CATAPULT
Offshore Renewable Energy

5G PORTAL

5G PORTS AND OFFSHORE RENEWABLE TECHNOLOGY ACCELERATOR LINCOLNSHIRE

1 MARKET

The offshore wind market is projected to grow dramatically. It is expected that the UK supply chain can capture £92 billion of economic value (GVA) by 2040*.

This is reflected in the growing demand for offshore and often remote activity across the wind farm lifecycle, including:

- Consenting surveys
- Continuous environmental monitoring, including water, seabed, weather, bird and ocean life
- Asset inspection, monitoring, maintenance and repair
- Emergency response and rescue

The remote nature of offshore renewables can be demanding, ultimately resulting in expensive and inefficient processes, as well as a high number of recordable safety incidents. By improving data transfer speeds and communication networks, new solutions can be introduced to mitigate these undesirable outcomes.

*UK Supply Chain Capability Analysis

2 ASSET OVERVIEW

The Offshore Renewable Energy (ORE) Catapult, together with a consortium of partners, has established an offshore wind focussed 5G testbed.

This 5G network is integrated within an operational windfarm as well as the operations and maintenance (O&M) port of Grimsby. The facility also includes a research buoy which allows the network to extend beyond the area of the wind farm.

With backing from industry partners, the facility provides access for technology developers to carry out in-field test and demonstrations, in growth segments such as:

- Remote sensors and monitoring
- Smart tooling
- Wearables and personnel safety
- Unmanned surface vessels
- Digital twins
- Logistics tracking and optimisation
- Drones and ROVs

Come and talk to us about how the 5G PORTAL can help you deliver your ambitions to deliver smarter, safer and greener solution in this challenging environment.

CONTACT US

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3 5G NETWORK SPECIFICATIONS

FEATURE	PORT/WINDFARM
Upload	45 to 55 Mbps
Download	300 to 400 Mbps
Latency	20 ms
Network Architecture	5G Standalone (SA) ORAN, 7.2 split
Band	n77
Bandwidth	100 MHz
Center Frequency	3850 MHz
MIMO Configuration	4 x 4

FEATURE	PORT/WINDFARM
MIMO Configuration	4 x 4
Peak Throughput	500 Mbps DL 65 Mbps UL
5G Core	Microsoft 5G Azure
RAN	Accelleran
5G Radios	Benetel Outdoor Radios
Network Management System	Boldyn Networks Cloud Platform
Coverage Area	1 km (5km for Windfarm)