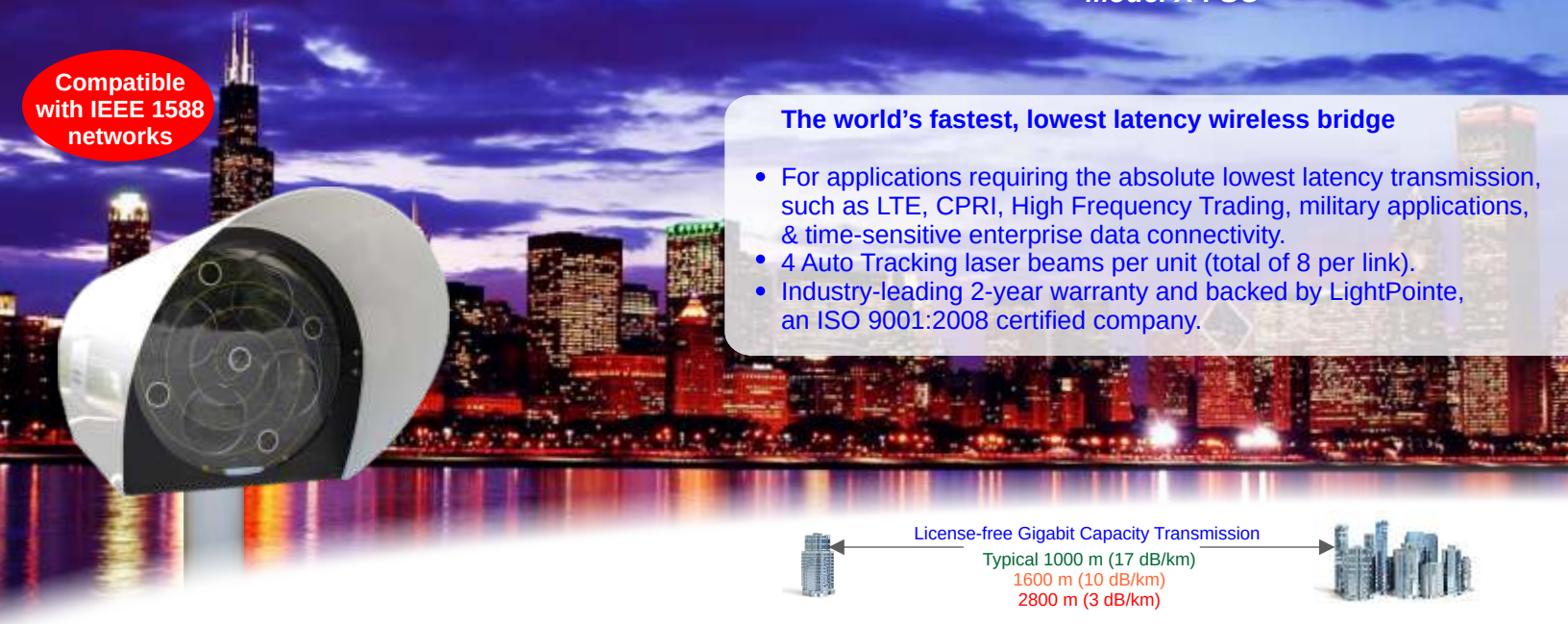
EXTREME LOW LATENCY LAYER 1 MULTI-LASER LINK

LIGHTPOINTE™ WIRELESS

Aire X-Stream™ Series Free Space Optics

Model X-FSO

Compatible with IEEE 1588 networks



The world's fastest, lowest latency wireless bridge

- For applications requiring the absolute lowest latency transmission, such as LTE, CPRI, High Frequency Trading, military applications, & time-sensitive enterprise data connectivity.
- 4 Auto Tracking laser beams per unit (total of 8 per link).
- Industry-leading 2-year warranty and backed by LightPointe, an ISO 9001:2008 certified company.

Ultra-Low Latency Point-to-Point Wireless Bridge

LightPointe's Aire X-Stream™ Series is ideal for ultra-low latency Gigabit Ethernet transmission. These state-of-the-art backhaul solutions can be utilized to easily establish point-to-point connectivity between buildings and/or towers in high speed Ethernet networks, including LTE, CPRI, and High Frequency Trading (HFT) networks. They are the fastest and most secure wireless bridges in the world—really!

