

AireBridge SX with optional HyBridge feature for real-time monitoring & selection of best transmission method

AireBridge SX

- Software defined wireless bridge for maximum flexibility.
- All weather/always on capability with up to 2 Gbps aggregated link capacity.
- Aesthetic, compact design.
- The clear choice of IT professionals desiring wireless bridge reliability, maximum signal security, and fast ROI.

AireBridge: All weather/always-on secure data transmission

LightPointe's 2014 AireBridge SX wireless bridges offer highly competitive pricing, extreme value, and excellent data transmission security only possible with laser technology. Utilizing an advanced single laser and avalanche photo diode (APD), these bridges transmit and receive data simultaneously for full duplex connectivity. Each side of the link can be ordered in a 250 Mbps, 500 Mbps, or 1000 Mbps (GigE/GbE) configuration—or can be upgraded later via software keys.

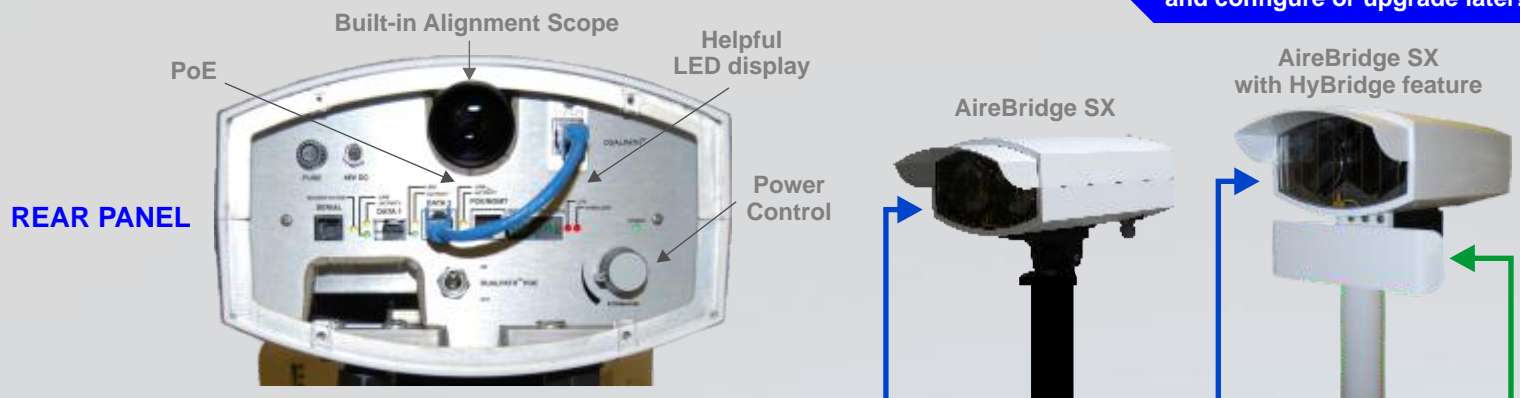
These “future proof” solutions are also available with LightPointe's patented HyBridge technology, which utilizes both laser and radio frequency transmission for nearly 100% reliability in all weather conditions. This optional real-time monitoring feature, which LightPointe patented, provides the best of both worlds in wireless transmission—highly secure, ultra fast laser throughput and integrated RF transmission.

Laser & General Product Features

- World's only Software Defined Free Space Optics (SD-FSO) bridges.
- Up to 2 Gbps aggregated link capacity.
- Full-duplex connectivity for highly secure transmission up to 1100 meters at 3dB/km (750m at 10dB/km; 600m at 17dB/km) with HyBridge technology option.
- Each side of the link can be ordered to transmit at 250, 500, or 1000 Mbps (asymmetric or symmetric).
- Optional HyBridge all-weather rtMAPS technology.
- Easy management via integrated AireManager web-based control system (SNMP v1/v2c; alarm reports; SYSLOG; user selectable in-band/out-of-band interface support; firmware upload; integration into SNMP manager with proprietary MIBs).
- Flexible connection options (RJ45 copper data interface, optional MM or SM fiber data interfaces).
- Industry-leading 2 year warranty.

