

LaserBit GIGAPICO Series

Laser Based Free Space Optical Communication System



Features:-

- Free Space, Wireless Communication
- Compact System Design
- Full Duplex Wire Speed Connectivity
- Industry Standard Fibre Optic Interfaces
- Secure Data Transmission
- Quick Installation & RE-DEPLOYMENT
- Built-in signal monitoring

Applications:-

- Provide GIGABIT Speed Wireless Connectivity instead of Fiber or where Fiber is not available
- 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

GIGAPICO Overview

The GIGAPICO series of products deliver ultra high bandwidth wireless connectivity that is unique to free space laser based systems. The applied technology is based on the highly successful PINTO series of products designed to deliver easy-to-use and cost-effective solutions for high speed wireless connections featuring lightweight compact mechanical design.

GIGAPICO systems provide GIGABIT Ethernet wire speed full duplex data transfer up to 200 meters and require no adjustment or configuration on site, which makes the installation fast and easy. They can be ordered with an IP based SNMP compatible device management that allows remote control and monitoring of the equipment. 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. **A LaserBit link can be considered as a virtual fiber in the air.**

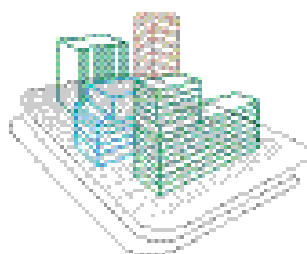
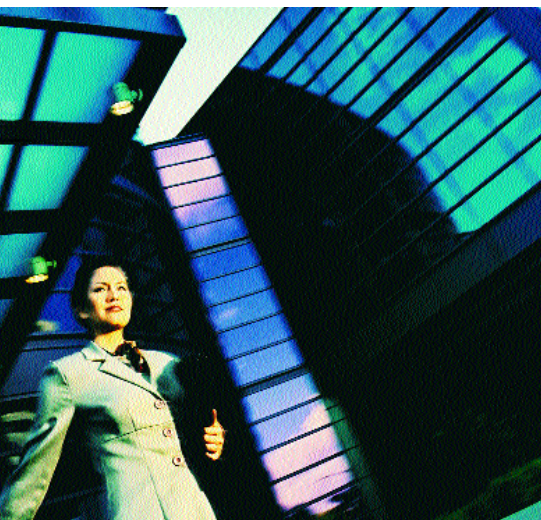
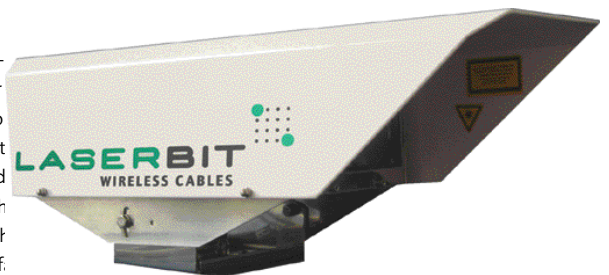
Product Description

