

WiFi and Mobile Computing Specialists

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CASE STUDY: Peel Ports - Port of Liverpool



The Challenge

- To completely design and install an outdoor, rugged, wireless network solution to support the port's highly-mobile crane and reach stackers.

The Solution

- A Siklu point-to-point link solution.
- Cisco wireless access point hybrid mesh solution.

The Results

- A high-availability 24/7 rugged Wi-Fi solution helping to improve operations across the terminal.

Ensign Delivers 24/7 a Rugged and Robust Cisco WiFi to One of the UK's Busiest Ports

Fast becoming one of the UK's most important gateways for international trade, the Port of Liverpool is making the most of the North West's booming economy. Owned by The Peel Ports Group and handling over 33 million tonnes of cargo every year, the Port of Liverpool has become a critical link for UK trade with both Canada and the United States.

Site Investment

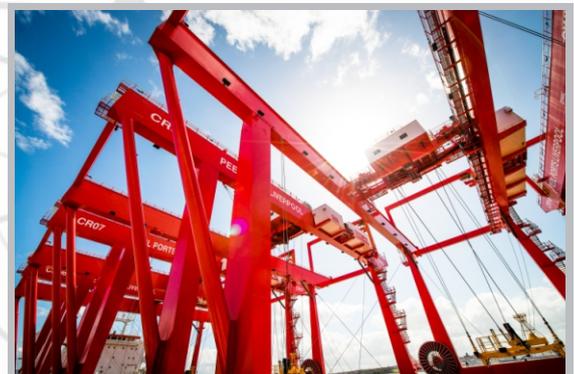
The site has experienced large growth in recent years, due in part to the Mersey Ports Master plan - a 20 year strategy focused on the docks and the Manchester Ship Canal, which has led to a **£1.1 Million investment** in a cutting edge IT operation.

Now dealing with a higher volume of traffic, the port authority realised the need for a better and more efficient wireless network to support communications to the straddle carriers across the container terminal. It was hoped that this would encourage faster turnaround times and more efficient fuel usage by providing more accurate and reliable support for the high-performance GPS tracking system - used to track and task the carriers as they organise the large expanse of metal haulage containers.

Site-Wide Rugged WiFi

Originally contracted to provide a rugged Wi-Fi solution across the site, which spans a total of **120 acres**, Ensign's initial success resulted in them being asked to upgrade and expand the wireless network coverage to the terminal's quay cranes and reach stackers.

Not only would Ensign's installation need to be rugged enough to withstand the often harsh North Westerly conditions but, in an industry where quite literally every second counts, also be capable of meeting the Port's **24/7 'full availability'** remit.



Braving the wind, rain and occasional freezing temperatures, Ensign's engineers created a hybrid wireless mesh solution, enabling seamless and redundant coverage by installing Cisco wireless access points to 21 of the lighting masts across the terminal. This, along with further hardware at high points on various buildings around the site, that are used as the connections points between the wired and wireless network, completed the wireless mesh design.

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Matt Harte, Ensign's technical sales manager, said: "What made the success of this deployment particularly satisfying was its nature as not only a very testing wireless solution, but also one that brought with it a number of exciting engineering challenges."

Productivity Improvements

Ensign's solution has helped the Port of Liverpool to record the fastest turnaround times of any other port in the UK. According to their official website, "95% of trucks are now in under an hour, 65% of those within 30 minutes, which represents an overall improvement of 30%."

This climate of economic growth in the North West is showing no signs of slowing down as Peel Ports look to expand their Gladstone Steel Terminal in order to deal with the demand brought by the booming automotive industry in the region. This new project will again allow Ensign the opportunity to design and install a wireless network capable of meeting the intense demand of a rugged and highly demanding industrial environment.



Ensign's work at the Port of Liverpool covers multiple sites, shown above.

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