LIGHTPOINTE
WIRELESS

HyBridge™ SX & SXR-5

- Faster than fiber point-to-point solution for businesses, government agencies and 4G/LTE carriers.
- Combines the superior security & speed of optical wireless transmission with radio backup for 99.999% availability.
- Aesthetic, compact design for sensitive installations.
- The clear choice of IT professionals desiring state of the art wireless capacity, reliability and fast ROI.

Hybrid Optical-RF Wireless Bridges for Enterprises & Carriers

LightPointe's innovative HyBridge™ Series combines the speed and security of industry-leading 4th generation optical wireless technology with radio frequency transmission. Based on 13 years of wireless experience, we've designed these bridges for maximum performance and unbeatable ROI. You will have the peace of mind of knowing that your network has the industry's fastest and most secure wireless technology *and* availability up to 99.999% — under all weather conditions. This makes the HyBridge Series a safe future proof investment.

These links include Adaptive Rate technology and LightPointe's exclusive DualPath™ feature, which automatically and seamlessly switches to a lower bandwidth mode if weather conditions warrant, then automatically goes back to "full throttle" optical transmission for performance and security surpassing all other wireless solutions.

Optical Wireless/System Features

- High speed full-duplex Gigabit connectivity for highly secure, reliable transmission up to a half mile/~750m.

- DualPath™ architecture (patented) for up to 99.999% network availability, even in dense fog.

- Integrated optical, radio and antenna components for a complete solution (easy install and attractive design).

- AirePex™ Intelligent Switching (patented) includes an algorithm to change between optical and RF transmission, preventing unnecessary switching.

- Intuitive AireManager™ Web interface allows links to be configured and monitored from a network computer.

- SNMP V1/2c support and alarm reports via SNMP traps.

- Enhanced link distances due to use of optical wireless and RF.

Radio Frequency Features/Options

- *HyBridge SXR-5* includes a 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.

- *HyBridge SX* is a radio-ready solution (deploy radio/frequency band of your choice, now or later).

OPTICAL WIRELESS UNIT

Description	Fixed Optics System with Manual Gain Control
Receiver/Transmitter(s)	One transmitter, one receiver
Optical Transmitter	VCSEL
Free-Space Wavelength	850 nm
Optical Receiver	Si APD
Bit Rate	1.25Gbps, full-duplex
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

RF UNIT (INCLUDED WITH *HYBRIDGE SXR-5*)

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

LAN NETWORKING INTERFACES

Protocol/Data Rate	802.3z, Gigabit Ethernet
Physical LAN Network Interface	Standard SFP interface for 1000Base-SX/LX (fiber), or 1000 RJ-45 (copper)
VLAN Ethernet Support	up to 1000 Mbps, full-duplex, rate adaptive, VLAN/802.1Q pass-through support
AirePex™ support	Integrated multiport Ethernet switch with Dualpath™ failover support
Physical Mgt. Interface	Inband via Ethernet connection or outband via separate 10/100 RJ-45 copper port
DualPath™ Interface (*SX*)	IP67 rated external 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, On-board History log file, TELNET

REGULATORY

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)

WIRELESS