Radio Features (optional/with HyBridge)

- AireBridge SX with optional HyBridge feature includes a turn-key 5.4/5.8 GHz radio, which uses flexible 5.4/5.8 GHz frequencies for widespread unlicensed usage, and worldwide license-free optical spectrum. Throughput is 150 Mbps half duplex.
- Maximized Distance DualPath™ feature enables longer distances due to rate adaptive use of multiple bands.
- Superior RF technology via both OFDM and 4 antenna/2x2 MIMO technology (higher data rates and lower interference in congested areas).
- Superior QoS due to Ethernet Port Flow Control and intelligent packet queuing, providing priority to voice/video traffic when switching to alternative RF path.
- Channel Shifting operates at frequencies different from those used in unlicensed 802.11 networks, for increased security. Links are undetectable by most 5 GHz devices.
- AES-256 encryption for optimum security.



LASER BRIDGE SPECS

Description	Fixed Optics System with Manual Gain Control
Receiver/Transmitter(s)	One transmitter, one receiver (total of 2 active/simultaneous beams for the link)
Optical Transmitter	VCSEL
Free-Space Wavelength	850 nm
Optical Receiver	Si APD
Bit Rate Options	250, 500, or 1000 Mbps options; full-duplex; each side is bandwidth configurable
Modulation	OOK (Optical carrier), 64QAM, 16QAM, QPSK, BPSK (RF carrier)
Receive Power Indicator	10-level bar graph
Dimensions (WxHxL)	215 x 200 x 400 mm (8.5 x 7.9x 15.75 in)
Unit Weight	4.5 kg (9.9 lbs)
Unit Shipping Weight	16.4 kg (36.9 lbs) inc. mount, alignment bracket, PoE power injector
Operating Voltage	Passive PoE injector (4,5+; 7,8-) or direct +48 Vdc
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
Built-In Alignment Telescope	Yes
Built-In Defroster	Yes

LAN NETWORKING INTERFACES

Protocol/Data Rate	802.3z, Gigabit Ethernet
Physical LAN Network Interface	Standard SFP interface for 1000Base-SX/LX (fiber), or 1000 RJ45 (copper) up to 1000 Mbps, full-duplex, rate adaptive
VLAN Ethernet Support	VLAN/802.1Q pass-through support
rtMAPS support	Optional integrated multiport Ethernet switch with integrated transmission channel monitoring and path selection (when ordered with HyBridge feature)
Physical Mgt. Interface	Inband via Ethernet connection or outband via separate 10/100 RJ-45 copper port
DualPath™ Interface (optional)	IP67 rated 10/100 RJ45 connector, non powered or passive PoE (4,5+; 7,8 -)
Management System	Integrated Ethernet based Web Browser GUI, SNMP v1/2c (optional v3), RMON, Alarm Reporting via SNMP traps, TELNET

RADIO FREQUENCY SPECS (IF ORDERED OR UPGRADED TO HYBRIDGE FEATURE)

Bit Rate	up to 150 Mbps
Processor	Atheros MIPS 24KC, 400 MHZ
Transmission frequencies	5.470 - 5.825 GHz (Manual or automatic country setting)
Channel width	(5 - 40 MHz) (Automatic or user selectable)
Dynamic Frequency Selection	Yes
Channel shifting support	Yes
Wireless Encryption	WPA/WPA AES-256
Antenna Gain	16 dBi
Polarization	Dual Linear

REGULATORY INFORMATION

EMC	Optical Wireless: FCC PART 15, CE Mark RF: FCC Part 15.247, IC RS210, CE MARK
Laser Safety	Eyesafe Class 1M laser product (IEC/EN 60825-1/A2)

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