



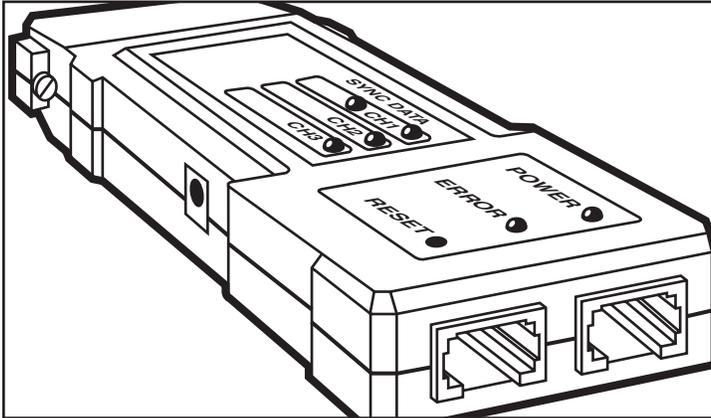
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BLACK BOX[®]

NETWORK SERVICES

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X.25 PAD-2



The most compact way to connect one or two RS-232 devices to X.25 or Frame Relay.

Key Features

- ▶ **Provides access to a packet-switched link for one or two RS-232 devices.**
- ▶ **Local channels are modular, with top async data rate of 115.2 kbps.**
- ▶ **Link channel is sync and can be either RS-232 (up to 128 kbps) or V.35 (up to 2 Mbps).**
- ▶ **Can be configured for a large variety of applications with terminal-based menus.**
- ▶ **Universal power supply.**
- ▶ **Measures only 0.9"H x 2.1"W x 4.3"D (2.3 x 5.4 x 11 cm).**

The X.25 PAD-2 gives one or two pieces of RS-232 equipment easy, cost-effective access to a packet-switching network or device in a wide range of applications. For example, it can serve as:

- A PAD (Packet Assembler/Disassembler);
- An access unit for private or public X.25 networks;
- An access server for a mainframe's X.25 ports;
- An async switch and contention manager; or
- A FRAD (Frame Relay Access Device).

It can also be used to run asynchronous data over Frame Relay, either in X.25 packets or directly (in SLIP protocol).

Two versions are available: The V.35 version (product code MX320A-HS) uses ITU V.35 for its channel-1 (sync packet-switched) interface, while the RS-232 model (MX325A-HS) uses RS-232/V.24. On all models, channel 1 (hidden from view in the above illustration) is a DB25 female connector, while

local async channels 2 and 3 are RJ-45 female connectors. The MX320A-HS comes with a short cable you can attach to the WAN port to patch it to a V.35-standard M/34 female connector. The X.25 PAD-2's maximum data rate on channel 1 is 128 kbps for the MX325A-HS or 2 Mbps for the MX320A-HS.

Channel 1 is always DTE, but can be configured for either X.25 or Frame Relay. Channels 2 and 3 are always DCE but can be configured for SLIP or X.28.

The X.25 PAD-2 comes with a universal 115/230-VAC power supply, an RJ-45 to DB25 patch cable for configuration, and a manual. MX320 models should also come with a DB25 to M/34 patch cable for the WAN-link port.

In order to connect the PAD-2 to your equipment, you will also need an RS-232 or V.35 cable for channel 1, plus either (a) another special cable like the configuration cable or (b) one or two twisted-pair cables with modular adapters for channels 2 and 3.

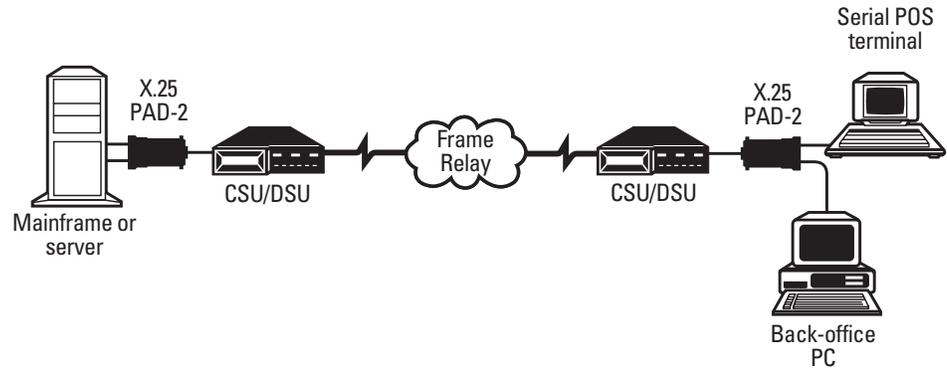
Except for a single internal jumper that controls whether or not the X.25 PAD-2 resets itself to factory defaults when it powers up, you'll configure the PAD-2 with a powerful terminal-based menu system. Just use the included configuration cable to attach the unit to a terminal or a PC running a terminal emulator, and you can tailor the PAD-2 for the requirements of almost any packet-switched application. The configuration firmware is covered in our "Packet Switching Guide"; if you don't already have a copy, ask for one when you order.