With equipment latency of less than 20 *nano*seconds and full duplex layer 1 transmission transparency, the Aire X-Stream Series is perfect for organizations requiring the ultimate in extreme speed and low latency—even faster than optical fiber. Best of all, the *X-FSO* wireless bridge is license free worldwide, and immune to RF congestion and interference. And for those concerned about security, and due to the narrow and pencil-like transmission beam nature the signal, it is virtually impossible to intercept and regarded as the most secure of any wireless technology.

Applications

- Ultra-low latency faster-than-fiber connectivity—without trenching/installing fiber or the recurring costs of leased-line alternatives.
- Optimized for time sensitive applications such as LTE, High Frequency Stock Trading, and real-time Military Theater of Operations.
- Ideal for locations where radio interference and congestion, or licensing costs/delays, make installation of radio frequency alternatives impossible or too costly.
- Extreme long distance installations where daisy-chaining multiple units (back-to-back) may be required, while maintaining excellent transmission speed/low latency and high availability.
- IEEE 1588 networks (ultra-low packet delay variation/sub nanosecond).

Advanced Next Generation FSO Features

- 1250 Mbps, full-duplex for distances of up to 2,800 meters at 3dB/km (1,600m at 10dB/km; 1,000m at 17 dB/km).
- World's lowest latency PtP technology (less than 20 ns/nanoseconds terminal latency).
- Multi protocol support.
- Compatible with IEEE 1588 networks.
- Industry's only system with 4-Beam Auto Tracking, and Automatic Gain Control (total of 8 beams per link).
- Clock and Data Recovery (CDR) for daisy chaining.
- Cascadable back-to-back operation for extended links.
- No radio frequency interference or congestion issues.
- License-free worldwide.
- High quality ultra-precise German lenses.

Proven & operating today in the most demanding speed-sensitive networks

OPTICAL WIRELESS UNIT

Description	Free Space Optics wireless bridge
Receiver/Transmitter(s)	4 x VCSEL (4 transmitters and 4 receivers per linkhead; 8 total per link)
Dimensions (W x H x L)	321x297.5x620 mm (12.6x11.7x24.4 in)
FSO Head Weight	Without Pan/Tilt: 28 lbs (12.7 kg); With Pan/Tilt 33 lbs (15.0 kg)
Unit Shipping Weight	Each box inc.: 1 FSO head, Pan/Tilt mount, Power Supply, LM-UU, access.
Box A:	62 lbs (28 kg); 33”(.838m) x 17”(.432m) x 25”(.635m)
Box B:	62 lbs (28 kg); 33”(.838m) x 17”(.432m) x 25”(.635m)
Operating Voltage	48 VDC or PoE
Alignment System	Heavy duty pan/tilt alignment bracket
Operating Temperature	-25 C to 60 C (-13 F to 140 F)
Humidity Range	Up to 95% non-condensing
Power Consumption Max	40W
Immune to EMI & RF Interference	Yes
Built-In Alignment Telescope	Yes
Built-In Defroster	Yes
Bit Rate	1250 Mbps, full-duplex transparent
Operational Range	Typical .6 mile/~1000 meters (@17 dB/km attenuation)
Free-Space Wavelength	850 nm
Optical Receiver	Si APD
Receive Power Indicator	10-level bar graph
Status Indicator (LED)	Power, Overload, Loss of Sync, SFP link

NETWORK INTERFACE

Protocol/Data Rate	Layer 1 operation (GbE, CPRI); Compatible with IEEE 1588 networks
Physical LAN Network Interface	Copper RJ45, Fiber (LC Connector)
Interface wavelength	780 to 950 nm (Multi-mode / SX SFP); 1260 to 1360 nm (Single-mode / LX SFP)
Latency	< 20 nanoseconds
Management System/Protocol	Out-of-Band via 10/100 RJ45; Web interface with SNMP v1/v2c

REGULATORY

EMC	FCC PART 15, CE MARK
Laser Safety	Eye safe Class 1M laser product (IEC/EN 60825-1/A2)

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