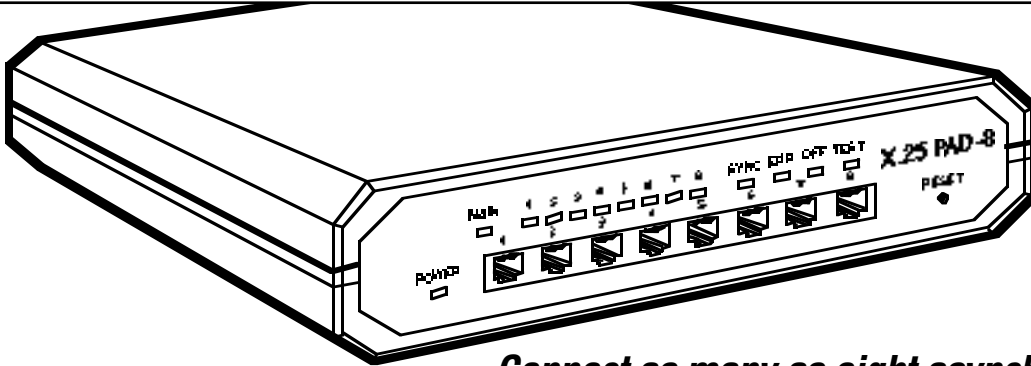
BLACK BOX[®]

NETWORK SERVICES

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X.25 PAD-8



Connect as many as eight asynchronous users to another site's resources using X.25 or Frame Relay.

Key Features

- ▶ **Sends sync data up to 2 Mbps and async data up to 115.2 kbps.**
- ▶ **Supports SNMP, SLIP, X.32, IP routing, Frame Relay for RFC 1490, X.2 for RFC 1490 and 1356, and X.25 multicasting.**
- ▶ **Connects up to eight async devices.**
- ▶ **Supports Frame Relay and X.25 packet switching—ideal for migrating networks.**
- ▶ **Five link interfaces available.**
- ▶ **Built-in management agent for configuring channels.**
- ▶ **Flash memory for future upgrades.**

If you have X.25 or Frame Relay service, why not make the most of it? Use our X.25 PAD-8 to weave the data from as many as eight asynchronous devices into a single stream for transmission on a high-speed synchronous channel!

The packet assembler/disassembler (PAD) converts async channel data into X.25 data packets and concentrates the packetised data stream onto a single X.25 link via a composite sync interface. Packets received over the X.25 link are converted back into the async format.

Supporting both switched and permanent virtual circuits (PVCs), the X.25 PAD-8 can be used in a wide range of applications and can function, for example, as:

- An access unit to X.25 private or public networks.
- An access server to X.25 ports of mainframes.
- A Frame Relay access device (FRAD) to run async data in X.25 packets over Frame Relay.

- A FRAD to run async data (using a protocol-like SLIP) directly over Frame Relay.

Async port connections

The X.25 PAD-8's async ports are RS-232, pinned out on RJ-45. Configure each of them for a data rate from 75 bps to 115.2 kbps. It's very easy to run modular twisted-pair cable from these ports to any of your async RS-232 devices: PCs, terminals, or serial printers. We offer several types of modular adapters that you can use to attach the cable to any of these devices.

Sync port connections

The single sync port for the connected main link can handle data rates as high as 2 Mbps. Different models of the X.25 PAD-8 come with different sync-port interfaces. Several models offer variations of power sources. We offer, for instance, an RS-232 model with a choice of 115-VAC, 230-VAC, or 48-VDC input. The V.35 sync interface model is available with 230-VAC and 48-VDC supplies. Our RS-422 and RS-

530 models are available with 115-VAC power input only. And the X.21 version of the X.25 PAD-8 can be ordered with a 230-VAC power supply only.

(The DC models can accept -48, -24, +24, or +48 VDC; they come with a mating connector that you can splice onto the end of your DC power cord.)

Order a model that will work with your WAN-access device, be it a sync modem, CSU/DSU, FRAD, or whatever else.

Controlling the PAD

You can control the X.25 PAD-8 through a sophisticated terminal-based menu system. (It has extended X.28/X.29 or SLIP command modes and performs extended X.3 terminal handling.)

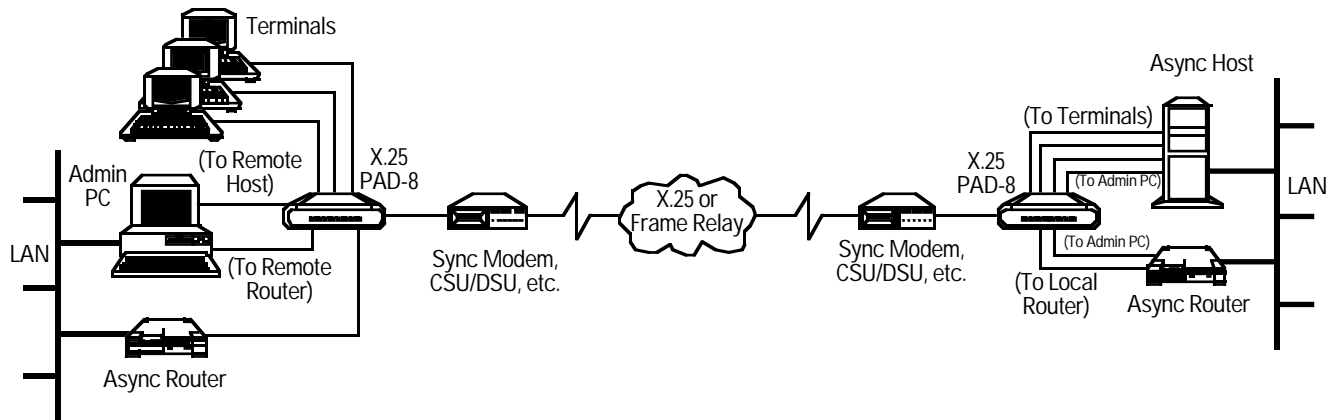
The built-in management agent not only enables you to configure the system but compile status reports and statistics, too. The X.25 PAD-8 also incorporates an SNMP agent.

