

AIREFORCE™ - WIRELESS BANDWIDTH EXPANDER



OVERVIEW

The AireForce™ Wireless Bandwidth Expander is an intelligent indoor unit (IDU) designed specifically to boost the bandwidth of LightPointe outdoor wireless system installations to multi Gbps bandwidth levels via a real-time hardware based compression platform. The AireForce entry level chassis comes equipped with one Data Network Mux (DNM) module to increase the transmission capacity of a LightPointe Gigabit Ethernet (GbE) outdoor wireless bridge to a stunning 4 Gbps. The module supports GbE as well as Fiber Channel (FC) protocols. A single chassis can be equipped with up to three separate DNM modules allowing for a total capacity increase of up to 12 Gbps by using additional transport links. This future proven architecture allows the user to create a massively scalable outdoor wireless network connection in the event that bandwidth requirements increase. Unlike other wireless transport solutions, the increase in bandwidth does not result in shortened deployment distances or reduced system availability.

The AireForce solution is targeted at Enterprise LAN customers and Service Providers seeking a cost-effective, easy-to-install, and highly scalable high-performance alternative to leased lines when connecting buildings, campuses or other remote locations. Customers that have already deployed a GbE LightPointe Outdoor Wireless Free Space Optics or Millimeter Wave (MMW) GbE solution can easily integrate the AireForce indoor unit into an existing application and boost the transmission capacity.

The AireForce system acts like a virtual fiber connection and operates at optical fiber-like system latency. It performs real time forward error correction (FEC), and can be equipped with a real-time, wire speed FIPS140-2 compliant AES-256 encryption engine.

FEATURES AND BENEFITS

Ultra-High Capacity Connection	Scalable Ethernet/ Fiber Channel capacity up to 12 Gbps.
Ultra Low Latency	Virtual-wire performance and optical fiber-like system latency to support real time and latency sensitive applications.
Deployment Flexibility	The AireForce IDU can be deployed with any Lightpointe Free Space Optics (FSO) and Millimeter Wave (MMW) GbE outdoor wireless solution.
Network Interfaces	Flexible, user configurable SFP based optical fiber interface, support for standard multi- or singlemode GbE and FC SFPs, as well as 10/100/1000 RJ45 copper interfaces.
Storage Area Network Support	Support for native Fiber Channel (FC) Storage Area network (SAN) protocols, compatible with leading network storage vendors.
Power Redundancy	Dual hot-swappable and variable line voltage power supply units.
Forward Error Correction	High performance bit and packet level Forward Error Correction (FEC) to ensure highest level of application performance.
Network Security	Optional In-Flight, Over-the-Air and real time AES 256 based (FIPS-140-2 Ready) traffic encryption. Per circuit based individual encryption of individual Virtual Wires and Dashboard for Global Encryption Key Management.
Network Management	Ethernet based Integrated Network Management System via GUI based AireForce System Manager Platform, SNMP v1/2c management support, Network Fault&Alarm Reporting, SLA Management, Time of Day bandwidth profiles and more...

Data Sheet

PRODUCT SPECIFICATION

General Description

Intelligent Indoor Unit (IDU) for wireless bandwidth expansion of LightPointe Outdoor Wireless Transmission Systems

Chassis

Specification	2U Rack Mountable Unit (ETSI, EIA 23" and EIA 19")
Interface Slots	3 DNM slots for Data Networking Muxes (front), 2 PSU slots (rear)
Total Power Consumption	30 W
Weight	10 kgs/22lbs
Dimensions(W x D x H)	17.5 x 19 x 3.5 in. (444 x 482 x 89 mm)
Operating Temperature / Humidity	+5°C to +40°C (41°F to 104°F) / 5% to 85% (none condensing)
Storage Temperature	-40°C to +70°C (-40°F to +158°F)

Power Supply Modules

Specification	Redundant Hot swappable Power Supply Units (PSU), 2 per chassis
Input Voltage/Current	100-240Vac @50/60 Hz / 6A max.
Output Power	377 Watts max.
Weight	1.36 kgs/3.0 lbs
Dimensions(W x D x H)	4.5 x 8.1 x 1.85 in. (114 x 205 x 47 mm)

Wireless Access Node (WAN) Interface

Physical Interface	2 x 10/100/1000 Base-TX RJ-45 and 2x 1000Base-SX/LX GbE SFP
Protocol	802.3 (Ethernet/Gigabit Ethernet)
Compatibility	All LightPointe Outdoor Wireless GbE Free Space Optics and Millimeter Wave Systems

Client LAN/SAN Interface

Physical Interface	SFP: 1000Base-T/SX/LX (GbE) and/or FC100-Mx/SM (FC)
Protocol	802.3z (Gigabit Ethernet), Software provisionable FC, FICON
Data Network Mux (DNM) modules	Stat-Mux up to 4 Client LAN/SAN ports to 2 WAN parts, Up to three DNM modules per chassis
Compression	Real-time, wire-speed hardware compression
Encryption	Optional wire-speed GbE AES-526 encryption (FIPS140-2 Ready)

Network Management

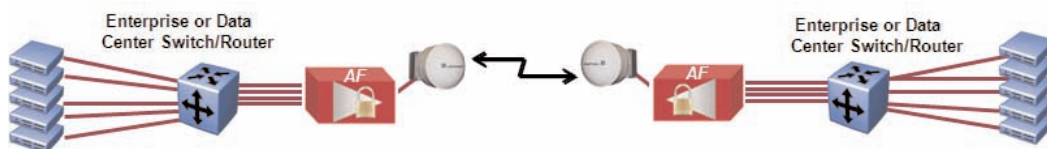
Physical Interface	10/100 RJ-45 Ethernet LAN connection, DB-9 RS232 connection
Management Options	Web browser GUI (AireForce™ System Manager), CLI, SNMP v1/2c support via standard and proprietary MIBs

Regulatory Compliance

EMC	FCC Part 15 ClassA EN 55022 Class A EN 55024 EN 300 386 Class A, other than telecommunications centers
Safety	FDA 21 CFR 1040.10 UL 90950-1 CAN CSA 60950-1 IEC/EN 60950-1 IEC/EN 60825

TYPICAL APPLICATION SCENARIO

FOR DEPLOYMENT DISTANCES SEE LIGHTPOINTE OUTDOOR WIRELESS DATASHEETS



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