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Black Box Corporation.

BLACK BOX[®]

NETWORK SERVICES

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LASERLINK 1000



The low cost and long range point to point solution

Key Features

- ▶ **Licence free connection.**
- ▶ **Wire Speed Fast Ethernet (100 mbps Ethernet)**
- ▶ **Competitive pricing**
- ▶ **Rapid installation and redeployment**
- ▶ **Direct Ethernet twisted pair connection**
- ▶ **Robust and weatherproof**
- ▶ **Transmission monitoring**

Fast and cost effective

This third generation in the LaserLink series of products from BLACK BOX, are designed to deliver easy-to-use and cost-effective solutions for high speed wireless connection over long range. The applied technology is based on the highly successful compact mechanical design of the LaserLink 150 and 500 series products. LaserLink 1000 systems are enhanced with new, state of the art features such as Automatic Inbound Power Control and Easy Distance Optimisation Technique. These attributes make the LWU1000 the best value mid-range FSO product on the market. Because they use infrared light as their transmission medium, these Black Box systems do not require frequency licences and the transmission is not affected by electro-magnetic interference.

The concentrated laser beam is extremely hard to tap, even to discover. The transparent and wire speed data transfer together with virtually zero latency assures the easy integration of the system in all environments. A Black Box link is a virtual fibre in the air.

The Alternative to Leased Lines

These precision units provide a means of linking two sites when it is cost prohibitive to lay cable or when it is physically impossible because of infrastructure such as railways, roads or rivers. Using Laser technology the units enable a secure, high speed link to be established.

Simple to Install

Mains power and an Ethernet connection are all that is needed to get the units up and running. Even mounting brackets and fixings are included. As with any

Optical system, clear line of site between locations is required but Black Box will advise on the best location and method of mounting and installing your system and cables at very competitive rates.

Secure and reliable

A major advantage of Laser based optical solutions is the inherent high security especially compared to radio links. The narrow angle of the beam makes it almost impossible to try to monitor covertly without detection. Precision engineered transmission heads also ensure reliable connection even in adverse weather conditions. The laser transmission carries the data using a concentrated laser beam and a unique modulation technique is employed to ensure error free data transmission over distances up to 500 metres. The transparent and wire speed data

transfer together with virtually zero latency assures every integration of the system in all environments. Because they use infra red light as transmission mediums the Black Box LaserLink systems do not require frequency licences and the transmission is not affected by electro magnetic interference.

The Complete Solution

The LWU1000 comprises of two laser heads and two outdoor interconnection units and mounting brackets. The Laser heads are installed outdoors where a clear optical path exists between the two sites. Next to

head the outdoor connection unit (OIU) provides fast and easy interconnection between the Laser head and the cable coming from the network equipment. The OIU also houses the power supply and the network interface of the system. The power supply provides the low voltage power required to operate the laser head while the data port offers direct connectivity for standard network equipment.

The system contains a built in signal monitoring unit which features a visual signal strength indicator and LINK status information accessible at the rear of the head assembly.

An optical indoor connection unit contains the IP based management hardware. This shows a bar graph signal strength and alarm status and has relay connections for communication to other remote alarm systems. A further option is the connection of PC based monitoring software connected via Ethernet or RS232 port.

Investment Protection

Industry standard network interfaces and a clear upgrade path for higher bandwidth protect the customer's investment in Black Box systems. The LaserLink systems also offer high levels of

network flexibility due to their extremely fast and easy installation method, which makes them ideal to follow network topology changes.

Applications:

- ✍ Replaces lower speed leased lines or radio links
- ✍ High bandwidth connection for Internet Service Providers.
- ✍ High speed of LAN connections and long haul backbones.
- ✍ Suitable for temporary installations.
- ✍ Emergency backup to cable connections.

Specifications

Connections:

LAN Interface: RJ-45

Management:

- Indicators: Power
- Optimum Link Level
- Receiver Saturation
- Receiver Status
- Dynamic signal level
- LED array

Engine (Laser): Light Source - Laser

Diode, 785 nm wavelength.
 Laser Diode Power: 2 x 70m W (Class 3b).
 Detector - APD Photodiode.
 Dynamic Range - >40dB.
 Beam Divergence: 0.5 - 15mrad.
 Receiver Acceptance Angle: 8.5 mrad.

Range: 10-1000 metres.

Operating Environment:

Operating Temperature: - 25 to + 60 Centigrade.
 Storage Temperature: - 40 to + 80C.
 Humidity: 95% Non Condensing
 Protection Rating: IP65 for Head and Outdoor Unit.
 Power: 230VAC, 50W Max
 Dimensions: 560 x 289 x 217 mm
 Weight: 2.5 kg

<i>Ordering Information</i>	
ITEM	CODE
LaserLink 1000 Twisted Pair Ethernet	LWU1000-TP
LaserLink 1000 Multimode Fibre SC	LWU1000-FO