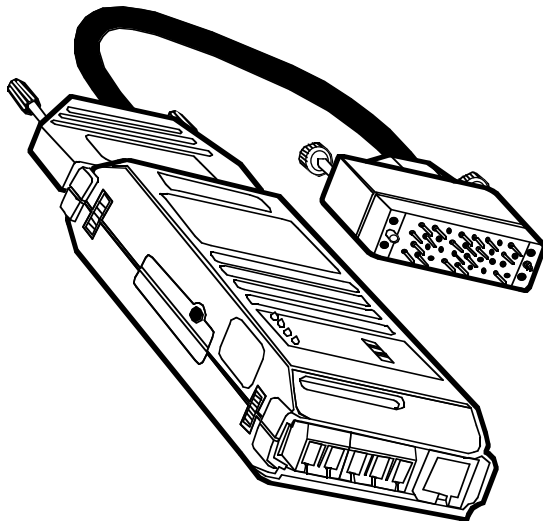


BLACK BOX[®]

NETWORK SERVICES

Limited-Distance Modem 56/64

Send data at 56 or 64 kbps up to 6 miles (10 km) over unconditioned 4-wire dedicated lines.



Key Features

- ▶ Choose V.35 (with pigtail) or RS-232 models.
- ▶ Drives your data at 56 or 64 kbps.
- ▶ RS-232 versions support sync and async communication; V.35 versions support sync only.
- ▶ Performs ITU V.54-compliant loopback tests, including local analog loopback and remote digital loopback.
- ▶ LED indicators tell you status at a glance.
- ▶ Operates with an external, wall-mounted power supply.

With the Limited-Distance Modem 56/64, you can connect full-duplex sync or async DTEs, computers, or controllers over unconditioned 4-wire dedicated lines. The Modem operates at data rates of 56 or 64 kbps, at distances up to 6 miles (10 km), according to the wire gauge and data rate shown in **Table 1** on the next page.

Black Box carries four V.35 models and two RS-232 models with 230-VAC wallmount power supplies. All models have a DB25 connector and a terminal block interface. V.35 models include a pigtail cable to an M34 connector. When choosing your V.35 Modem, you can select either RJ-45 or RJ-11 male or female, and M/34 male or female. When ordering your RS-232 Modem, you can choose either RJ-11 or RJ-45 female.

And this Modem doesn't just sit pretty. It comes complete with four diagnostic LED indicators, including Power, Test, Data Carrier Detect, and Transmit Data. The Modem also features two ITU V.54-compliant loopback tests—local analog loopback (LAL) and remote digital loopback (RDL)—activated by a 3-position switch or the DTE interface Circuit 141 (Pin 18) and Circuit 140 (Pin 21). The Test LED lights when any diagnostic loop is active.

Plus, the Modem's carrier is strap-selectable for either continuous operation, or switched operation for passing

control signals end-to-end. Switched operation is controlled by the RTS signal.

What's more, the low transmit level minimizes crosstalk onto adjacent circuits within the same cable. You get crisp, clear data flow, since data is transmitted and received using a balanced interface, ensuring high immunity to circuit noise. Also, the Modem is coupled to the dedicated line through isolation transformers, along with other circuitry, to protect against AC or DC overvoltages.

Typical Application

Drive data up to 6 miles (10 km) over 19 AWG unconditioned wire between an IBM 3174 and an IBM host via a pair of Limited-Distance Modems.

Send data up to 6 miles (10 km) at 56 or 64 kbps.

