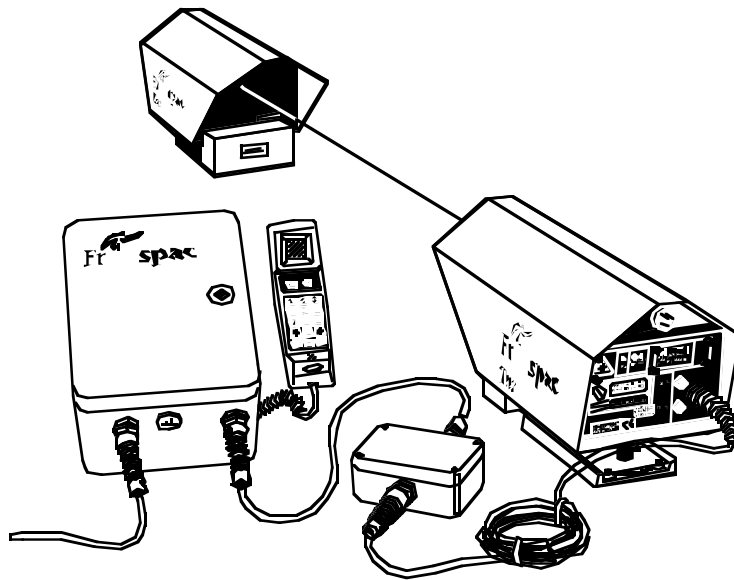




# BLACK BOX®

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## Freespace Turbo



*The laser solution for wireless building-to-building data links, Freespace Turbo supports speeds from 45-mbps T3 to 100-mbps FDDI and Fast Ethernet to 155-mbps ATM at distances up to 1000 ft. (300 m).*

### Key Features

- ▶ *Get laser connections between buildings for all network protocols, at wire speed.*
- ▶ *SkyFibre™ technology ensures clean, clear data transmission.*
- ▶ *Built-in UPS keeps the link running if you lose power.*
- ▶ *Cold-weather protection via an automatic lens defroster.*
- ▶ *Fast and easy to install.*
- ▶ *Diagnostics simplify problem-solving.*

Easy to install, Freespace Turbo promises reliable building-to-building wireless laser connectivity at full network speeds. This cutting-edge laser system gives you wire speed connections for all network protocols, from 45 mbps Ethernet to 155 mbps ATM.

Featuring SkyFibre™ technology, Freespace delivers greater than 99.99% statistical availability at distances up to 1000 feet (300 m). And it provides excellent security against data interception.

Freespace Turbo consists of two main components: the link head and the power/diagnostics unit. You receive two heads and two power/diagnostics units for each Freespace Turbo you order (one for each end of the link). The link heads are usually fixed to the outside of buildings, with a clear line of sight between heads. A

fiberoptic cable extends from the link head to a power/diagnostics unit that can be located indoors or outdoors.

A built-in telescopic sight, phone link, audible alignment feedback, and a signal-strength meter enable fast and accurate installation.

What's more, Freespace Turbo meets the latest ISO 9002 certification requirements. And each unit is guaranteed weatherproof. A lens defroster automatically operates at temperatures below 37° F (2.7° C).

Every Freespace Turbo comes with a built-in UPS.

