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SOLUTIONS

Aer Rianta Creates the Ultimate Network Platform with new Cabling at Shannon Airport

SYSTIMAX® fiber solutions provide high bandwidth loop to connect airport tenants with multiple service providers and increase security of service

Airport management company Aer Rianta, owns and operates three major airports in Ireland that handle more than 18 million passengers a year. Of these, 2.4 million pass through its Shannon facility on Ireland's west coast.

Over the last three years, systems at Shannon have been substantially upgraded and its cabling infrastructure is now among the most advanced in Europe. Airport operations have benefited from gigabit network connections since 2000 when SYSTIMAX GigaSPEED® cabling was installed in terminal buildings, and these facilities are currently being extended.

In the latest stage of development, access to high-speed data networking is being made available across the entire site through installation of an optical fiber ring around the airport perimeter. Once completed, the ring will have highly resilient links utilizing diverse routing to central systems and a choice of external telecommunications suppliers.

Phase 2 of the ring, currently underway, gives full local high-speed connectivity to the main airport campus. The operations it will support range from airfield lighting control systems and fire station connectivity to fuelling facilities and catering businesses.

Multimode SYSTIMAX LazrSPEED and singlemode OptiSPEED® fiber solutions were chosen for the project. A mix of 12 and 24-core LazrSPEED dual purpose, indoor/outdoor cable is used for transmission at up to 10 Gb/s over a distance up to 300 metres and 1 Gb/s for 1 kilometer. To provide alternative routes and longer distance connections, 12 and 24-core OptiSPEED singlemode fiber is also used in the ring.

"Having both LazrSPEED and OptiSPEED Solutions gives us the flexibility and security of being able to run connections at up to 10 Gb/s using two alternative technologies," said Brendan Murphy,



SYSTIMAX® Structured Connectivity Solutions

“Having both LazrSPEED and OptiSPEED Solutions gives us the flexibility and security of being able to run collections at up to 1 Gb/s using two alternative technologies.”

Mr Brendan Murphy, Project Manager at Aer Rianta

Project Manager at Aer Rianta. "The new LazrSPEED Solution allows the use of lower cost, multimode laser-based electronics to achieve 10 Gb/s over 300 or 1 Gb/s up to 1 kilometer. The complementing links use the more expensive singlemode electronics and are supported by the singlemode fiber."

Multimode LazrSPEED fiber also forms the backbone of the recently installed Shared Services Center. By using the same technology in outdoor cabling, Aer Rianta reduced the need for expensive electronics to convert from multimode to singlemode transmission.

In total, Aer Rianta is installing more than 8 kilometers of low-smoke zero-halogen (LSZH) LazrSPEED fiber. This makes the airport one of the largest LazrSPEED installations in Europe. Nearly 10 kilometers of LSZH OptiSPEED indoor/outdoor cable have also been installed in the first phases of the project.

Communications rooms are located at various points on the ring acting as distribution points for connections to groups of buildings. Each room is equipped with a distribution frame using small form factor (SFF) SYSTIMAX LC fiber connectors. In addition to saving space and increasing port density, these have exceptionally low losses (typical 0.1dB per connection) an important advantage in high data-rate, long distance channels.

Connections to outside telecoms suppliers' networks will also be made at points on the fiber ring. These suppliers will then have the option to lease bandwidth from Aer Rianta to provide businesses located within the airport precinct with services such as Internet access and virtual private networks.

"The SYSTIMAX fiber provides all the bandwidth Aer Rianta needs to facilitate a wide range of services, including video and Voice over IP, both for tenants and its own operations," said Wally Blennerhassett, Sales Director, SYSTIMAX® Solutions, Ireland. "It also combines economic implementation using the LazrSPEED Solution with the levels of reliability essential in these critical airport functions."

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