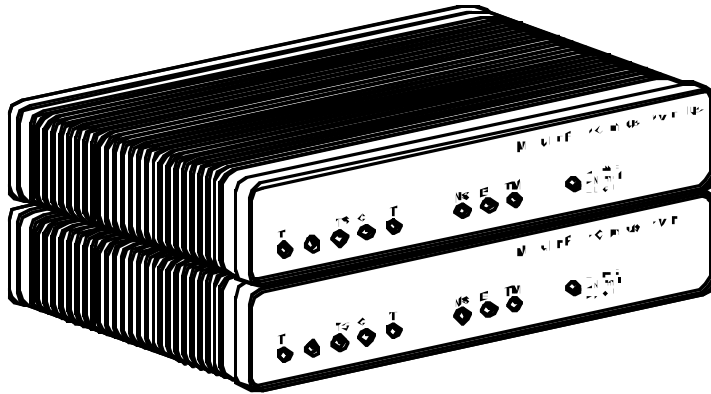# BLACK BOX®
NETWORK SERVICES

Modular Fibre Campus Drivers

Fast point-to-point communication up to 3 miles distant—plus swappable DCE-DTE interface modules for signal conversion.

Key Features

▶ *Full-duplex operation over a single multi-mode fibreoptic cable.*

▶ *Data transmits at up to 38.4 kbps (asynchronous) or 256 kbps (synchronous) over distances to 3 miles (4.8 km).*

▶ *Synchronous clocking can be internal, external, or derived from receive signal.*

▶ *Interface modules for V.24/RS-232, V.35, RS-422/530, X.21, and G.703.*

▶ *V.54-compliant local and remote loopback test modes are activated via switch.*

▶ *Front-panel LEDs monitor interface data, control signals, and test-mode status.*

The Modular Fibre Campus Driver (ME621A) and Modular Fibre Campus Driver Plus (ME620A) support high-speed, full-duplex campus communications across a single 50- or 62.5-micron core, multi-mode fibreoptic cable. These devices also convert and connect to most network interfaces with swappable DCE-DTE Interface Cards: V.24/RS-232, RS-422/530, V.35, X.21, WAN Ethernet Bridge, and G.703.

The fibre advantage

Fibreoptic line drivers offer three main advantages over their copper-wire counterparts: immunity to electrical interference, superior conductivity, and signal security.

Because fibreoptic cables use a nonmetallic glass conductor, they are impervious to the effects of electromagnetic and radio-frequency interference (EMI and RFI), as well as crosstalk. Also, because fibre cable doesn't conduct electricity, it can't cause electrical problems in your equipment due to power surges or high-voltage interference.

Speedy (and distant) delivery

Data transmission can be synchronous or asynchronous. Rates for the ME621A range between 0 and 19.2 kbps asynchronous or 4.8, 9.6, 14.4, 19.2, 28.8, 32, 56, 64 and 128 kbps synchronous; for the ME620A, between 0 and 38.4 kbps asynchronous or 2.4, 9.6, 14.4, 28.8, 38.4, 56, 64, 72, 128, 144, 192 and 256 kbps synchronous. The transmit-clock source can be internal, external, or derived from the received line signal.

As distance extenders, these Campus Drivers support point-to-point distances up to 3 miles (4.8 km).

Pick the interfaces you need

The ME621A and ME620A are short-range modems designed to work in pairs. One is needed for each end of a fiber cable, to which each joins via an ST connector.

The Drivers are shipped without modules installed in the serial-port interface, so you can order the ones that best suit your needs. The array of interface modules available

allows the Campus Drivers to integrate easily into most systems.

The serial ports on all except the X.21 interface modules are hardwired as DCE, so a straight-through cable of 1.8 m or less can connect them to a DTE device (terminal, PC, host). For connection to a DCE device (modem, multiplexor), a null-modem cable of similar length is required.

Each Driver comes with a universal-interface AC power supply and a domestic (US) power cord. The supply operates in 85- to 256-VAC (50/60 Hz) environments (no reconfiguration required), and it is equipped with a male IEC-320 power connection.

Also, both software (XON/XOFF) and hardware (RTS/CTS) handshaking modes are always available.

Easy to configure

The Modular Fibre Campus Drivers are quickly and easily configured through a mini DIP-switch package (S1) on the bottom side of the PC board. All 8 switches are externally accessible. They control async/sync data rates (S1-1 through S1-4); clock source (S1-5 and S1-6); and DTE enabling/disabling control of Remote Digital Loopback (DL) test (S1-7) and Local Analog Loopback (LAL) test (S1-8).

Finds problems fast

V.54-compliant diagnostics, activated via a front-panel switch, can be used to evaluate both local and remote units, as well as the twisted-pair link between them. LAL tests, performed on each unit individually, check the local Campus Driver. DL tests assess both the local and remote Campus Drivers, as well as the communication link between them.

Eight red/green LED indicators on the front panel of each unit monitor power, DTE signals, test modes, and network connection.

Both the Modular Fibre Campus Driver and Driver Plus models comply with FCC Part 15 Class A, UL 1950, and CE Electromagnetic Compatibility (EMC) directive and Low Voltage Directive (LVD).

Additional equipment you may need:

- Campus Driver Interface Cards
  - RS-232 (DB25F)
  - RS-422/530 (DB25F)
  - V.35 (M34F)
  - X.21 (DB15)
  - G.703 (RJ-45)
- Ethernet WAN Bridge Module
- V.35 Interface Cable
- Fibreoptic Cable

For these and other components...
Call our expert Technical Support Staff for all your modem 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
Modular Fibre Campus Driver, ST	
Plus, Max. 256 kbps	ME620A
Standard, Max. 128 kbps	ME621A
Campus Driver Interface Cards	
RS-232 (DB25F)	ME481C-232
RS-422/530 (DB25F)	ME481C-422
V.35 (M34F)	ME481C-35
X.21 (DB15)	ME481C-X21
G.703 (RJ-45)	ME481C-G703
Ethernet WAN Bridge Module	ME530A
V.35 Interface Cable	EYN450
Fibreoptic Cable	EFN062

Specifications

Clocking — Internal, external, or received

Diagnostics — V.54-compliant local and remote loops

Handshaking — Software: XON/XOFF; hardware: RTS/CTS

Maximum Distance — Up to 3.1 miles (5 km) depending on data rate

Operation — Full duplex, point-to-point

Transmission Format — Synchronous

Speed — ME620A: Async up to 38.4 kbps, sync up to 256 kbps; ME621A: Async up to 19.2 kbps, sync up to 128 kbps

Interface — RS-232, RS-422/530, V.35, X.21, or G.703 (depending on interface card)

Connectors — (1) ST®, DB25F, M34F, DB15, or RJ-45, depending on the interface card

Power — 230-VAC universal input, external, self-selecting

Size — 4 x 18.5 x 16.7 cm

Weight — 0.9 kg