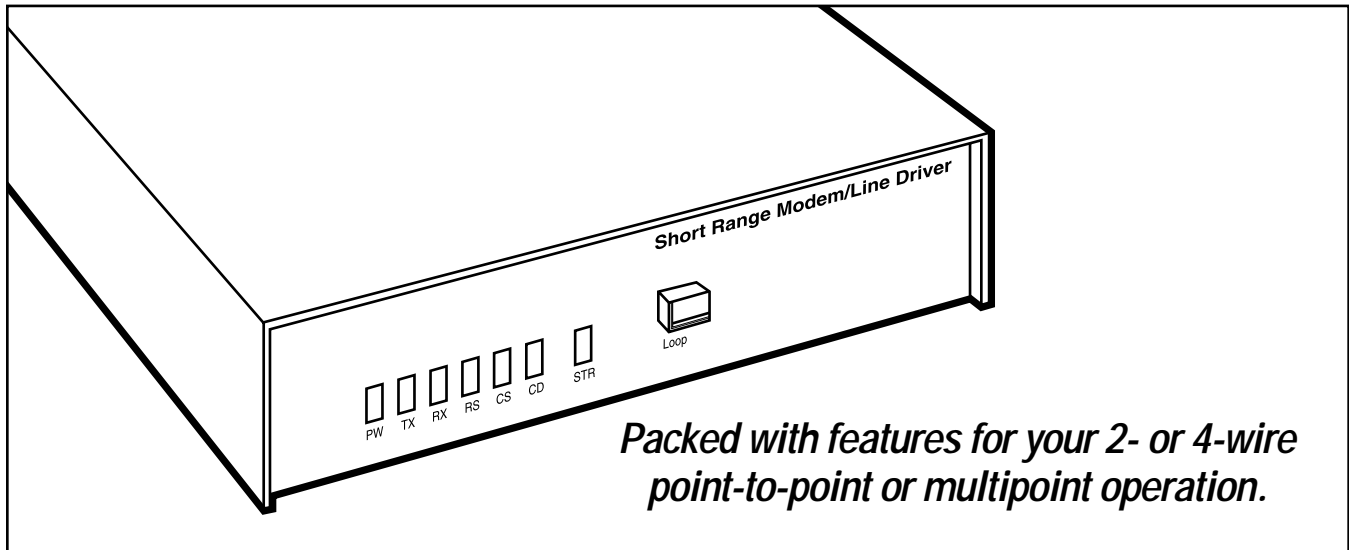


# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

### HIGH-SPEED SHORT-RANGE MODEM/LINE DRIVER



#### Key Features

- ▶ **Transmits async or sync data at speeds up to 128 kbps or at distances up to 3 miles (4.8 km).**
- ▶ **Constant Carrier or Switched Carrier operation.**
- ▶ **Switch on Data mode enables terminals to transmit even if they can't respond to RS and CS control leads.**
- ▶ **Local digital loopback testing.**
- ▶ **Anti-streaming protection.**

The High-Speed Short-Range Modem/Line Driver transmits async or sync data at speeds up to 128 kbps, or at distances up to 3 miles (4.8 km). It's perfect for point-to-point or multipoint applications.

The modem/line driver uses RS-485 tri-state drivers and receivers. Constant Carrier or Switched Carrier is possible.

In Constant Carrier operation, two modem/line driver units are connected in a point-to-point configuration. The distance between each unit depends on the selected data rate and wire gauge.

When Switched Carrier is selected, up to 32 modem/line drivers can be connected together to form a multipoint

configuration. As in Constant Carrier, the distance from the master unit to the last slave unit depends on the selected data rate and wire gauge. Switched Carrier operation also supports point-to-point configuration.

If your terminals don't respond to the RTS and CTS control leads, the modem/line driver provides Switch on Data mode. When a terminal sends data, the modem/line driver will bring up its carrier and start to transmit. During timeouts, the unit returns to its idle state.

Local digital loopback is selected via a front-panel mounted switch. The data line is then looped bilaterally to enable both the local terminal and remote terminal to be tested when in

4-wire mode.

CTS can be configured to respond to RTS, no matter what the state of the transmitter. RTS to CTS delays can be set to constant or to 0, 8, or 50 ms.

If a terminal in a multipoint configuration fails while the RTS is active, the attached High-Speed Short-Range Modem/Line Driver remains transmitting. However, a streaming terminal could cause the entire network to fail.

To prevent failure, the modem/line driver provides anti-streaming protection. When this protection is enabled, the control logic turns off the modem/line driver's transmitter. The transmitter doesn't turn on again until the RTS signal is released by the terminal.

# 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 6 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 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.

## Technically Speaking

Line drivers can operate in any of these transmission modes: 4-wire full-duplex, 4-wire half-duplex, and 2-wire half-duplex. In fact, most models support more than one type of operation. So how do you know which line driver to use?

First, you must decide if you require half- or full-duplex operation. In half-duplex transmission, voice or data signals are transmitted in only one direction at a time, as in a CB radio conversation. In full-duplex operation, voice or data signals are transmitted in both directions at the same time, like a telephone conversation.

In half-duplex mode, the entire bandwidth is available for your transmission. In full-duplex

mode, however, the bandwidth must be split into two because data travels in both directions simultaneously.

The second consideration you have is choosing the type of twisted-pair cable you need to complete your data transmission. Generally you need twisted-pair cable with two or four wires. Often the type of cabling already installed in a building dictates what kind of line driver you use.

If you're still unsure which operational mode will work for your particular application, consult our Tech Support experts and they'll help you make your decision. Just call 0870 90 10 750, then press 1, 2, 3 to reach our Communications Group.

## Specifications

**Clocking:** Internal, external, receive

**Distance (Maximum):** 4.8 km

**Operation:** 2-wire half-duplex or 4-wire full-duplex, point-to-point or multipoint

**Protocol:** Async or sync

**Speed:** 1.2 kbps to 128 kbps

**Surge Suppression:** Line transmit output, receive input: (1) Common Mode, (1) Differential

**Interface:** RS-232

**Connectors:** Channel: (1) DB25 F; Line: (2) RJ-45

**Indicators:** Power, TD, RD, RS, CS, CD, AS

**Operating Temperature:** 0 to 50°C;

**Humidity:** 5 to 90% noncondensing

**Power:** 120/240 VAC, 50–60 Hz, switch selectable

**Size:** 4.6 x 22.6 x 25.4 cm

**Weight:** 1 kg



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

## Ordering Information

ITEM	CODE
High-Speed Short-Range Modem/Line Driver .....	ME1084A
<i>You may also need...</i>	
RS-232 Cable, 25-Conductor, 3-m.....	ECM25C-0010