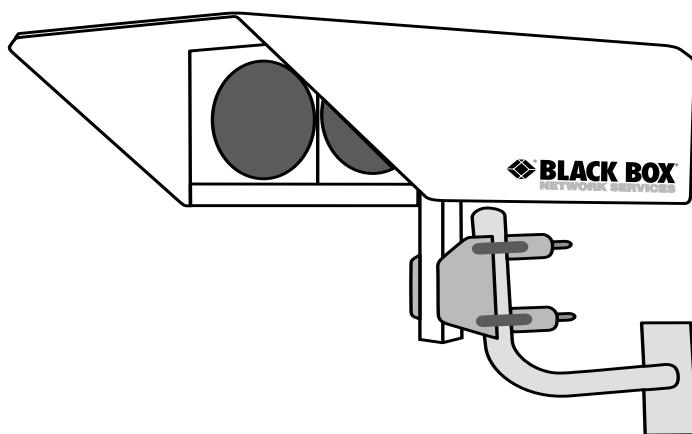


## LaserLink Compact Serie



### Key Features

- ▶ New Industry Standard for Free Space Optics
- ▶ Wire Speed Fast Ethernet (100 Mbps)
- ▶ Competitive pricing compared to 2.4 GHz radios
- ▶ Quick Installation and Redeployment
- ▶ RJ-45 STP Connection
- ▶ IEEE 802.3u compliant
- ▶ Transmission monitoring

### OVERVIEW

The LaserLink Compact series of products from BLACK BOX sets a new standard for Free Space Optical transmission systems. The series provides a simple and easy to install solution that is unique in laser based networking.

This new range of products incorporates a lightweight, compact mechanical design with a factory-set, optical system which allows end users to benefit from a simple and quick installation.

LaserLink Compact is more competitively priced than 2.4 GHz radio, and its performance is at least hundred times faster. BLACK BOX's LaserLink Compact range offers cost effective, reliable and secure laser based free space optical transmission for local area networks (LAN) with Fast Ethernet speed of 100 Mbps. The transmission carries data using a concentrated laser beam and a unique modulation technique is employed to ensure error free data transfer over distances of up to 150 meter. Transparent and wire speed data transfer together with virtually zero latency ensures that the LaserLink Compact system can be easily integrated into any environment. The LaserLink Compact series use laser light as a

transmission medium. As with all BLACK BOX systems this means that frequency licenses are not required and transmission is not affected by electromagnetic interference. Data transmission via a laser beam is secure as it is extremely hard to intercept, and cannot be detected by spectrum analysers. In the case of a LaserLink Compact system the laser link is considered a virtual fiber in the air which is then converted to electrical interfaces.

### PRODUCT DESCRIPTION

The LaserLink Compact system comprises of two Laser Heads – one at each end of the link – and the supporting hardware. The Laser Heads are installed in or outdoors, usually on roof-tops or sidewalls of buildings, which have a clear line of sight between two locations. The LaserLink Compact links are available with a factory set, operating range of either 10 -75m or 75-150m. The LaserLink Compact system is a standalone all-in-one solution, which requires no additional hardware for operation. The power supply is connected directly to the laser head, which features 100BaseTX interface for network connection.

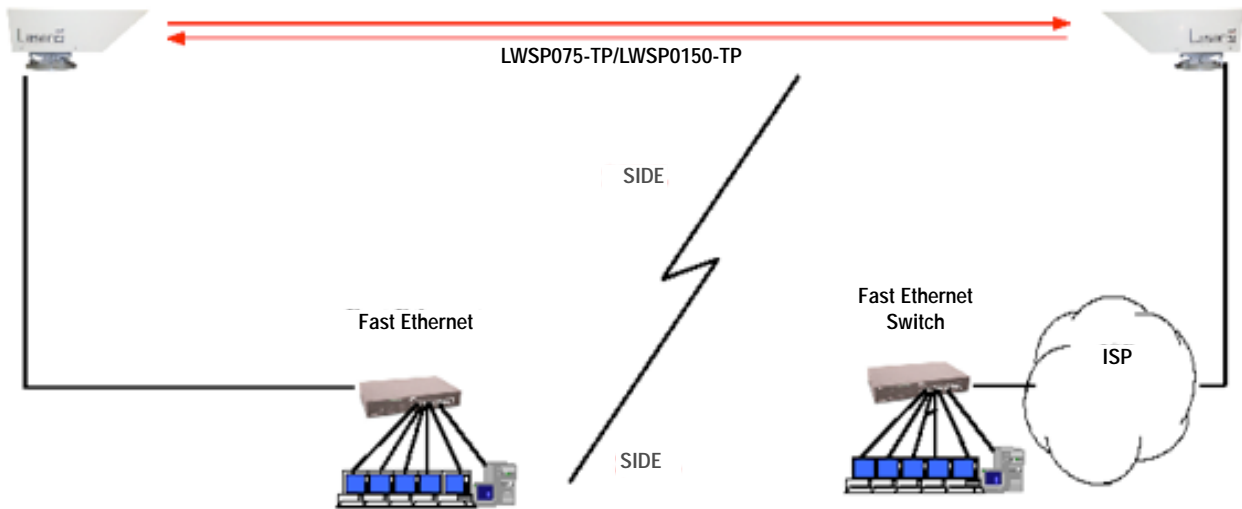
Each LaserLink Compact head contains built-in transmission monitoring service. The Power On LED, Optical Link Status, Ethernet Link/Received Data and Optical Level indicators, provide useful information for troubleshooting. The Optical Level OK and Saturation indicators provide guidance for use during system installation.

### APPLICATIONS

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

### DO IT YOURSELF INSTALLATION

The most important feature of BLACK BOX's LaserLink Compact system is the quick and easy installation process. The alignment of the equipment is very simple, and a 100 Mbps network can be connected in any environment within an hour without cabling.



## Specifications

### Electrical Characteristics

**Light source** — GaAlAs Laser Diode  
**Laser diode power (mW)** — 70  
**Detector** — SiPIN Photodiode  
**Dynamic range** — >25 dB  
**Bandwidth** — 100 Mbps  
**Data In/Out** — 100BASE-TX RJ45  
**BER** — Better than  $10^{-9}$   
**System latency** — <50 ns

### Power

**Power required** — 110/230V AC

### Optical Characteristics

**Wavelength** — 785 nm  
**Beam divergence** — 20-70 mrad  
**Receiver acceptance angle** —  $1 < 2$  dgr

### Physical Characteristics

**Head Housing** — Hardened aluminum  
**Weight (w. Alignment Unit)** — 2.5 kg  
**Dimensions (with cover and Alignment Unit, mm)** — 160 x 110 x 350 mm

### Environment

**Operating temperature** — -25 to +60°C  
**Humidity** — up to 95% non condensed  
**Protection rating** — IP65 for Head Assembly

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## The Complete Package

- 2 Laser Heads
- 2 Mounting brackets
- 1 Manual (on CD)

## Ordering information

### ITEM

### CODE

#### LaserLink Compact serie

LaserLink Compact distance 10 - 75m ..... LWSP075-TP  
 LaserLink Compact distance 75 - 150m ..... LWSP0150-TP