CableFree
Wireless Excellence

Free Space Optics (FSO)
CableFree FSO Network Interface Modules
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.
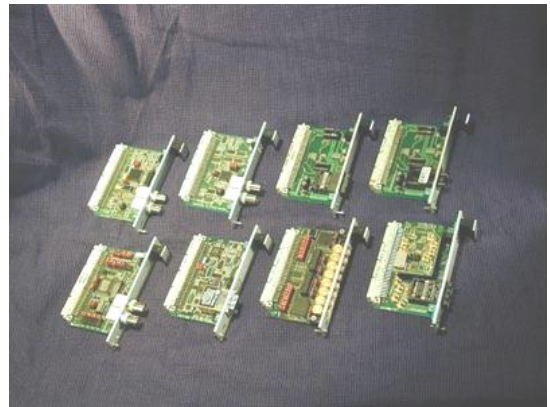
Summary

The CableFree range of FSO products from Wireless Excellence feature removable modular network interfaces. The interfaces may be swapped out to achieve capacity upgrades and change-of-use for FSO links by trained installation personnel. Please consult the installation manual before proceeding with any upgrades.

Features

- Plug directly into CableFree FSO units or optional IDU

- Upgradeable bandwidth from 1.5Mbps up to 622Mbps

- Future-proof protection of communication hardware

- Used in all CableFree system types

- Fully field-upgradeable in minutes

- Reduced inventory & spares requirements

- Enables change-of-use and data formats

- All interfaces ITU & IEEE standards-compliant

Applications

- Enterprise Voice & Data Networks

- Telecom Service Providers

- Broadcast Television

- CCTV Video

Enterprise Network Data Interfaces

Interface Type	Order Code	Connectors	System Supported	Range Supported
Data Networking				
Ethernet 10BaseT	10M-RJ45	Twisted-pair RJ45	Access, 622, Gigabit	4,000m
Ethernet 10BaseFL	10M-MMST	Fibre-optic ST 850nm	Access, 622, Gigabit	4,000m
Fast Ethernet 100BaseTX	100M-RJ45	Twisted-pair RJ45	Access, 622, Gigabit	4,000m
Fast Ethernet 100BaseFX	100M-MMST	Fibre-optic ST 1310nm	Access, 622, Gigabit	4,000m
Gigabit Ethernet 1000BaseSX	1000M-MMSC	Fibre-optic SC 850nm	Gigabit	2,000m
Gigabit Ethernet 1000BaseLX	1000M-SMSC	Fibre-optic SC 1310nm	Gigabit	2,000m
Gigabit Fibre Channel	1062M-MMSC	Fibre-optic SC 1310nm	Gigabit	2,000m
ATM 155Mbps	155M-MMSC	Fibre-optic SC 1310nm	Access, 622	4,000m
ATM 622Mbps	622M-MMSC	Fibre-optic SC 1310nm	622	2,000m
Multiplex Voice & Data				
Ethernet 10Mbps + E1 (10+2) - 10BaseT	10M-RJ45/ E1-BNC	Twisted-pair RJ45 + 2xBNC 75ohm	622	2,000m
Ethernet 10Mbps + E1 (10+2) - 10BaseFL	10M-MMST/ E1-BNC	Fibre-optic ST 850nm + 2xBNC 75ohm	622	2,000m
Fast Ethernet 100Mbps + E1 (100+2) - 100BaseTX	100M-RJ45/ E1-BNC	Twisted-pair RJ45 + 2xBNC 75ohm	622	2,000m
Fast Ethernet 100Mbps + E1 (100+2) - 100BaseFX	100M-MMST/ E1-BNC	Fibre-optic ST 1310nm + 2xBNC 75ohm	622	2,000m

Telecommunication Interfaces

Interface Type	Order Code	Connectors	System Supported	Range Supported
PDH interfaces				
1x E1/G703 2Mbps single channel	1E1-BNC	2x BNC 75ohm Twisted-pair RJ45	Access, 622, Gigabit	4,000m
2x E1/G703 2Mbps (2x2)	2E1-BNC	4x BNC 75ohm 2x Twisted-pair RJ45	Access, 622, Gigabit	4,000m
4x E1/G703 2Mbps (4x2)	4E1-BT43	8x BT-43 75ohm 4x Twisted-pair RJ45	Access, 622, Gigabit	4,000m
12x E1/G703 2Mbps (12x2)	12E1-BNC	24x BNC 75ohm	Access, 622, Gigabit	4,000m
16x E1/G703 2Mbps (16x2)	1000M-SMSC	24x BNC 75ohm	Access, 622, Gigabit	4,000m
8Mbps E2/G703 single channel	E2-BNC	2x BNC 75ohm	Access, 622, Gigabit	4,000m
34Mbps E3/G703 single channel	E3-BNC	2x BNC 75ohm	Access, 622, Gigabit	4,000m
US-Standard interfaces				
1x T1 1.544Mbps single channel	1T1-BNC	2x BNC 75ohm Twisted-pair RJ45	Access, 622, Gigabit	4,000m
2x T1 1.544Mbps single channel	2T1-BNC	4x BNC 75ohm 2x Twisted-pair RJ45	Access, 622, Gigabit	4,000m
4x T1 1.544Mbps single channel	4T1-BNC	8x BNC 75ohm 4x Twisted-pair RJ45	Access, 622, Gigabit	4,000m
6Mbps T2 single channel	T2-BNC	2x BNC 75ohm	Access, 622, Gigabit	4,000m
45Mbps T3/DS3 single channel	T3-BNC	2x BNC 75ohm	Access, 622, Gigabit	4,000m
51Mbps STS-1 single channel	STS1-BNC	2x BNC 75ohm	Access, 622, Gigabit	4,000m
SDH interfaces				
155Mbps STM-1 Sonet /SDH interface	155M-SMSC	Fibre-optic SC 1310nm	Access, 622	4,000m
622Mbps STM-4 Sonet /SDH interface	622M-SMSC	Fibre-optic SC 1310nm	622	2,000m

Video Interfaces

Interface Type	Order Code	Connectors	System Supported	Range Supported
Broadcast Television				
SMPTE Serial Digital 143,177,270,360,540Mbps	SDI-540	2x BNC 75ohm	622	2,000m
SMPTE HD Serial Digital 1.485Gbps	HD-SDI-1485	Fibre-optic SC 1310nm	Gigabit	2,000m
Broadcast Composite Video single channel	B-1CV	2x BNC 75ohm	Access, 622	4,000m
CCTV Video				
External Video-IP Codecs are recommended	-	BNC 75ohm + aux	Access, 622	4,000m

For Further Information

For more information about CableFree FSO network interfaces or CableFree FSO products, please contact Wireless Excellence Limited

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