



BLACK BOX[®]

NETWORK SERVICES

© 2000. All rights reserved.
Black Box Corporation.

LASERLINK MUX

Combine Voice and Data over Laser Links

Key Features

- ▶ Voice and Data Integration
- ▶ Fast Ethernet and 2 Megabit E1 channels
- ▶ Full Duplex Wire Speed Connectivity
- ▶ Secure Transmission
- ▶ Uses Licence Free Links
- ▶ Easy Operation

Standards Based Cost Saving

The Black Box LaserLink Mux products combine one full duplex Fast Ethernet channel and one E1 line into a single high speed digital data stream thus providing the ideal solution for integrated voice and data applications. Hospitals, campuses and corporate users as well as Telco's and bandwidth providers can benefit from better aggregate utilization of their Fiber Optic (FO) networks and Free Space Optical (FSO) systems or Cat 5 communication links. The LAN port features auto-negotiation function to eliminate device configuration and making the installation effortless while the E1 port offers both balanced and unbalanced interfaces and selectable AMI/HDB3 line coding for easy network integration. The LaserLink Mux devices guarantee independent full wire-speed transparent transmission both for the 2 Mbps G.703 signals and the 100 Mbps Ethernet segment over a high speed digital

link. The solution provided by Black Box's E1 & Fast Ethernet high speed multiplexer is cost effective, reliable and simple; an ultimate way of keeping communication costs low. By utilizing industry standard interfaces, the LaserLink Mux protects the customers' investments in long-term projects. The ITU-T and IEEE compliant interfaces provide interoperability with other telecom or LAN products thus seamless integration into such networks.

Easy to use and install

The Black Box LaserLink Mux is a flexible, yet easy to install and use product. It offers one IEEE standard auto negotiation Ethernet interface with RJ-45 data port for LAN connection and one ITU-T G.703 interface equipped both with balanced 120 Ohm (RJ-45) and unbalanced 75 Ohm (coaxial) connectors for E1 connection. The Black Box LaserLink Mux devices guarantee independent full wire-speed transparent transmission both

for the 2 Mbps G.703 signals and the 100 Mbps Ethernet segment over a single, high speed digital link. While the Ethernet side does not require any configuration, the appropriate network interface, as well as the line coding (AMI/HDB3) for the E1 operation can be selected by the user to meet with the local requirements. The multiplexer provides protocol transparent transmission thus the E1 channel can carry both structured and unstructured data and the Ethernet interface can accommodate any kind of standard frame. The voice and data signals are multiplexed into a high speed digital data stream that is interfaced with CAT 5 UTP with RJ-45 connector, multimode fibre with SC connector or (to special order) a single mode fibre. All interfaces have individual LED indicators for extended status and alarm reporting. Loop back modes of E1 and high speed digital data provide useful help in troubleshooting. The selectable AIS handling of E1 line gives further flexibility when integrating the equipment into an existing system.

Specifications

Connections

LAN Interface – 100BaseTX, RJ45
E1 Interface – 75 ohm

unbalanced (2 x BNC) and 120 ohm balanced (RJ45)

High Speed Aggregate Interface – LMUX-TP – RJ45 UTP Copper
LMUX-MM – SC Connector (1300 nm multimode fibre)

Management

Indicators – Extended Status and Diagnostic LEDs for each Interface

Tests – E1 and Data Loopbacks

Engine (Multiplexer)

Technique – Time Division

Ethernet Rate – 100 Megabits Per second
E1 – 2.048 plus/minus 50 ppm
Mbit/s

E1 Line Code – AMI / HDB3

Operating Environment

Operating Temperature – 0 to + 50 Centigrade

Storage Temperature – 20 to + 50 Centigrade

Humidity – 0 - 95% Non Condensing

Power – 230VAC, 50W Max

Dimensions – 435 x 206 x 44 mm

Typical applications

- ▶ Increased utilization of FO, FSO or Cat 5 links
- ▶ Integrated Telephone + LAN connection for corporate users
- ▶ Multiple services for ISP's and TELCO's
- ▶ Parallel VoIP, LAN and voice services

Ordering Information

ITEM	CODE
LaserLink Mux Twisted Pair	LMUX-TP
LaserLink Mux Multimode Fibre SC	LMUX-FO



#81201