

Free Space Optics (FSO)
CableFree FSO alignment module
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.

Description

CableFree FSO Alignment Modules are used to ensure optimum alignment and rapid installation of FSO links. Installers use the Alignment Modules during the alignment process to talk to colleague at the remote end of the link and to convert local and remote RSSI into audible beeps. The Alignment module generates the FM audio signal from the microphone and controls whether the FM audio or Data is transferred from the local head over the laser link to the remote laser head. It also displays link statistics (both local and remote) including firmware versions of the laser head and the alignment module. The higher the pitch and the higher the frequency of tones the stronger the RSSI at the local head. The local RSSI tones are NOT heard through the headphones at the local end. The tones that can be heard through the headphones are generated at the remote end. The alignment module is used to set the optical output power of the laser either automatically or manually using the Automatic Transmit Power Control feature.

Alignment Module Features

- On-screen readout of link performance
- Duplex Audio voice circuit
- Audible tones ensure rapid alignment
- Controls ATPC features
- Used to align CableFree FSO units

Benefits

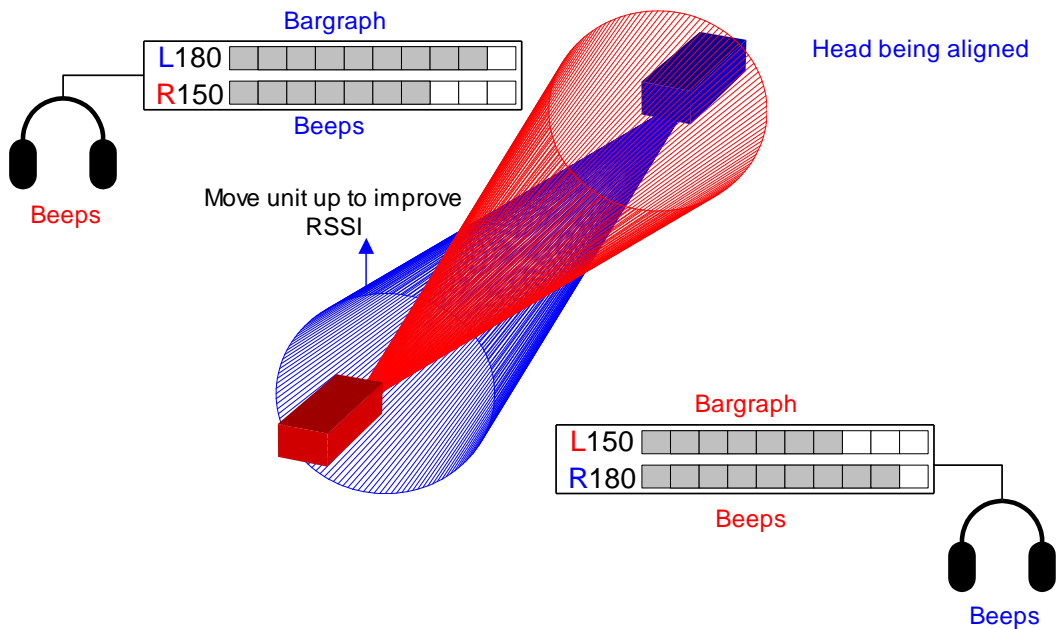
- Saves time on site
- Ensures rapid, accurate alignment
- Can be used to re-align a “live” link without outage
- Simple at-a-glance diagnosis of link statistics
- Audio voice circuit saves GSM/cell phone calls
- Local & Remote RSSI means a “one person swap” for maintenance is possible

Product Specifications

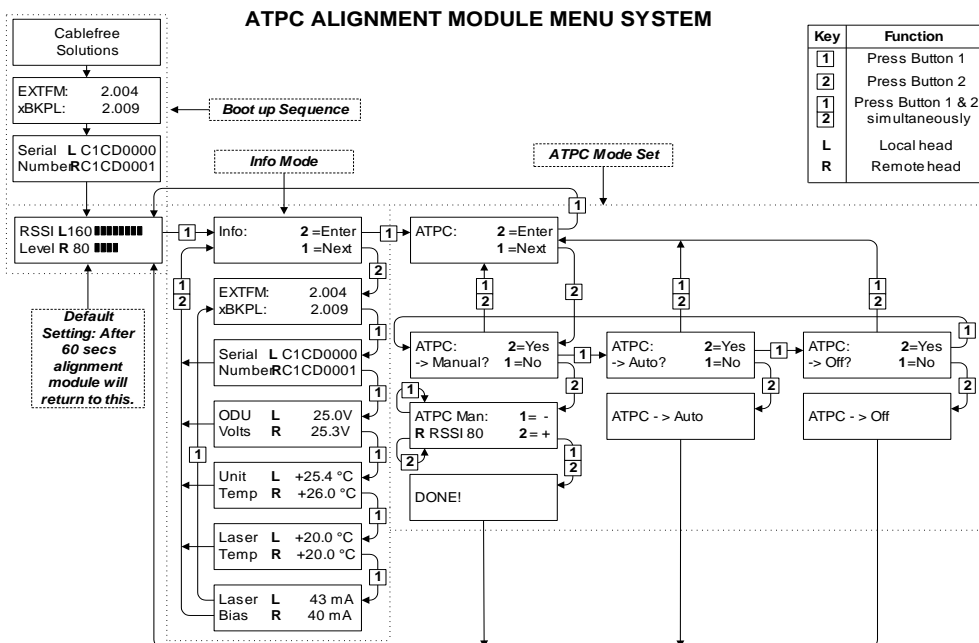
| Specification | FSO Alignment Module |
|-----------------------|---|
| <i>Connectivity</i> | |
| FSO connector | 15W “D” connector |
| Audio Circuit | Headset with microphone |
| Audible tones | Inbuilt speaker |
| Switches | FM voice/data mode, Audible tones on/off |
| Buttons | 2-button menu system views status and controls ATPC |
| <i>Indicators</i> | |
| LCD Display | Onscreen display of RSSI (signal level), ATPC modes, temperature, serial number etc |
| LEDs | Power and FM lock (incoming voice) |
| <i>Environmental</i> | |
| Power Consumption | 3.84 W |
| Operating Temperature | -20...+60 °C |
| <i>Mechanical</i> | |
| Dimensions (mm) | 150 x 70 x 30mm (excluding headphones) |
| Weight | 0.35 kg |



FSO Alignment Principles



ATPC alignment module menu system



For More Information

Contact Wireless Excellence Limited for more information on our Installation & Management solutions.

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