

Free Space Optics (FSO) CableFree Access Range Overview



About Wireless Excellence

Founded in 1996 and with headquarters in Oxford UK, Wireless Excellence Limited is a leading designer and supplier of outdoor and indoor Broadband Wireless communication products.

With a complete range of solutions including Radio, Microwave, Millimeter-Wave, Free Space Optics, WiFi and 4G/LTE solutions, customers in over 80 countries have chosen Wireless Excellence as the “one stop shop” solution of choice for dependable wireless networking.

About FSO

CableFree FSO Technology uses directional beams of Infrared light for communication and does not require RF spectrum to operate. Capacity up to 1.5 Gbps and distances of up to 4km are possible depending on region.

CableFree FSO links have been deployed in many countries including major telecom and corporate networks, and have many advanced features which increase flexibility, reliability, performance, management capability and total-cost-of-ownership.

System Features

- Full-duplex bandwidth from 1.5Mbps up to 155Mbps
- Range variants support links up to 4,000m
- Fully upgradable via plug-in interface modules
- Rugged environmental IP65 waterproof enclosure
- Full range of PDH & SDH Copper & Fibre interfaces
- Automatic Transmit Power Control (ATPC)*

Applications

- Wireless Voice, Data and Video transport
- Last-mile network connections
- GSM & 3G Cellular network interconnect
- Fast Roll-out & Temporary Deployment
- Fibre Resilience

Product Variants & Specs

System Variant	A1000-LH	A1000	A2000	A4000
<i>Performance</i>				
Range	1,000m	1,000m	2,000m	4,000m
Bandwidth	100Mbps	155Mbps	155Mbps	155Mbps
Power Consumption	25-35W	25-35W	25-35W	25-35W
Operating Temperature	-25p...+60 deg C	-25p...+60 deg C	-25...+60 deg C	-25...+60 deg C
ATPC	No	Yes	Yes	Yes
Optical Wavelength	980nm	980nm	980nm	980nm
Transmit Power	+19.0dBm	+19.0dBm	+25.4dBm	+25.4dBm
Beamwidth	8mRad	8mRad	8mRad	5mRad
Safety Classification	Class 1M (IEC)	Class 1M (IEC)	Class 1M (IEC)	Class 1M (IEC)
Receiver Type	Enhanced APD	Enhanced APD	Enhanced APD	Enhanced APD
<i>Mechanical</i>				
Dimensions (mm)	522.5x371x211	522.5x371x211	522.5x371x211	522.5x371x211
Weight	9.0kg	9.0kg	9.0kg	9.0kg

Accessories

Mounting Brackets	Wall, Roof, Pole, Tower or Tripod mount options available
Indoor unit	Indoor network termination and SNMP V2 management interface. See SmartAgent
Alignment kit	Display of Local & Remote signal levels
Management Suite	Full range of solutions including LinkManager™, AlarmView™, ClusterManager™, GSM modem

System Specifications

Environmental	IP65 weather-sealed unit
Power supply	options for 115V ac, 230V ac, 48V dc
Alignment	Mechanical sight, 10-stage RSSI meter, FM audio circuit & tones, handheld test set.

*Not applicable to "LH" system derivations

Part Numbers

Product Code	Description
AX000-100-RJ45-ATPC	100Mbps, RJ45 Interface, ATPC
A1000-100-RJ45-LH	1km, 100Mbps, RJ45 Interface, No ATPC
AX000-100-MMSC-ATPC	100Mbps, Multimode SC Interface, ATPC
AX000-155-MMSC-ATPC	155Mbps, Multimode SC Interface, ATPC
AX000-155-SMSC-ATPC	155Mbps, Singlemode SC Interface, ATPC

X: Variable Value. 1, 2 or 4 specify 1km, 2km or 4km.

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