(continued on page 2)

Connect your async devices with packet switching!

Local Site

Remote Site



(continued from page 1)

Using the menu system, first configure the async channels to set profiles, sync link, and system parameters. Then bring any of these powerful features of the X.25 PAD-8 into play for use in your system:

- PVCs.
- Call IDs.
- NUI databases.
- Aliasing.
- IP routing and routing tables.
- Frame Relay funneling.
- X.32 (XID) tables.
- SNMP management and event reporting.
- X.25 multicasting.

The X.25 PAD-8's circuit board contains two jumpers for initial configuration purposes and a 68302 CPU that runs the X.25 PAD-8 software. In most instances, the device operates unattended. And although its jumpers' default settings suit most applications, you can change them to adapt to your unique operating requirements.

During normal operation, the device's front-panel Power, Synchronisation, and Main Link LEDs light continuously. Channel-activity indicators blink according to the traffic load and turn off when their respective channels are idle.

What's more, the X.25 PAD-8's configuration stores in nonvolatile memory, so it's not affected by a power loss. And because the X.25 PAD-8 has flash memory, you can keep upgrading it—for as long as we keep releasing new firmware revisions.

If you want to rackmount the X.25 PAD-8, we offer a Universal Rackmount Kit (RM516) that you can use different pieces from to either mount a single unit in a 19" rack or mount two units side-by-side.

Specifications

Memory: 512 KB RAM

Packet Size: Up to 4096 bytes for X.25; up to 8192 bytes for other protocols

Protocol: Packet switching:
ITU X.25 LAPB or Frame Relay;
Supporting protocols: ITU X.3, X.28, X.29, X.32; LMI, ANSI PVC management; ANSI T1.606, T1.617 Annex D, T1.618, ITU Q.922 Annex A

Throughput: 500 packets per second

Async Channel Connectors:
(8) RJ-45 F

Async Channel Speed: 75 bps to 115.2 kbps, programmable

Async Channel Flow Control:
X-ON/X-OFF or RTS/CTS flow control (user-selectable)

Async Channel Log-On Messages:
Herald and bulletin (user-definable)

Async Channel Command Modes:
ITU-T Rec. X.28 and proprietary extensions, ITU-T Rec. X.29

Async Channel Terminal Handling:
Enhanced, handling beyond ITU-T Rec. X.3 requirements

Sync Link Connector:

RS-232: (1) DB25 F;
V.35: (1) M/34 F;
RS-422: (1) DB37 F (via an adapter cable);
RS-530: (1) DB25 F;
X.21: (1) DB15 M

Sync Link Speed (Maximum):
2 Mbps

Sync Link Clock Source: External clocking for receive and transmit paths; internal clock for DCE interfaces

Indicators: (14) Front-mounted LEDs:
(1) Power, (1) Main Link, (1) Error, (8) Subchannels, (1) Overflow, (1) Test, (1) Synchronisation,

Temperature Tolerance: 32 to 122°F (0 to 50°C)

Humidity Tolerance: Up to 90%, noncondensing

Power: Input: Depending on model:
115 VAC, 60 Hz; 230 VAC, 50 Hz;
or 48 VDC (accepts -48, -24, +24, or +48 VDC);
Consumption: 15 W;
Fuse: 125 mA, 250 V

Size: 1.7"H x 8.5"W x 9.5"D
(4.3 x 21.6 x 24.1 cm)

Weight: 3.9 lb. (1.8 kg)

You May Also Need

- A CSU/DSU, sync modem, or other WAN-access device
- A Universal Rackmount Kit (RM516)
- Power-line and data-line surge protectors

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognise any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p. m. and you need help, but your vendor's tech support line is closed.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely

important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

Ordering Information

ITEM	CODE
X.25 PAD-8	
RS-232	
115-VAC	MX321A-232-R3
230-VAC	MX321AE-232-R3
48-VDC	MX321A-232-D48-R2
V.35	
230-VAC	MX321AE-35-R2
48-VDC	MX321A-35-D48-R2
RS-422	
115-VAC	MX321A-36-R2
RS-530	
115-VAC	MX321A-530-R2
X.21	
230-VAC	MX321AE-X21-R3
<i><u>To rackmount a single X.25 PAD-8 or two units side-by-side, order...</u></i>	
Universal Rackmount Kit	RM516
Includes (2) short brackets, (1) long bracket, (2) small U-brackets, and a set of (8) screws and washers.	
<i><u>You may also want to order cables:</u></i>	
RS-232 Cable, 25-Conductor, 10-ft., (3-m),	
Male/Female	ECM25C-0010-MF
V.35 Interface Cable, 10-ft., (3-m),	
Male/Male	EYN450-0010-MM
DB37 Interface Cable, 10-ft., (3-m),	
Male/Male	EDN37J-0010-MM
RS-530 Data Cable, 10-ft., (3-m),	
Male/Female	EVN530-0010-MF
X.21/X.21 Cable, 10-ft., (3-m),	
Male/Female	EVNX21-003M-MF