

Application Note  
Broadcast Television and Satellite Uplink Connections  
10 Gigabit Wireless Networks



CableFree FSO links carrying live 1.485Gbps HD-SDI broadcast video streams at London 2012 Olympics

### 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/5G/LTE, customers in over 80 countries have chosen Wireless Excellence as the “one stop shop” solution of choice for dependable wireless networking.

## Scenario

Outside Broadcast, News Gathering and Satellite Uplinks reporting demand innovative solutions to communications problems – and with today's all-digital environments, high integrity feeds and very high data rates such as 270Mbps SDI/ASI and 1.485Gbps HD feeds are often required.

Connecting remote cameras to OB vans, mixing/edit facilities or connecting feeds between difficult-to-access areas and tall buildings creates problems sometimes not well suited to traditional leased-line, fibre-optic, copper cable or microwave links.

Wireless Excellence solves the problem with high-capacity, highly reliable wireless solutions with low cost of ownership. CableFree products offer up to Gigabit capacity throughput and are installed in hours, not weeks.

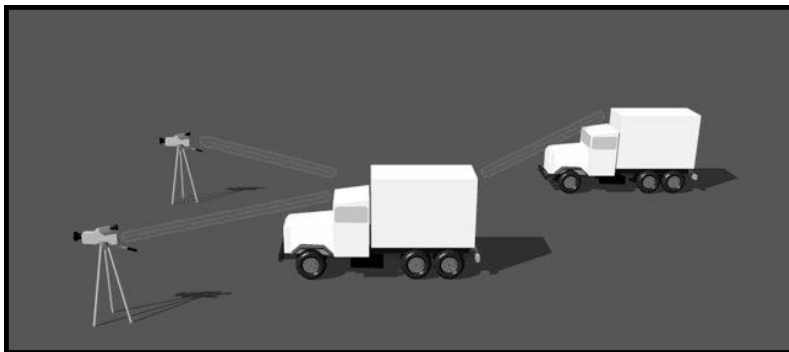
## Solution

A CableFree wireless solution offers the following features and benefits:

High Performance	1.5Gbps using FSO, 10Gbps+ MMW, 6Gbps Microwave, 550Mbps using Radio
Rapid installation:	15 minutes deployable on tripods
Highly reliable:	99.999% availability achievable
License-free Operation:	No fees to pay on license free bands
No monthly rental fee:	Low maintenance solution
Diverse technology options:	Complete range of FSO, Broadband Radio, Microwave, MMW, WiFi
Fully manageable:	Advanced software tools
Resilient solutions:	1+1 Hybrid FSO+RF resilient link options
Highly Secure:	Proven inherently secure technologies
Low Total-Cost-of-Ownership (TCO):	Moveable asset
Safe & Environmentally friendly:	Low disruption during installation

CableFree products are field-proven, with thousands of deployments in over 80 countries since 1997. Excellence in performance and reliability are not sacrificed in providing highly competitive priced solutions together with a comprehensive range of support services.

## Application Diagram



Two or more vehicles or buildings are connected by CableFree wireless products. Clear Line-of-Sight (LOS) for FSO or Near-Line-of-Sight (NLOS) for radio is required.

The customer data (video, data and/or voice) is connected to the wireless units which can be mounted on tripods, rooftops, towers, poles or behind windows.

For permanent installation a site survey is recommended before installation, to determine suitable mounting points, location of cable runs etc.

Installation involves physically mounting the equipment, aligning it, connecting data and power circuits and commissioning.

## Recommended Products

CableFree Gigabit FSO	HD-SDI 1.485Gbps up to 2km
CableFree AC-MIMO	Radio links up to 550Mbps, range up to 40km
CableFree MW	Licensed Microwave links up to 6Gbps, range up to 100km
CableFree MMW	60/70GHz Millimeter Wave links up to 10Gbps+, range up to 10km
CableFree WiFi	High performance WiFi for indoor and outdoor coverage

T: +44 (0870) 495 9169  
E: sales@cablefree.net  
W: www.cablefree.net

## For More Information

Please contact Wireless Excellence Ltd for information on the complete range of CableFree products and services

Wireless Excellence Limited  
The Oxford Science Park,  
G6, Magdalen Centre  
Robert Robinson Avenue,  
Oxford OX4 4GA