The X.25 PAD-2 can also be monitored through its firmware, but it has six top-mounted LEDs that show you basic operating information at a glance: POWER, ERROR, SYNC, and three activity LEDs (one for each channel).

Although you should never have to do so, you can press the X.25 PAD-2's RESET button to reset its internal circuitry and start its power-up self-test.



Hook all of your satellite locations—no matter how small they are—into your X.25 or Frame Relay network.



Specifications

Compliance: CE (EN55022, EN 50082-1, EN 60950) Class A; FCC Class A, IC Class/classe A

Interfaces:

Channel 1 (to packet-switched synchronous link):
 MX320A-HS: ITU V.35
 proprietarily pinned on DB25, DTE;
 MX325A-HS: EIA/TIA RS-232/ITU V.24/V.28, DTE;
 Channels 2 and 3 (to local async devices): EIA/TIA RS-232/ITU V.24/V.28 proprietarily pinned on RJ-45, DCE

Protocols:

Channel 1: Synchronous 1988 ITU X.25 LAP-B or Frame Relay; for Frame Relay, supports CCLM, LMI, and ANSI PVC management protocols, as well as ANSI T1.606, T1.617 Annex D, T1.618, and ITU Q.922 Annex A;
 Channels 2 and 3: Asynchronous SLIP or X.28 (user-selectable)

Clock Source: Channel 1: Internal or external for receive and transmit paths, user-selectable

Data Rate:

Channel 1:
 MX320A-HS: Up to 2 Mbps, user-selectable;
 MX325A-HS: Up to 128 kbps, user-selectable;
 Channels 2 and 3: 75 bps to 115.2 kbps, user-selectable

Data Format: Channels 2 and 3: 5, 6, 7, or 8 data bits; even, odd, mark, space, or no parity; 1, 1.5, or 2 stop bits; user-selectable

Flow Control: Channels 2 and 3: Hardware (DTR/CTS) or software (X-ON/X-OFF), user-selectable

Other Characteristics for Channels 2 and 3:

Log-on messages: Herald and bulletin, user-definable;
 Command modes: ITU X.28 (with proprietary extensions) and X.29;
 Terminal handling: Enhanced, beyond the requirements of ITU X.3

Packet Size: Up to 4 KB for X.25 or 8 KB for Frame Relay

Maximum Distance:

Up to 50 ft. (15.2 m) to attached devices;
 MX320A-HS: If unbalanced control leads aren't required, transmission across 500 ft. (152.4 m) or more might be possible to/from Channel 1 only

Memory: 512 KB RAM

User Controls:

Top-mounted reset button;
 (1) Internal board-mounted jumper for power-up settings

Indicators:

(6) Top-mounted LEDs:
 (1) POWER (lights green while unit is powered);
 (1) ERROR (lights red if a hardware malfunction is detected);
 (1) SYNC (lights or flashes green to show status of synchronization between linked PAD-2s);
 (3) DATA (one for each channel—these light or flash yellow in response to data activity on the corresponding port)

Connectors:

(1) Left-side-mounted DB25 female for channel 1 (patch cable provided to M/34 female on MX320 models);
 (2) Right-side-mounted RJ-45 female for channels 2 and 3;
 (1) Front-mounted barrel jack for power

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

Humidity Tolerance: Up to 90% noncondensing

Power:

Through desktop power supply:
 Input: 100 to 250 VAC, 47 to 63 Hz (autosensing), at approximately 300 mA;
 Output: 5 VDC at up to 1.5 A;
 Consumption: 3.5 watts maximum

Size: 0.9"H x 2.1"W x 4.3"D (2.3 x 5.4 x 11 cm)

Weight: 3.3 oz. (90 g)

Ordering Information

ITEM	CODE
X.25 PAD-2	
V.35	MX320A-HS
RS-232	MX325A-HS

You might also need:

CSU/DSU MS	MT132A-R2
V.35 Cable, M/34 M/M (specify length)	EYN450-MM
RS-232 Cable (specify length)	
DB25 M/F	ECM25C-MF
DB25 M/M	ECM25C-MM
CAT5 unshielded twisted-pair cable, RJ-45 M/M, specify length	EYN737MS-MM
8-Wire Modular Adapter Kits (unassembled)	
RJ-45 F↔DB9 F	FA065
RJ-45 F↔DB25 F	FA027
RJ-45 F↔DB25 M	FA025



Black Box offers the best warranty program in the industry—Fido Protection®. For more information, request **FaxBack 22512**.