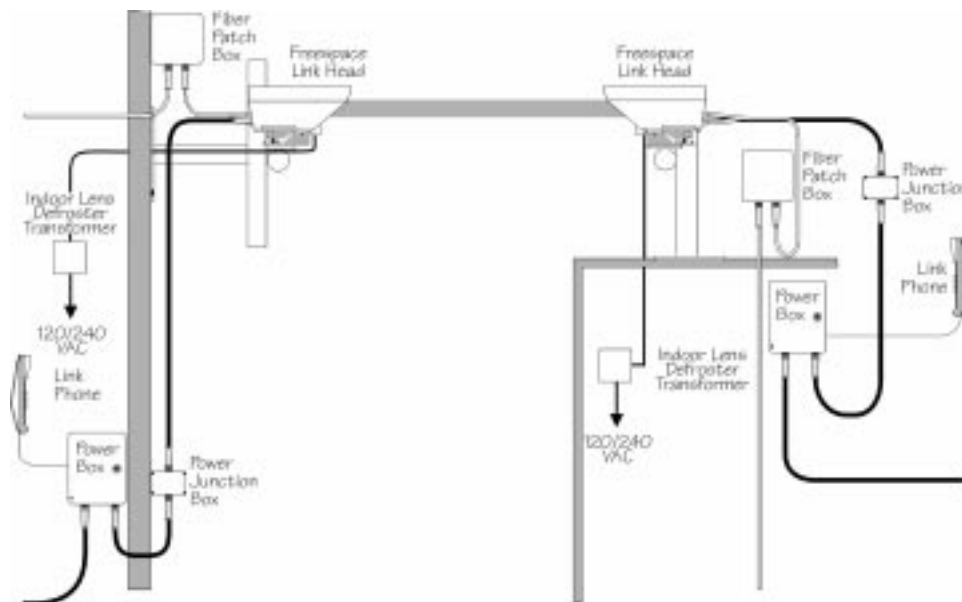
Plus, a fully integrated suite of diagnostic tools make troubleshooting a breeze:

- Power and transmitter status control
- UPS control and status indication
- Signal-strength and low-power fallback alert
- Diagnostics, loopback, and fallback control
- Service power and voltage selection, control, and indication
- Link range selection switch ...and more!

### Typical Application

*Transfer data between two buildings without cable, using a single beam of laser light.*

Get wire-speed line-of-sight wireless connections for building-to-building installations.



### Specifications

#### Technical:

#### Network Protocols

**Supported** — 155-mbps ATM, 100-mbps Ethernet in half- or full-duplex mode, 100-mbps FDDI

#### Maximum Recommended Range — 300 m

**Network Interface** — Fiberoptic STII multimode 50/125 and 62.5/125 cable, 1300 nm

**Approvals and Standards** — FCC Part 15 Class A and B; EN 50 082; EN 55 022; EN60 950; UL 950; CSA 1950

**Use Restrictions** — No regulatory requirements

**Transmitter** — Wavelength: 780 nm (typical); Power Output: +16 dBm (typical); Beam Divergence: 0.5° (typical); Laser Diode: GaAlAs

**Receiver** — Sensitivity: -27 dBm; Effective Active Receive Area: 11,400 mm; Dynamic Range: 27 dB; Fade Margin: 17 dB min. and 20 dB (typical)

**Power Supply** — 120 VAC, 60 Hz or 240 VAC, 50 Hz

**Performance** — More than 99.9% statistical availability at full range; Unfaded BER<10

#### Environmental:

**Temperature Range** — Head unit: -30 to 50° C; Power/Diagnostics Unit: -30 to 50° C

**Relative Humidity** — Head Unit: 100%; Power Diagnostics Unit: 100%

#### Mechanical:

**Mounting** — Head Unit: Standard video-equipment mounting, 4" PCD (4xM6); Diagnostics Unit: Wall-mount via external brackets

**Size** — Head Unit: 16 x 17.9 x 42 cm; Diagnostics Unit: 25 x 20 x 15 cm

**Weight** — Head Unit: 3.4 kg; Diagnostics Unit: 3.4 kg

### Technically Speaking

SkyFibre™ technology transmits a wide, vertical oval beam that is met by a large-area receiving lens. Together they form a unique adaptive "cross-hair" receiving zone. This superior design minimizes signal interference caused by the environment and building movement, so you get *greater than 99.9%* statistical availability. Running at wire speeds of 45 mbps T3 to 100 mbps FDDI and Fast

Ethernet to 155 mbps ATM, SkyFibre provides near-zero-latency performance and functions as an invisible piece of fiber cable.

**Keeps going even when the power fails.** A built-in uninterruptible power supply (UPS) runs for up to three hours if power fails.

**Prevents internal condensation and corrosion.** The link heads are dry-nitrogen-purged, then sealed and pressure-tested to 20 PSI.

### For these and other components...

Call our expert Technical Support Staff for all your LAN 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
Freespace Turbo (pair) .....	LW9000A
Wallmount Bracket (no charge).....	LW9000-WALL
Freespace Turbo (pair) with pedestal mount....	LW9000-PED
Spare Freespace Turbo Head .....	LW9001A