DATASHEET

Key features

PTP communication up to1Gbps
Ethernet connectivity from 20m to 1000m
Full duplex connectivity
Industry standard interfaces
Secure data transmission
Quick installation and re-deployment
Built-in automatic failover
License free operation

The AF RANGE products are the fifth generation of compact free space laser based systems from GEODESY-FSO designed to deliver a cost-effective solution for high speed wireless connectivity. The laser transmission carries the data using the concentrated laser beam and a unique modulation technique is employed to ensure error free data transfer over distances up to 1000 meters.
The transparent and wire speed data transfer together with virtually zero latency assures the easy integration of the system in all environments.
Because they use infrared light GEODESY-FSO 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. Basically, the GEODESY-FSO link can be considered as a virtual fibre in the air.
The GEODESY-FSO AF RANGE system comprises of two Laser Heads, and two High Power POE power supply. The Laser Heads are installed outdoors, where a clear optical path exists between the two sites. The system contains built-in signal monitoring unit, which features a visual signal strength indicator and LINK status information LCD display accessible on the rear of the lase head.
By utilizing standard network interfaces, GEODESY-FSO systems protect the customers' investments in long-term projects. Moreover, AF RANGE systems offer high level of network flexibility due to their extremely fast installation method, which makes them ideal to follow network topology changes.

Usage examples

PTP

Geodesy AF Series is a perfect solution to interconnect points with a full duplex 100Mbps speed

Part Nr	Recommended maximum installation distance (Clear Weather)	Recommended maximum Installation distance (@17dB/km)
PX-P0500E100/AF/TP	500 m	500 m
PX-P1000E100/AF/TP	1000 m	800 m
PX-P0500E1000TP/AF/TP	500 m	500 m

POE Available on selected models.

GeoDesy FSO
www.geodesy-fso.com

AF

Wireless

Electrical characteristics

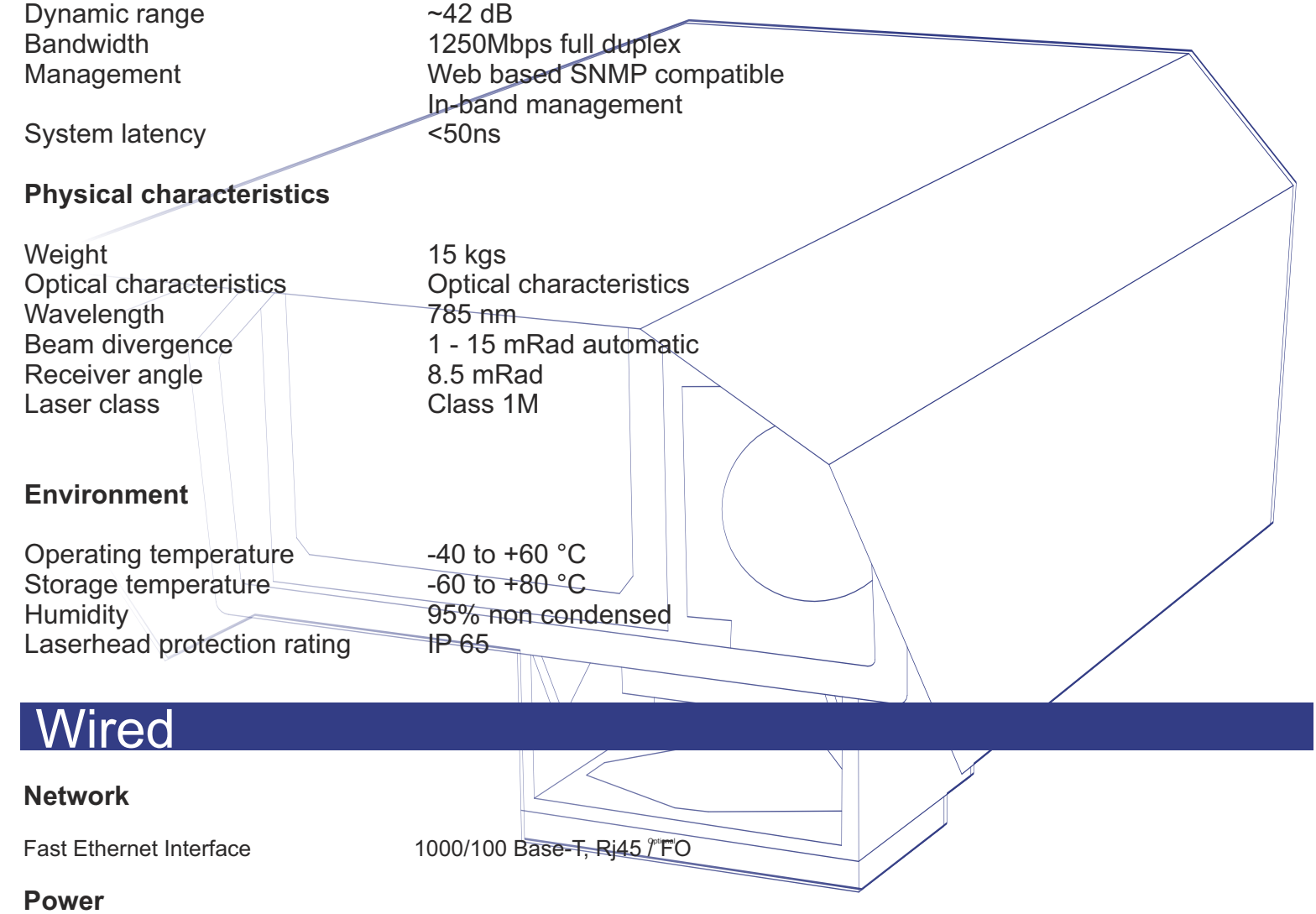
Light source	LaserDiode
Laser diode power	25 mW
Detector	SiAPD Photodiode
Dynamic range	~42 dB
Bandwidth	1250Mbps full duplex
Management	Web based SNMP compatible In-band management
System latency	<50ns

Physical characteristics

Weight	15 kgs
Optical characteristics	Optical characteristics
Wavelength	785 nm
Beam divergence	1 - 15 mRad automatic
Receiver angle	8.5 mRad
Laser class	Class 1M

Environment

Operating temperature	-40 to +60 °C
Storage temperature	-60 to +80 °C
Humidity	95% non condensed
Laserhead protection rating	IP 65



Wired

Network

Fast Ethernet Interface	1000/100 Base-T, Rj45 / FO optional

Power

Internal PSU power	115/230 vAC ~50Wh
Power to the head	POE Compatible 48 vDC *,**

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GeoDesy FSO has 120 years experience of manufacturing surveying equipment from our base at the Hungarian Optical Works MOM. Here we combine traditional manufacturing techniques with the latest manufacturing technologies. Using our knowledge of high efficiency optical systems and precision mechanical manufacturing GeoDesy have developed a range of high speed, low cost FSO products, becoming a leading player in the free space optical communication market. Our product range offers broadband, point to point connectivity enabling wireless networking over and above your current infrastructure, suitable for a wide range of applications.