

# LaserBit GIGAPINTO Series

Laser Based Free Space Optical Communication System



## Features:-

- Free Space, Wireless Communication
- Compact System Design
- Full Duplex Wire Speed Connectivity
- Industry Standard Fiber Optic Interfaces
- Secure Data Transmission
- Transparent Operation
- Quick Installation & 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 environments
- High bandwidth connection to the internet
- VoIP applications
- Backbone connectivity in metropolitan or 3G wireless networks
- Emergency Back-up to fiber



## Product Overview

GigaPINTO is a new addition to the GIGA series systems, the ultra high bandwidth productfamily of LaserBit's Compact portfolio. GigaPINTO systems provide Gigabit Ethernet wire speed full duplex data transfer up to 500 meters. Due to the compact mechanical design and factory set optical system GigaPINTO requires no adjustment or configuration on site, which makes the installation fast and easy. GigaPINTO systems feature multibeam technology and LaserBit's patented Automatic Inbound Power Control, which guarantee outstanding link availability. The product can be ordered with IP based SNMP compatible device management that allows remote control and monitoring of the equipment. Because they use infrared light as 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 since 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.**

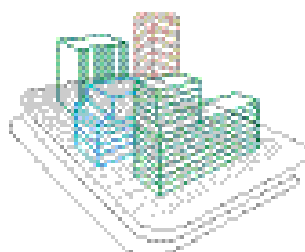
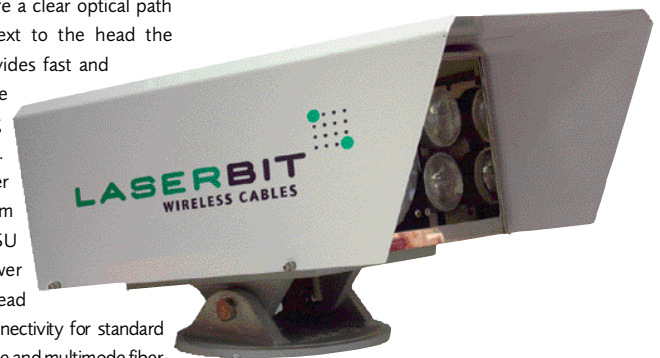
## Product Description

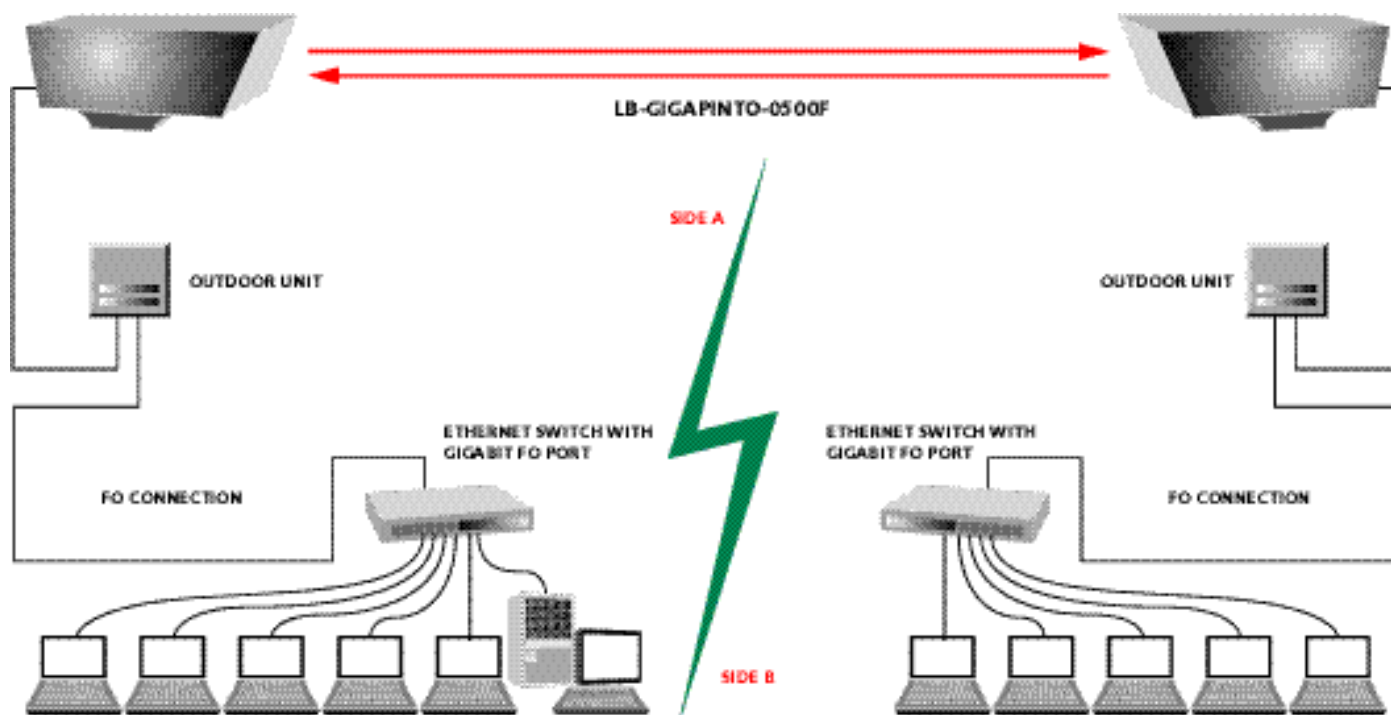
The GigaPinto system comprises of two Laser Heads, two Outdoor Interconnection Units (OIU) and two sets of interconnection cables — one at each end. The Laser Heads are installed outdoors, where a clear optical path exists between the two sites. Next to the head the Outdoor Interconnection Unit provides fast and easy interconnection between the laser head and the cable coming from the network equipment. Moreover 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 equipments. Both single mode and multimode fiber optic 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.

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 condition. 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 clear upgrade path for higher bandwidth protect the customer's investments in LaserBit systems. Moreover, GigaPinto 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 PINTO Series - Technical Specifications

### ELECTRICAL CHARACTERISTICS

Light source	Laser Diode
Laser diode power	2 x 25 mW
Detector	APD Photodiode
Dynamic range	>30 dB
Bandwidth	1.25 Gbps
BER	< 10 <sup>-9</sup>
System latency	< 50 ns

### DATA IN / OUT

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

Head Housing	Aluminium & Stainless Steel
Weight	18 kg
Dimensions (with cover and Alignment Unit, mm)	560 x 289 x 217

### ORDERING INFORMATION

LB-P0500-E1000F	LaserBit GigaPinto LINK. 1 Gbpt/sec. Ethernet interface. Maximum 500 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 (1300 nm) 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)

### 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 + 30VDC, 2x1 A max.

### OPTICAL CHARACTERISTICS

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



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