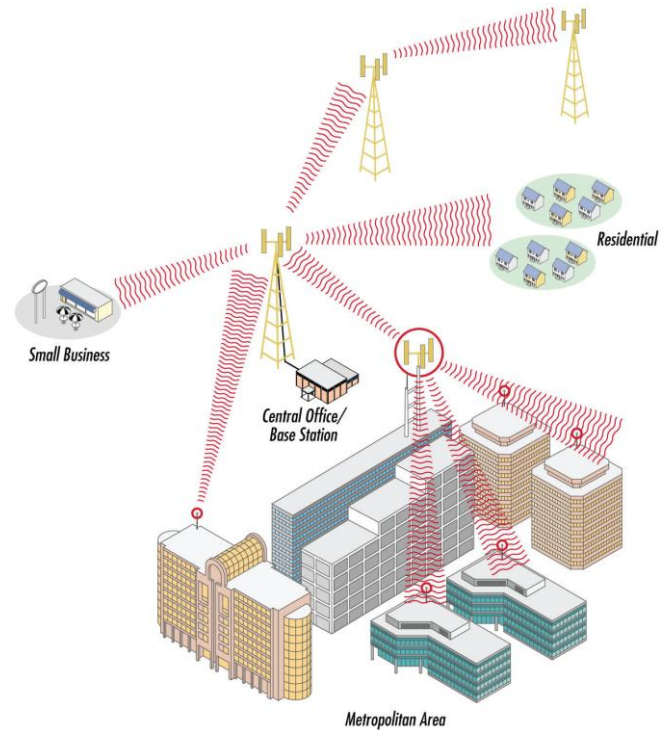


Application Note Wireless Internet Service Provider (WISP) 10 Gigabit Wireless Networks



CableFree Products used in Wireless ISP networks

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

Wireless Internet Service Providers (WISP) provide broadband wireless internet connections wherever traditional ADSL, cable or satellite services are either unavailable or uncompetitive.

WISP networks demand low-cost but highly-reliable equipment to provide “xDSL equivalence” of service with upgrade path for modern services demanding Quality of Service (QoS) such as VOIP, VOD and IPTV. WISP networks typically use licensed 3.5GHz or unlicensed 2.4 or 5.3/5.8GHz frequencies to provide connectivity both to end-users and for the back-haul network. Additionally, microwave, MMW and FSO links may be used in the network for long and short range, high capacity links.

Wireless Excellence provides high-capacity, highly reliable and rich-feature-set wireless products with high levels of integration and low cost of ownership. Extended frequency ranges of 2.3-2.5 and 4.9-6.1GHz are available. CableFree products offer up to Gigabit capacity, low costs, advanced feature-set compared to existing radio offerings and are installed in hours, not weeks.

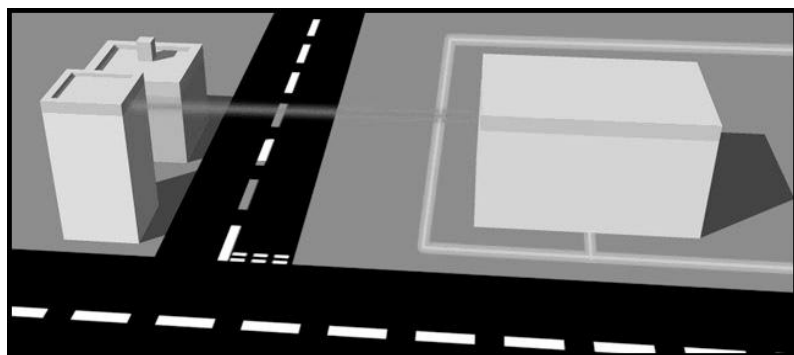
Solution

A CableFree wireless solution offers the following features and benefits:

High Performance	Gigabit Ethernet (1.25Gbps) using FSO and Microwave, 5Gbps using MMW, 550Mbps using Radio
Rapid installation:	3 hours achievable, 15 minutes temporary
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 UNITY 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. Network connections (10/100/1000) connect directly 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 Access FSO	FSO Connectivity up to 155Mbps, range up to 4km
CableFree Gigabit FSO	FSO Gigabit Ethernet and Fibre Channel 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

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For More Information

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

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