

LaserBit SUPERGIG Series

Laser Based Free Space Optical Communication System



Features:-

- Free Space, Wireless Communication up to 2500m
- Modular System Design
- Full Duplex Wire Speed Gigabit Connectivity
- Industry Standard Copper and Fiber Optic Interfaces
- Secure Data Transmission
- Quick Installation and Re-deployment
- Built-in signal monitoring

Applications:-

- Provide Gigabit speed wireless connectivity instead of fiber or where fiber is not available or
- Interconnect LAN's in campus or industrial environment
- High bandwidth connection to the Internet
- VoIP applications
- Backbone connectivity in metropolitan or 3G wireless networks
- Emergency backup to fiber convenient graphical based management of the connected devices.



Product Overview

The SuperGig series of products from LaserBit are laser based free space optical systems designed to provide flexible, reliable and secure solution for Gigabit Ethernet wireless connections up to 2500 m. Based on the proven 8 transmitter modular design these systems exhibit outstanding weather performance. The adjustable transmitter optical system allows custom configuration of the system for specific installations and site conditions. Eight transmitter multi-beam technology and LaserBit's patented Automatic Inbound Power Control guarantees outstanding link availability figures even in harsh weather conditions. SuperGig can be enhanced with LBView, a device management platform that allows remote control and monitoring of the equipment through a standard web browser, SNMP manager or LaserBit's proprietary BitView GUI interface. Because they use infrared light as the transmission medium, LaserBit systems do not require frequency licenses and the transmission is not affected by electro-magnetic interference. The concentrated laser beam is extremely hard to tap, even to discover as it can not be detected by spectrum analyzers or similar instruments. The transparent and wire speed data transfer together with virtually zero latency assures the easy integration of the system in all environment. **The LaserBit link is a virtual fiber in the air.**

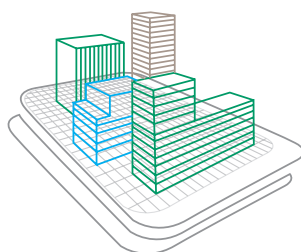
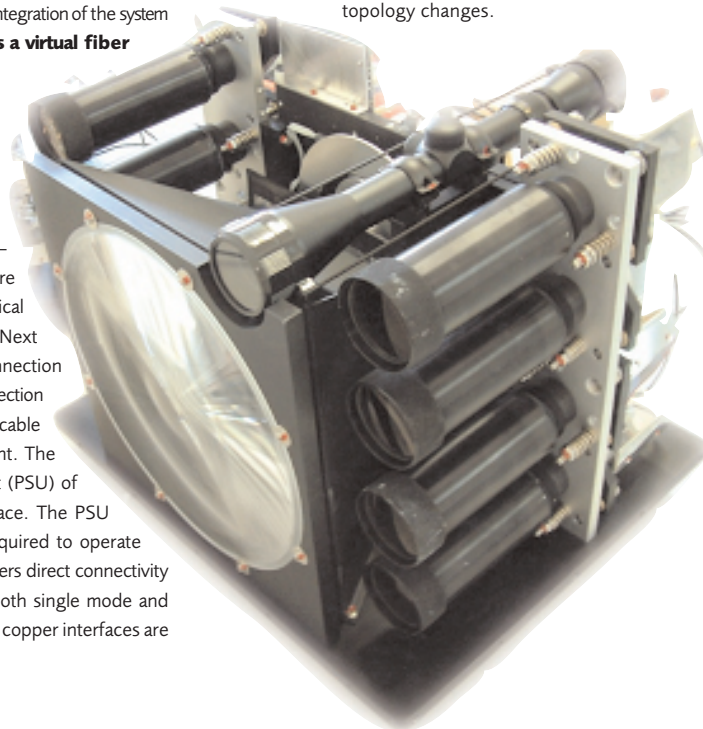
Product Description

