BLACK BOX ®
NETWORK SERVICES

MICROCONVERTER G.704

Connect your router to structured or unstructured circuits with this manageable, low-cost converter

Key Features

▶ *Very inexpensive*

▶ *Highly reliable*

▶ *Managed structured G.703 (E1) connectivity including remote management*

▶ *Configurable for managed clear channel operation*

▶ *Both 75 ohm and 120 ohm connectivity in one unit*

▶ *Multiple power supply options including minus forty eight VDC*

Specifications

Input port: Synchronous serial. Use of external terminal timing signal EIA530/RS449 (switch selectable). D.T.E. clock inversion option (switch selectable). Local loop back option (switch selectable)

Output Port: G.703 overlaid with G.704 framing, for Nx64k rate adaption, with any combination of time slot assignments. Support for recovered clock or internal master clock (management selectable). Twin co-ax BNC (75ohm) and RJ45 socket (120 ohm). Remote loop back option (management selectable).

Management: Front mounted async management port on RJ45. Support for remote managment in G.704 mode (TS0 is carried end to end)

Status Indicators: Green LED for power status. Green LED for carrier line status. Amber LED for clock master enabled. Amber LED for terminal timing enabled. Amber LED for loop back enabled.

Power: Internal auto-ranging power supply 90-260VAC, 60.50Hz (-48VDC optional)

Size: 195mm x 121mm (138mm over connectiors) x 45mm (7.7″ x 4.8″ x 1.8″ approx)

The Black Box MicroMux G.704 converter is the ideal solution for connecting X.21 / RS449 / V.35 / RS530 interfaces on to G.703 2.048Mbps E1, Fractional E1 or equivalent lines. Using the latest proven G.703 chipsets, the MicroMux provides a low cost alternative to expensive G.703 interfaces for routers, bridges and multiplexers etc… providing connectivity to high speed services up to 2.048Mbps using technologies such as DSL, Megastream, wireless etc..

The units can be set to master a clock onto the network, based on the internal clock source that is accurate to + / - 20 ppm (parts per million), which is well within the specifications of + / - 50 ppm. Or the units will slave to the existing network clock that is present on the line.

Power options include a 90 – 260 VAC self sensing power supply with an IEC320 socket for power input, or a screw terminal block for -48 V d.c. input.

Configuration is carried out through the Management port on the front of the unit, which is an RJ45 socket. A cable for connection to a DB9 way male port on a PC is included. The management requires VT100 emulation to be running on the PC and uses a simple command line interface (CLI) to enable users to manage such functions as clocking, interface type, timeslot allocation, status, CRC-4 settings, name of the unit etc… Clock inversion and Terminal Timing (TT) are also configurable through this interface.

The MicroMux G.704 has been engineered to address the expanding market for managed interface converters, and the requirement for Nx64k fractional data rate support, something referred to as rate adaption. The MicroMux G.704 can support fractional E1 data rates, at any Nx64k data rate, and with any combination of time slot assignments. CRC4 can be enabled / disabled. It can also support clear channel 2048kbit/s operation with local management, acting as a managed version of the MicroMux G.703.

The MicroMux G.704 supports X.21, EIA530, RS449 and V.35 interfaces as standard, including support for the external terminal timing signal.

The interface configuration can be changed in the field at any time. It also supports 75 ohm un-balanced and 120 ohm balanced G.703 / G.704 connection, selection of which is by way of two externally accessible switches, and use of either the BNC connections (75ohm un-balanced) or the RJ45 connection (120ohm balanced).

The management interface is accessed via a front panel serial port, presented on an RJ45 connector. It supports a command line terminal interface for engineering configuration and status reporting, and a 'command line string instruction set' for direct control from a management system. Please see the management applications section for more details.

The ultra low cost answer for Nx64k rate adaption and structured connectivity the MicroMux G.704 Interface Converter from Black Box is probably the most cost competitive solution for connecting data communications equipment to structured two mega-bit data circuits.

A derivative of the highly successful MicroMux SP-3, the MicroMux G.704 has been engineered to reduce cost in this expanding sector of the market, and thus enhance Black Box's position as the market's leading provider of G.703 / G.704 interface converters.

Many of the so called low-end routers available today can handle 2Mbit/s throughput, but they only have conventional DTE interfaces, usually X.21or EIA530. By combining one of these routers with a MicroMux G.704 users can enjoy the high performance of up to 2Mbit/s without the expense of a higher end router.

The MicroMux G.704 can support the full range of Nx64k fractional E1 date rates too, with any combination of time slot assignments. The MicroMux G.704 supports X.21, EIA530 and RS449 interfaces, including support for the external terminal timing signal on EIA530. It also supports V.35 in addition to the above, and it can be configured either to X.21, EIA530 and RS449, or to V.35 in the field.

The MicroMux G.704 supports 75 ohm unbalanced and 120 ohm balanced G.703 connection. Selection of which type is by way of two externally accessible switches, and use of either the BNC connections (unbalanced) or the RJ45 connection (balanced). CRC4 can be enabled / disabled.

▼ *Ordering Information*

ITEM	CODE
Microconverter G.704	
90-230 VAC	MTU9005
48 VDC	MTU9005-48
Order the cable for the interface you need......	
Adaptor Cables, 2-m	
RS-449 DCE (Female)	CBL449
RS-530 DCE (Female)	CBL530
V.35 DCE (Female)...	CBLV35
X.21 Interface cable, 3-m, M/M	EVNX21-003M-MM