



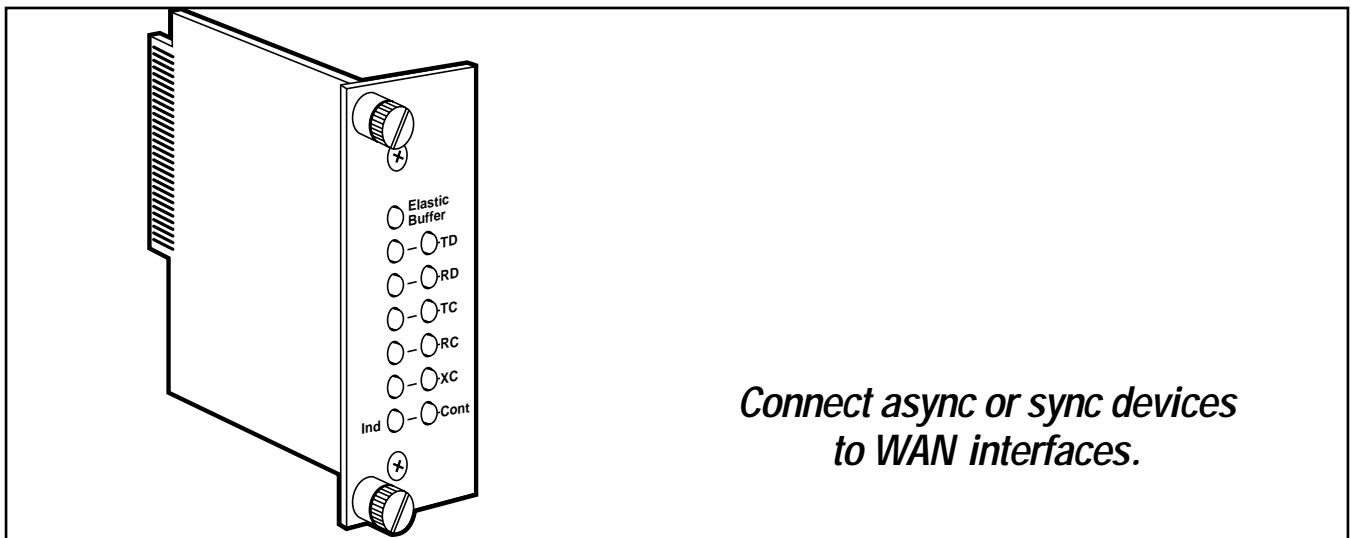
BLACK BOX[®]

NETWORK SERVICES

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MICRORACK CARDS



*Connect async or sync devices
to WAN interfaces.*

Key Features

- ▶ **Synchronous or asynchronous operation, full or half-duplex.**
- ▶ **Sync data rates up to 128 kbps, 384 kbps, or 2.048 Mbps.**
- ▶ **Async data rates up to 19.2 kbps or 115.2 kbps.**
- ▶ **Convenient front- and rear-card construction. Status indicators are on the front card; connectors are on the rear card.**
- ▶ **Cards fit in 2-, 4-, 8-, or 16-slot MicroRACKs.**

MicroRACK Cards solve your WAN interconnection problems! Choose either synchronous or asynchronous cards. The sync cards connect RS-232 to V.35, RS-232 to X.21, or V.35 to X.21 WAN interfaces via dual UD26 connectors. The async cards connect RS-232 to RS-422 or RS-232 to RS-485 interfaces via RJ-11 or RJ-45 connectors.

The IC222C lets a synchronous RS-232 device communicate bidirectionally with a synchronous V.35 device. The card is protocol-independent and supports data rates up to 384 kbps.

The IC224C enables an X.21 DCE to communicate bidirectionally with an RS-232 DCE or DTE. This card is also protocol independent and

supports data rates up to 128 kbps.

The IC225C lets an X.21 DCE communicate bidirectionally with a V.35 DCE or DTE. The card supports data rates up to 2.048 Mbps.

Async models allow an RS-422 or RS-485 DTE to communicate with an async RS-232 device. The cards operate at speeds up to 19.2 kbps for RS-422 models or rates up to 115.2 kbps for RS-485 models. Select from (1) RJ-11 and (1) RJ-45 or (2) RJ-45 connectors.

All of the cards are designed to mount in the 2-, 4-, 8-, or 16-slot MicroRACK. For more information about the MicroRACK, and its power supplies, see FaxBack #12915.

Each card model is composed of a front and rear card, so changing the interface is as simple as swapping a card—you don't even need to power down your computer since the cards are hot-swappable.

The front card contains the LED circuitry and a DCE/DTE configuration strap. The arrows on the strap indicate the configuration of the card. Keep in mind, however, the X.21 interface can only be configured as DCE.

The rear card contains the physical connectors and a grounding jumper. (Adapter cables for sync cards are available—see [page 2](#) for more information.)

Specifications

Transmission Format: IC222C, IC224C, IC225C: Synchronous; IC474C, IC475C, IC479C, IC480C: Asynchronous

Internal Interface: Connection to RM202, RM204, RM208, or RM216 rack chassis via male card edge

Electrical Interface:
X.21: EIA RS-422/V.11 compatible; RS-232: RS-232/V.24 compatible; V.35 data and clock signals: receivers—V.35 compliant, drivers—0.5V differential signal; V.35 control signals: RS-232/V.24 compatible; RS-422; RS-485

Data Rates: IC222C: Up to 384 kbps; IC224C: Up to 128 kbps; IC225C: Up to 2.048 Mbps; IC474C, IC475C: Up to 19.2 kbps; IC479C, IC480C: Up to 115.2 kbps

Clocking: RS-232/V.35 DCE or DTE receiving timing from an X.21 DCE device

DCE to DCE buffering: Dual 16-bit buffers for full duplex operation—set to 8 bits in case of underflow or overflow; switchable, custom control settings

Connectors: IC222C, IC224C, IC225C: (2) UD26 female; IC474C, IC479C: (1) RJ-11, (1) RJ-45; IC475C, IC480C: (2) RJ-45

Indicators: Bi-level LEDs for TD, RD, TC, RC, and XC; single green indicator for INDICATION and CONTROL; single red indicator for elastic buffer status

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

Relative Humidity: 5 to 95%, noncondensing

Power Supply: Rackmount power supply is switchable between 120 and 240 VAC; chassis supplies 10 VAC to the MicroRACK Card, typical consumption is 1.2 watts; 12-, 24-, or 48-VDC power supply also available

Size: 3.1"H x 1"W x 5.4"D (7.9 x 2.5 x 13.7 cm)

Weight: < 1 lb. (< 0.5 kg)

Ordering Information

ITEM	CODE
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For sync applications...

Sync MicroRACK Cards

RS-232 to V.35.....	IC222C
RS-232 to X.21	IC224C
V.35 to X.21	IC225C

Order one adapter cable for each sync card...

Adapter Cables, UD26 M

For IC222C...

RS-232, DB25 M.....	EHN092-232M
RS-232, DB25 F.....	EHN092-232F

For IC224C...

V.35, M/34 M.....	EHN092-V35M
V.35, M/34 F	EHN092-V35F

For IC225C...

X.21, DB15 M.....	EHN092-X21M
X.21, DB15 F.....	EHN092-X21F

For async applications...

Async MicroRACK Cards

RS-232 to RS-422 (2-Port)	
RJ-11/RJ-45	IC474C
RJ-45/RJ-45	IC475C
RS-232 to RS-485 (2-Port)	
RJ-11/RJ-45	IC479C
RJ-45/RJ-45	IC480C

For more information about the MicroRACK and its power supplies, see FaxBack #12915.

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

Recognize 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.