

5G - Powering the future of telecoms

PROBLEM

Haverhill based Duvine Ltd, DC power solutions provider, has been selected by the University of Surrey's 5G Innovation Centre (5GIC) to power the development 5G Mobile Testbed, based on the University Campus in Guildford.

The intention is that the facility will steadily be upgraded from supporting a 4G network to a fully-fledged 5G system, enabling the development and testing of 5G prototype technologies in a real world situation.

The Innovation Centre is now open for customers to use and develop the future of the 5G network

SOLUTION

A single Power Equipment Rack (PER) rated at 48VDC 24kW capable of supplying twenty-three Base Band Units (BBUs) Transceiver units requiring 1000W each. Alongside this Duvine also supplied forty-four smaller PERs sized power modules, to supply a number of Remote Radio Units (RRUs) transceiver units requiring up 400W each.

Multiple rectifier modules are utilised in each PER, each rectifier module converts the incoming mains 240VAC to the required -48VDC output. To provide the total power required, multiple rectifiers are required, also offering additional redundancy, such that should one power module fail the remaining modules are capable of supplying the required load. The central controller ensures the rectifiers share output current evenly and monitors the system output volts and amps plus alarm conditions. The system is configured using Duvine's proprietary software.

Each system is complete with its own DC distribution consisting of single pole MCBs complete with over-current protection of the DC line. AC input distribution is also provided.



KEY BENEFITS

Through using Duvine's Solution, the 5G Innovation Centre Benefits from:

- Robust power rack capable of delivering the required outputs and additional redundancy
- Hot swap capability of modules in case of failure
- Compact and easy installation in base stations
- Over-current protection on DC
- Security from our ISO9001 and ISO14001 status.
- A scalable solution to meet growing demand
- Battery backup solution option for both BBU's and RRU's

