FlightSpectrum™

OVERVIEW

The first Optical Wireless solution installed in a major telecommunications carrier network—and now deployed in 60 countries—the FlightSpectrum is the perfect balance of carrier-proven performance and price. Optical Wireless solution is available for 4X E1, 8X E1 and 16X E1 license-free connectivity in Mobile Wireless Carrier networks. At the heart of the FlightSpectrum is a two-beam, two-receiver design that enables connectivity at distances of 4 kilometers for backhaul applications and other wireless network applications. FlightSpectrum is the original benchmark that led the way for global mainstream adoption of Optical Wireless products based on free-space optics (FSO) technology. The FlightSpectrum is ideal for price-sensitive wireless service provider customers seeking an interference-free and license-free connectivity alternative to traditional radio frequency or leased E1 lines. Available in a data rate of 40 Mbps, the FlightSpectrum integrates easily into mobile wireless service provider network infrastructure.

FEATURES AND BENEFITS

- Variable Mbps Throughput – Full-duplex transmission, enabling up to 16 E1/T1 connectivity.
- Distance Rated at 4 km – Up to 2.5 mile operational range for tower-to-tower connections.
- Immune to Radio Frequency Interference – License-free worldwide and immune to spectrum issues of licensed or unlicensed radio frequency solutions.
- Multi-Beam Design – Two-beam, two-receiver design for higher performance.
- Multiple E1 Capacity – Up to 16 E1 connectivity when combined with our FlightMux solutions.

Data Sheet

OUTDOOR UNIT

Description	Two-Beam Fixed Optics System
Receiver/Transmitter(s)	Two receivers, two transmitters
Dimensions (W x H x L)	300 x 300 x 640 mm (11.8 x 11.8 x 25.2 in)
Unit Weight	13.5 kg (29.7 lbs)
Shipping Weight	23.6 kg (52 lbs) x 1 linkhead
Operating Voltage	90 to 240 V (50/60 Hz) or +/– 48 V DC
Operating Temperature	-25 C to 60 C (-13 F to 140 F)
Humidity Range	Up to 95% non-condensing
Power Consumption Max	20 W
Immune to EMI & RF Interference	Yes
Built-In Alignment Telescope	Yes
Built-In Defroster	Yes
Manual Gain Control	SNMP Network Management Option

FREE SPACE

Bit Rate	FS2 = 4x E1, 8x E1 or 16x E1 solutions

Operational Ranges (At 5dB System Fade Margin)

	Light Haze Light Rain	Thin Fog Heavy Rain	Moderate Fog Monsoon
	-3 dB	-10 dB	-30 dB
FS2	4.0 km	1.9 km	900 m

Free-Space 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

SINGLEMODE FIBER BETWEEN INDOOR UNIT & OUTDOOR UNIT

Protocol	E1; 2.048 Mbps; framed/unframed through optical multiplexer indoor unit
System Interface	SC Connector
Interface Wavelength	1270 to 1350 nm
Optical Receive Power	-8 to -31 dBm
Optical Transmit Power	-8 to -15 dBm

CLASSIFICATION

IEC/EN 60825-1/A2	Class 1M

INDOOR UNIT

Description	E1 Optical Multiplexer
E1 Interfaces	4, 8 or 16 E1/G.703 channels with RJ-45 and BNC[1] connector
System Interface	Singlemode fiber with SC connector
Handset Interface	RJ-11 connector for order-wire point-to-point voice connection
Status Indicators (LED)	Power, system interface and E1 channel monitoring
Dimensions	440 x 220 x 40 mm (17.3 x 8.5 x 1.7 in)
Operating Voltage	65 to 260 V (50/60 Hz) or - 48 V DC
Operating Temperature	0 C to 50 C (32 F to 122 F)
Power Consumption Max	10 W

[1]BNC connector not available for FlightSpectrum 8x E1 and 16x E1

AIRLINX Communications, Inc.
Box 253
Greenville, NH 03048
E-mail: sales@airlinx.com
Tel: (888) 224-6814
Fax: (603) 878-0530