Table 1. Approximate Range.

| Data Rate kbps | 19 AWG (0.9 mm) | 24 AWG (0.5 mm) | 26 AWG (0.4 mm) |
|-------------------|--------------------|--------------------|--------------------|
| 56/64 | 10 km or 6 mi | 4.5 km or 2.8 mi | 3.2 km or 2 mi |

Specifications

Data Rates — 56 or 64 Kbps, selectable

Number of Data Bits (Async Mode) — 8, 9, 10, or 11, including 1 start and 1 stop bit, with or without parity

Frequency Allowance (Async Mode) — Shortening of the stop bit on the receive end is selectable:

- 12.5% allows a frequency difference between the async DTE and the Modem of -2.5% to +1.0%
- 25% allows a frequency difference of -2.5% to +2.3%

Transmission Line — 4-wire unconditioned dedicated line (two twisted pairs)

Transmission Mode — Sync or Async, full-duplex

Transmission Controls —

- DCD (Circuit 109) turns ON after recognizing a receive signal from the line.
- CTS (Circuit 106) turns ON 8 msec after DTE raises RTS (Circuit 105).
- DSR (Circuit 107) turns ON when the modem is powered and is in normal mode or in analog loop state. DSR turns OFF when the modem is in digital loopback state.
- TEST Mode (Circuit 142) turns ON when the modem is in a diagnostic loop.

Transmission Level — 0 dBm

Maximum Distance — 19 AWG: 10 km; 24 AWG: 4.5 km; 26 AWG: 3.2 km

Terminal Interface — EIA RS-232 V.24 integral DB25 female connector; V.35 interface is provided via a

mating cable, 45 cm long, terminated with a 34-pin male or female connector for V.35

Line Interface — 5-screw (4-wire and ground) terminal block together with RJ-11 or RJ-45 jack, mounted directly

Controls — Control loopback activity: Normal, ANA (analog), and REM (remote digital loopback)

Indicators — (4) LEDs: Power, TST (Test), CD (Carrier Detect), TD (Transmit Data)

Interface — ME560A-ME561A: V.35; ME562A-ME563A: RS-232

Connectors — All models: (1) DB25, (1) terminal block; ME560A-F: (1) RJ-45 female, pigtail cable with M/34 female; ME560A-M: (1) RJ-45 female, pigtail cable with M/34 male; ME561A-F: (1) RJ-11 female, pigtail cable with M/34 female; ME561A-M: (1) RJ-11 female, pigtail cable with M/34 male; ME562A: (1) RJ-11 female; ME563A: (1) RJ-45 female

Temperature — 0 to 50° C

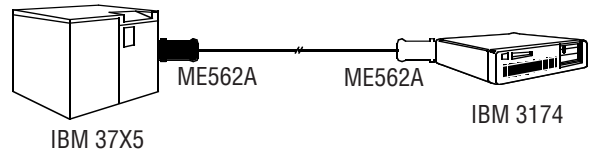
Humidity — Up to 90%, noncondensing

CE Approval — 220-VAC versions; ME560AE-ME563AE

Power — AE versions: wall-mounted 9-VDC, 230-VAC power supply

Size — 3 x 5.3 x 13 cm

Weight — 90 g



Additional equipment you may need:

- Bulk Category 5 Solid-Conductor Cable
- V.35 Interface Cable
- RS-232 Cable

For these and other components...

Call our expert Technical Support Staff for all your data-communications needs. They'll help you find the best equipment for your application.

Ordering Information

This information will help you place your order quickly.

| PRODUCT NAME | ORDER CODE |
|---|----------------|
| Limited-Distance Modem 56/64 V.35 | |
| RJ-45 F, M/34, | ME560AE-V35-F |
| M/34 M..... | ME560AE-V35-M |
| RJ-11 F, M/34 F, | ME561AE-V35-F |
| M/34 M,..... | ME561AE-V35-M |
| RS-232 | |
| RJ-11 F, | ME562AE |
| RJ-45 F, | ME563AE |
| You might also want to order cables: | |
| Bulk Category 5 Solid-Conductor Cable, 2-Pair, PVC, Custom Lengths..... | EYN717A |
| V.35 Interface Cable, 10-ft. (3.0-m), Male/Male | EYN450-0010-MM |
| RS-232 Cable, 10-ft. (3.0-m) | ECM25C-0010 |