

UK Broadband Deploys Siklu E - band Millimeter Wave Gear to Backhaul London Small Cell Traffic

The Challenge

A cost-effective small cell backhaul solution to be mounted on lighting columns and would take up very little space.

The Solution

EtherHaul Gigabit Radios

The Results

UKB found the EtherHaul perfectly suited for street-level small cell backhaul with its small, unobtrusive antenna, low power requirements and cost-effectiveness. In deployment the equipment is providing very stable throughput.

Background

UK Broadband, the nation's largest commercial holder of radio spectrum suitable for 4G mobile services and fixed wireless solutions, has built a 4G network across central London. That network uses a combination of macro and small cells, with fiber as the primary backhaul medium and microwave backhaul to connect the macro cell sites and the fiber drop points. Typically, UK Broadband uses a combination of 42 GHz and 28 GHz broadband, where the company owns spectrum.

The UK Broadband 4G network also incorporates small cells installed on street lighting columns, similar to lightposts but thicker and with less sway. What UK Broadband needed was a cost-effective backhaul solution to be mounted on those columns that would take up very little space.

Business Challenge

- Cost-effective small cell backhaul
- Can be mounted on street lighting columns
- Unobtrusive system that can be installed quickly
- Low power requirements that could easily be provided on the street, via PoE or directly from the small cell
- Reliable performance

Deployment/System Integration

After ruling out standard microwave links because of their bulky dish size and weight, UK Broadband looked at the EtherHaul-1200 system from Siklu, the industry leader in the E-band millimeter wave market. UK Broadband was familiar with EtherHaul's compact size, low cost, and low power requirements, and recognized its potential in small cell backhaul.

With space at a premium on the street lighting columns, the backhaul antennas must be as compact as possible. As Steve Hobbs, CTO of UK Broadband, pointed out, "Siklu's dish is small and unobtrusive, and that was an important consideration".

The EtherHaul system also features low power requirements, which can be delivered via Power over Ethernet (PoE) or direct 48-volt power from the small cell. Those power features keep operating costs low even as EtherHaul delivers the capacity necessary for the backhaul traffic.

"The cost of Siklu compared to standard microwave is very competitive," Hobbs added. "The equipment itself is lower cost, and installing it can be done simply and inexpensively as well. All you need is line of sight to your cell site."

In Summary

As the company continues to expand the 4G network, UK Broadband intends to use EtherHaul across all of their street light column sites where there is line of sight and a transmission distance less than one kilometer.

"This is one more application where EtherHaul is the ideal solution," said Andrew Westerman, Siklu's Sales Director for Western Europe. "We have been at the forefront of millimeter wave backhaul design for a number of years, and we continue to innovate to enable operators to deploy mobile backhaul solutions and keep their total cost of ownership low."