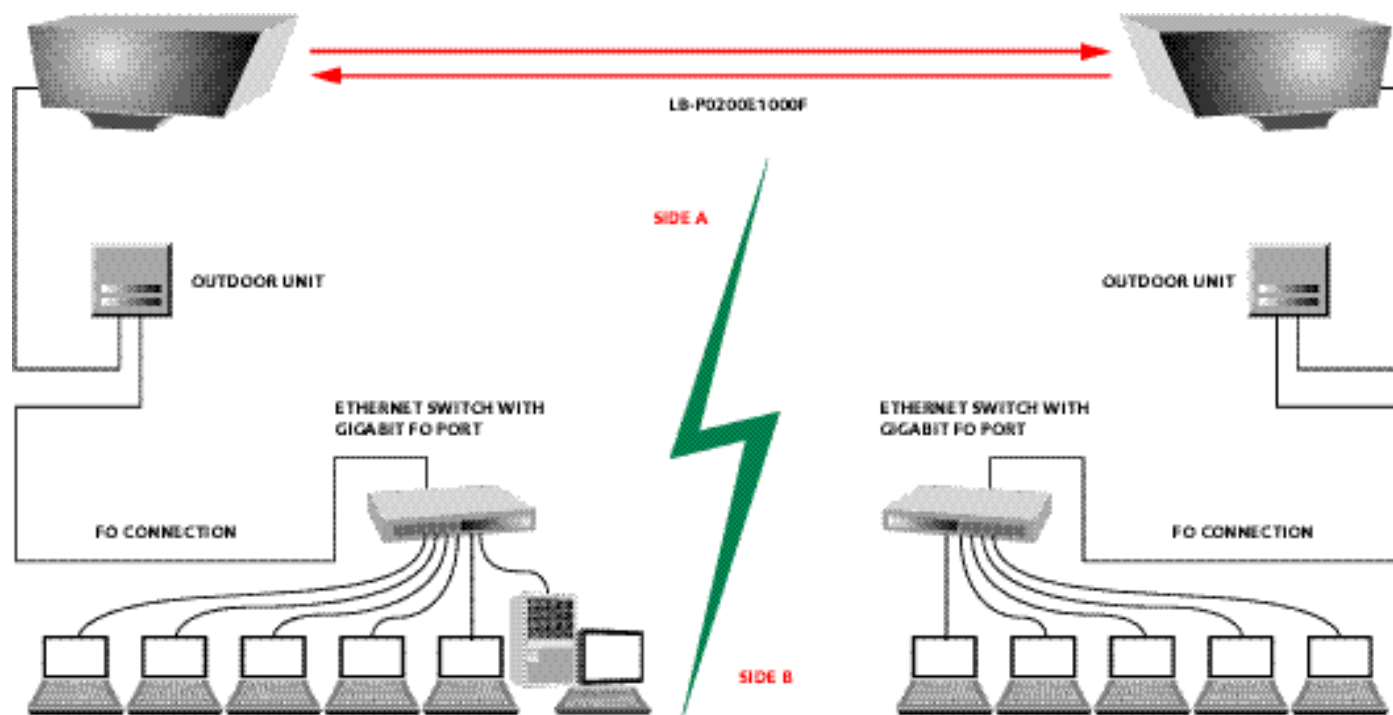
The LaserBit GIGAPICO system comprises of two Laser Heads, two Outdoor Interconnection Units (OIU) and two sets of interconnection cables — one at each end. The Laser Heads are installed outdoors, where a clear optical path exists between the two sites. Next to the Outdoor Interconnection Unit provides for 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.

A variety of standard fiber interfaces are available for easy network integration. The system contains a built-in signal monitoring unit, which features a visual signal strength indicator and LINK status information accessible on the rear of the head assembly. The optional IP Based Management Hardware is placed in an Indoor Interconnection Unit (IDU). The bar graph of the IDU displays the actual signal strength level while the LED indicators show the presence of minor or major alarm conditions. With the help of the relay contacts an external alarm monitoring equipment may be connected to the system to further process the alarm signals. In addition to the above LaserBit's BitView™ software allows the monitoring of the link's operation through a proprietary graphical interface (GUI) via Ethernet or RS-232 ports or a third party SNMP manager via TCP/IP connection.

Investment Protection

Industry standard fiber optic interfaces and a clear upgrade path for higher bandwidth protect the customer's investment in LaserBit systems. Additionally, GIGAPICO systems offer high level of network flexibility due to their extremely fast and easy installation method, which makes them ideal to follow network topology changes.





LaserBit GIGAPICO Series - Technical Specifications

ELECTRICAL CHARACTERISTICS

Light source	Laser Diode
Laser diode power	1 x 25 mW
Detector	APD Photodiode
Dynamic range	>30 dB
Bandwidth	1.25 Gbps
BER	< 10 ⁻⁹
System latency	< 50 ns

DATA IN / OUT

Gigapico Ethernet SC connectors (SM LX optional)	MM fiber SX interface at 850 nm with SC connectors
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PHYSICAL CHARACTERISTICS

Head Housing	Stainless steel
Weight	6.5 kg
Dimensions (with cover and Alignment Unit, mm)	485 x 216 x 175

ORDERING INFORMATION

LB-P0200E1000F	LaserBit GIGAPICO LINK. 1 Gbps/sec. Ethernet interface. Maximum 200 m distance between heads, MM FO connection (SX interface with SC connectors). Incl. Bracket
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OPTIONAL MODULES

LB-SM-OPT	Single Mode Driver Option, LX IF (1300nm) with SC connectors (additional cost to MM Optical Head per END)
LB-MGM-BASE*	Basic IP based management system (inc. 2 x LB-MGM-HW and BitView-Light-8), 110 VAC or 230 VAC PSU (per LINK)

Complete link management solution with PC based graphical interface and SNMP agent up to 8 links. See pricelist for full list of optional items.

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

POWER

Power required	230 VAC, 50 W max. (110 VAC and 48 VDC optional)
Power to head	2x8 VDC, 2x1 A max.

OPTICAL CHARACTERISTICS

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



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