

AMG

TRANSMISSION WITH INNOVATION

CASE STUDY

Logistical benefits:
Daemon and AMG
Systems provide video
surveillance network for
new iPort Rail terminal.

/ OVERVIEW

The iPort project near Doncaster, South Yorkshire is big, bold and ambitious. Billed as 'the UK's most advanced multimodal logistics park', it offers 6 million square feet of space across 337 acres.

The massive park is already home to enormous distribution facilities for companies like Amazon, CEVA, Fellowes and Lidl, and its occupancy is set to expand in the coming years.

With planning consent for 24 hour operation, seven days a week, iPort is a bustling, non-stop centre of activity. Developer Verdion has sited the park specifically to provide the optimum in transport connections, with 87% of the UK population within a four hour drive of the facility. It's connected next to the M18 motorway, and is close to both Doncaster Sheffield Airport and within two hours of the East Coast's deepwater ports.



Rail transport is also a key component of the iPort strategy - with good reason. Rail freight provides a faster, greener, safer and more efficient way of transporting goods than by road, and is an indispensable part of the UK economy, contributing £870 million each year and supporting an economic output of £5.9 billion.

The newly developed iPort Rail terminal, located on its own 30-acre site within iPort, is the UK's first new inland rail freight hub for over a decade. iPort Rail is connected to the East Coast Main Line via the South Yorkshire Joint Line. It offers integrated access to iPort, meaning occupiers can directly approach the rail terminal using their own specialist vehicles on the facility's private roads

Distribution destination.



The terminal can handle up to six trains a day, operating 24-hours, six days a week. Each train is able to be the maximum UK length of 775m.

iPort Rail has an 800m reception siding and two 400m handling sidings. The site has storage capacity for 1,500 TEUs - effectively, 1,500 shipping containers - and has been designed to be a Channel Tunnel (SACTFF) approved secure facility for international movements.

The facility is designed and equipped for rapid growth, doubling the length of the handling sidings to 800m, providing a second 800m reception siding, and doubling train handling capacity and the size of the storage apron to provide around 3000 TEUs storage capacity, as iPort and its activities expand. iPort Rail's reach stacker operation is capable of a 115-tonne front axle load, allowing for extremely heavyweight goods movement. "iPort Rail provides high speed connectivity to the north of England and beyond," said Steve Freeman, managing director of iPort Rail. "It has capacity for the longest trains in the UK, and state-of-the-art new stackers which provide quick and cost efficient loading and unloading of trains."

John Clements, European Development Director at Verdion, said: "Demand for rail freight is increasing, and having a dedicated rail terminal on site is an important asset for our occupiers. iPort Rail's opening means we can offer even better connectivity to and from the Yorkshire region for national and international freight transport. We are also seeing a great deal of interest from businesses in the region not located at iPort wanting to take advantage of this rail connection to move and store their goods."

Monitoring the facility.

With iPort Rail playing such a crucial role in iPort's transportation strategy, there was a pressing need to ensure that the terminal has effective ongoing video monitoring.

Builder Buckingham Group was responsible for the work on iPort Rail, and they worked with CCTV specialist Daemon Fire & Security to implement the video surveillance system for the perimeter of the terminal.

Chris Tattersall, Technical Director at Daemon, said the system runs on a redundant fibre optic network. "The system was designed and developed in conjunction with Buckingham and the project consultants, BWB. AMG Systems assisted us with the fibre optic network design." Tattersall said. "The cameras we are using are from Bosch, and they are monitored and recorded using the Bosch Video Management System. The cameras are on towers from Altron, and the networking is from AMG."

There are 32 cameras mounted on 18 towers around the rail terminal site perimeter. Tattersall explained that the cameras are primarily used as detectors to monitor for trespass or intrusion.

"The cameras utilise Bosch analytics, monitoring the perimeter fence for people approaching and trying to climb over or cut through," he said. "The cameras are monitored live by the 24-hour security team in the site gatehouse." The system is networked using equipment and expertise from AMG Systems.

Daemon and AMG designed a failsafe fibre optic ring system together, Tattersall said.

"From the gatehouse there's a fibre optic cable which goes and loops around every camera tower and goes back to the gatehouse," he said.

"It's a redundant ring, so if they get a fault or deliberate cut, everything will carry on working. We're using industrial PoE Ethernet switches in the towers so they can withstand low temperatures, which is particularly important during cold winters in a relatively open site like this."

The industrial managed switches, 20 of which were used in this project, are AMG model AMG9HLM-8FH-2C.

These switches are able to operate in temperatures ranging from -40 deg C to 75 deg C, and are designed for medium to large network environments to strengthen network connections. Including full Layer 2 Full Management features, the switches have the benefit of redundant ring technology STP and RSTP, as well as advanced VLAN features. IGMP v1/v2 support allows for greater control of Multicast traffic across the network. Advanced security features allow for greater control of access to management features, as well as network devices. The PoE units provide a simple solution for supplying full 30 watts of power to edge devices.



/ CONCLUSION

Daemon's video surveillance project took around 10 weeks in total, including implementation and commissioning. It was handed over on time and installed on target.



Tattersall said the smooth running of the project could be put down to Daemon's good working relationship with contractor Buckingham, distributor Pro-Vision, networking and transmission expert AMG Systems, and product suppliers Bosch and Altron.

"We get good service from Pro-Vision," Tattersall said. "They handle any issues we've got. And we're extremely happy with the AMG kit. It works out of the box with no problems, which is all we can ask for."

As iPort's development continues apace, and the resulting need for rail transport services grows, the role that this video surveillance system has to play will only increase in importance.