AIRELITE™ G

OVERVIEW

LightPointe's Optical Wireless bridging solutions are field-proven on all continents and are ideally suited for LAN-to-LAN backbone connectivity without the need for time-consuming fiber trenching or costly recurring leased lines. Optical Wireless products are based on free space optics (FSO) technology, a low power infrared transmission technology that does not require any license for operation worldwide.

The AireLite G is the latest addition to the LightPointe Optical Wireless product line and the new flagship of LightPointe's high capacity single-beam, point-to-point Optical Wireless solutions, delivering real full-duplex Gigabit Ethernet throughput at a system latency of less than 50 microseconds. Additionally, the AireLite G offers several advanced features such as PoE operation, a web-browser-based and SNMP management, an integrated multiport Layer 2 switch fabric with multiple fiber and copper based network interface options, an integrated built-in alignment telescope, and an automatic lens defroster, just to mention a few. All features are designed within a compact, lightweight, fully outdoor rated and energy efficient package.

The AireLite G is targeted particularly at Enterprise LAN customers who seek a cost-effective, easy-to-install, high-performance alternative to leased lines when connecting campus buildings, or other remote locations. Operating at full-duplex GbE speed and at optical fiber-like system latency, the Airelite G is ideal for real-time bandwidth-intensive applications such as Voice-over-IP and video.

FEATURES AND BENEFITS

High Speed Connection	Real full-duplex Gigabit Ethernet throughput.
Ultra Low Latency	Fiber-like system latency (typically less than 50 microseconds)
Operating Distance	Recommended operational distance up to 500 meters.
Secure Operation	Highest level of physical transmission security due to narrow angle transmission beam.
Immune to RF Interference	All LightPointe Optical Wireless products are immune to radio frequency interference and spectrum saturation issues.
Network Interfaces	Flexible and user configurable SFP based optical fiber interface, support for standard multi-mode or singlemode GbE SFPs, and alternative 10/100/1000 RJ45 copper interface.
Upgradable Software	Ethernet based upgrade of System Firmware and Web Browser Management GUI
Low Voltage Design	Power over Ethernet (PoE)connection, no need for expensive high voltage power cabling.
Low Power Consumption	Total power consumption < 20W, uses less energy than a standard fluorescent light bulb.
AirePex™ Support	Integrated switch technology for redundancy/auto-failover operation to a secondary network path and/or add/drop network traffic.
Installation/Alignment	Built-in alignment telescope, RSSI receive signal bargraph LED, network status indicators and various system status LEDs on system backpanel.
Robust Product Housing	Weatherized, rugged and designed for outdoor installations in environments of -30°C to 60°C (-22°F to 140°F); sunshields are available for operation in hot, desert-like climate zones.
Lens Cover Defroster	Integrated internal heating element for low-temperature climates and lens cover defroster.
Network Management	Ethernet based RJ45 management connection, Web browser management GUI, fully integrated SNMP v1/2c (optional v3) management support, Alarm Reporting via SNMP traps, RMON counters, TELNET and separate RS232 terminal connection.
Eye safety	All LightPointe Optical wireless products are rated Laser Class 1M (eyesafe when beam is observed with the naked eye) according to the internationally recognized IEC/EN 60825-1/A2 laser eye-safety standard.

OUTDOOR UNIT

Description	Fixed Optics System with Manual Gain Control
Receiver/Transmitter(s)	One transmitter, one receiver
Dimensions (W x H x L)	215 x 200 x 400 mm (8.5 x 7.9 x 15.75 in)
Unit Weight	4.5 kg (9.9 lbs)
Unit Shipping Weight	16.4 kg (36 lbs) including mount, alignment bracket, PoE power injector
Operating Voltage	48 Vdc via PoE injector
Alignment System	Heavy duty pan/tilt alignment bracket
Operating Temperature	-30 C to 60 C (-22 F to 140 F)
Humidity Range	Up to 95% non-condensing
Power Consumption Max	20W
Immune to EMI & RF Interference	Yes
Built-In Alignment Telescope	Yes
Built-In Defroster	Yes

FREE SPACE

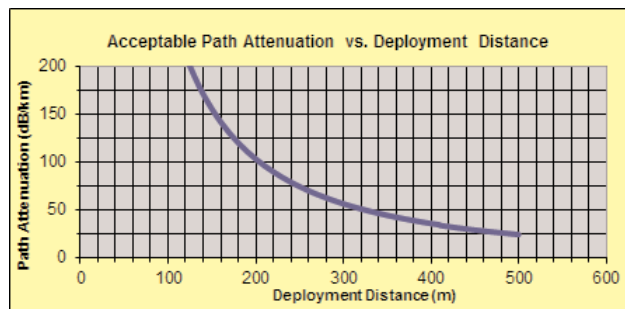|	
Bit Rate	1.25Gbps, full-duplex
Recommended Operational Range	up to 500 meters
Optical Transmitter	VCSEL
Free-Space Wavelength	850 nm
Optical Receiver	Si APD
Receive Power Indicator	10-level bar graph
Status Indicator (LED)	Power, TX Data, LOS, Overload, Data In, Data Out

LAN NETWORKING INTERFACES

Protocol	802.3z, Gigabit Ethernet
Physical LAN Network Interface	Standard fiber SFP (1000Base-SX/LX, copper) and/or 10/100/1000 RJ-45 copper
Ethernet Data Rate	1250 Mbps (full-duplex)
Latency	< 50 microseconds (typ.)
AirePex™ support	Integrated multiport Ethernet switch for redundancy/failover and/or network traffic add/drop operation
Physical Management Interface	Inband via Ethernet connection or outband via separate 10/100 RJ-45 copper port
Management System	Integrated Ethernet based Web Browser GUI, SNMP v1/2c (optional v3), RMON, Alarm Reporting via SNMP traps, On-board History log file, TELNET

REGULATORY

EMC	FCC PART 15, CE Mark
Laser Safety	Eyesafe Class 1M laser product (IEC/EN 69825-1/A2)

DEPLOYMENT DISTANCES

Path Attenuation* (dB/km)	Visibility (m)	Fog Classification	Rain Classification
1.00	18,000	Clear	Mist < 2 mm (0.1")/hr
3.00	4,300	Light Haze	Light Rain < 6 mm (0.25")/hr
5.00	2,600	haze	Medium Rain < 12 mm (0.5")/hr
10.00	1,900	Thin Fog	Heavy Rain < 30 mm (1.2")/hr
17.00	750	Light Fog	Cloudburst < 55 mm (2.2")/hr
30.00	500	Moderate Fog	Monsoon < 130 mm (5.1")/hr
130.00	100	Dense Fog	---

* WMO model: Path Attenuation(dB/km) = 13/Visibility (m)

Welcome to LightPointe