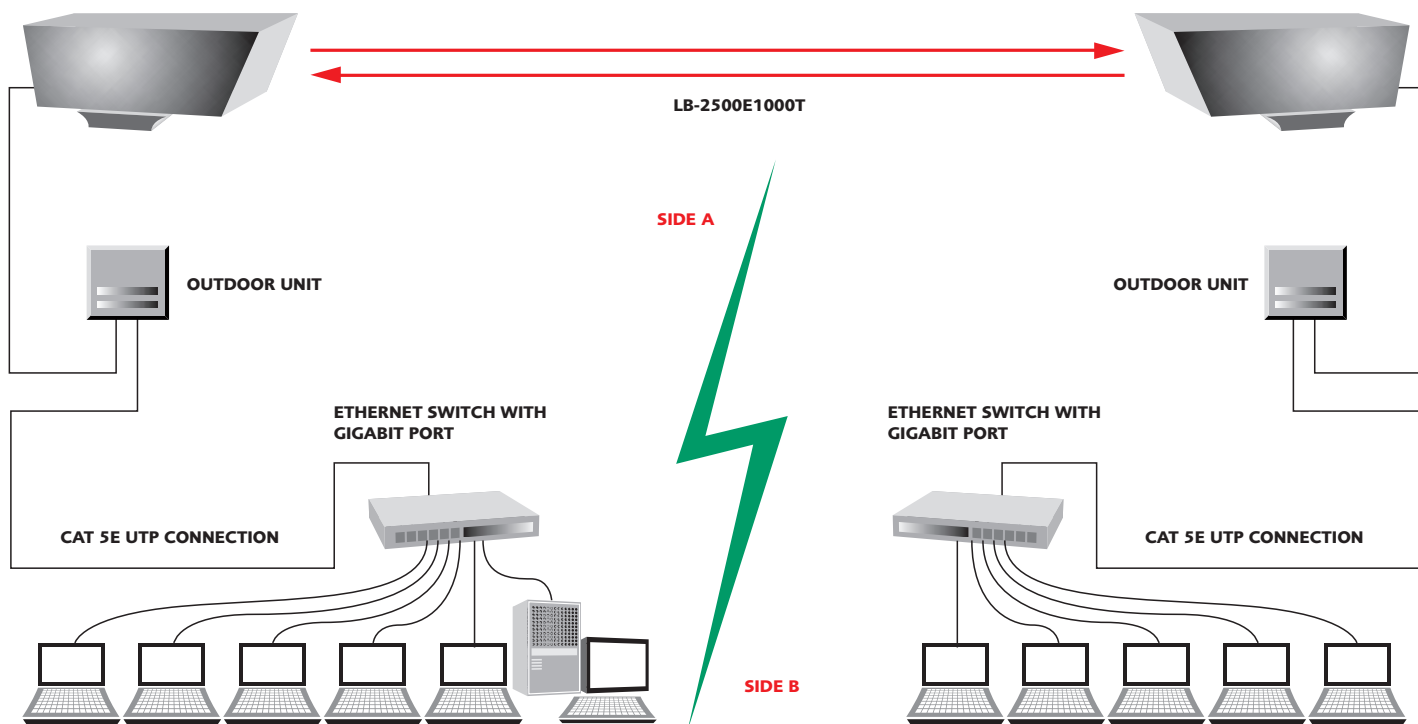
The SuperGig system comprises of two Laser Heads, two Outdoor Interconnection Units (OIU) and two sets of interconnection cables — one at each end. The Laser Heads are installed outdoors, where a clear optical path exists between the two sites. Next to the head the Outdoor Interconnection Unit provides fast and easy interconnection between the laser head and the cable coming from the network equipment. The OIU houses the Power Supply Unit (PSU) of the system and the network interface. The PSU provides the low voltage power required to operate the laser head while the data port offers direct connectivity for standard network equipment. Both single mode and multimode fiber optic as well as UTP copper interfaces are

available for easy network integration. The system contains built-in signal monitoring unit, which features a visual signal strength indicator and LINK status information accessible on the rear of the head assembly. SuperGig can be enhanced with LBView, LaserBit's multi-platform device management solution, which allows remote control and monitoring of the equipment. The LBView Unit is equipped with status indicators that give an overview of the current FSO device status in the blink of an eye. The built-in web server functionality provides user friendly one click device management while the SNMP interface enables easy migration with existing network management systems. When supplemented with BitView, it offers enhanced data security and convenient graphical based management of the connected devices.

Investment Protection

Industry standard network interfaces and a clear upgrade path for higher bandwidth protect the customer's investments in LaserBit systems. Additionally, SuperGig systems offer a high level of network flexibility due to their modular design, which makes them ideal to follow network topology changes.





LaserBit SUPERGIG Series - Technical Specifications

ELECTRICAL CHARACTERISTICS

Light source	Laser Diode
Laser diode power	8 X 25 mW
Detector	APD Photodiode
Dynamic range	>40 dB
Bandwidth	1.25 Gbps
BER	< 10 ⁻⁹
System latency	< 50 ns

ENVIRONMENT

Operating temperature	- 25 to + 60 Centigrade
Storage temperature	- 40 to + 80 Centigrade
Humidity	95% non condensed
Protection rating	IP65 for Head Assembly and Outdoor Unit, IP20 for Indoor Unit

DATA IN / OUT

Gigabit Ethernet - FO	MM fiber SX interface at 850 nm with SC connectors (SM LX optional)
GigaBit Ethernet - UTP	1000BaseT, RJ-45 socket

POWER

Power required	230 VAC, 50 W max. (110 VAC and 48 VDC optional)
Power to head	2 x 12 VDC, 2x1 A max.

PHYSICAL CHARACTERISTICS

Head Housing	Aluminum & Stainless Steel
Weight	32 kg
Dimensions (with cover and Alignment Unit, mm)	750 x 467 x 480

OPTICAL CHARACTERISTICS

Wavelength	785 nm
Beam divergence	0.5 - 15mrad
Receiver acceptance angle	8.5 mrad

ORDERING INFORMATION

LB-2500E1000/xx/yyy/z LaserBit SuperGig LINK. 1 Gbpt/sec. Ethernet interface. Maximum 2500 m distance between heads. Incl. Bracket
 xx - interface type (tp, sm,mm), yyy - power type (115,230,-48), z - window heater option (s,h)

OPTIONS

LBView	Management Indoor Unit with built in HTTP server and SNMP Agent (per HEAD)
BitView	IP based graphical management platform (Windows2000, Windows NT 4.0, Windows XP)



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