

CASE STUDY: IJSSELLAND HOSPITAL

This is the first MER cabling system for our hospital and everything is much better than the previous situation where we were using top-of-rack switches in the cabinets. We would certainly recommend using the Brand-Rex HI-DEX solution in similar projects.



Nestled in the small Western Netherlands town of Capelle aan den IJssel, on the Eastern edge of Rotterdam, the IJsselland Hospital is a high-tech general regional hospital with beds for 390 patients. These patients are cared for by more than 1,550 employees, 110 medical specialists and around 200 volunteers, who work hard to ensure that everyone inside the hospital walls feels secure and trusts in the care they are receiving. The hospital was founded in 1991 as a result of a merger of the Rotterdam Bergweg Hospital and the Hospital Eudokia and specialises in stomach, intestine and liver care.

Technology and healthcare

The healthcare sector is under increasing pressure, with budgets being cut and spending closely monitored. This means that healthcare facilities are looking to get the absolute maximum from their investments and are keenly aware that they need to find affordable solutions that don't compromise on quality in any way.

Life expectancy in Europe is growing year on year - the 65 and over age group in the European region is expected to grow to 224 million by 2050 - and the IJsselland Hospital has made every effort to ensure that it is ready to handle the increase in elderly patients, having already been classed as a 'Senior Friendly Hospital', which means it has adjusted procedures to make sure it can adhere to the wishes and needs of vulnerable elderly patients.

To deal with these changing patient patterns and trends, the introduction of leading edge technologies such as fibre based IT systems can be key - helping to better monitor patients, improve communications, analyse data and speed up administrative tasks.

Experience and expertise

Brand-Rex has been the Hospital's cabling solutions provider of choice for many years so when the IT department identified that the infrastructure was in need of a major overhaul in order to keep pace with advances in medical technology, the network infrastructure specialist was naturally the first port of call.

Hospitals, trusts and other healthcare establishments such as IJsselland Hospital must be absolutely sure that their networks can handle growing volumes of data and can afford senior staff access to this data at any time and in any place.

Representatives from Brand-Rex attended several meetings with IJsselland to discuss the hospital's needs and requirements in developing its main equipment room (MER). IJsselland Hospital was keen to implement a solution that would meet tomorrow's needs as well as those of today and provided Brand-Rex with a clear vision of a future proof IT infrastructure.



One of the key requirements was a short and hassle free installation that would keep disruption to an absolute minimum and with this in mind pre-terminated copper and fibre assemblies were quickly identified as a solution that would marry with the end user's demands.

After actively participating in the design of the new network infrastructure and by displaying the specific knowledge, experience and expertise needed to introduce cutting edge technology in a healthcare environment, Brand-Rex was awarded the contract.

Gert van Zuylen, ICT Coordinator, comments:

'The upgrade was needed because a rebuild and expansion of the desired MER room was necessary. The new cabling system needed to be future proof for higher connection speeds and flexible for expansion in the future. Our hospital has a certified Brand-Rex cable infrastructure that has served us well so it was logical to choose Brand-Rex again. There were no doubts that Brand-Rex could supply us with the right solution.'

When work officially got underway the initial plans to install a pre-terminated solution based on standard components were quickly reworked to feature a solution based on MTP, which was then worked into a HI-DEX design - offering significant advantages in terms of flexibility, expandability and longevity.

Gert continues, *'Early on we took the decision to go for a Brand-Rex MT Connect solution but we were then shown the benefits of the HI-DEX solution and we very quickly decided to make the switch - it was a pretty easy call to make in the end.'*

The HI-DEX solution

HI-DEX is an ultra high performance, pre-terminated, modular, optical fibre cabling system based on MT ferrule connector technology. The product set is ideally suited for installation in the data centre where multiple, point to point, fibre connections between distribution racks and equipment racks can be quickly and efficiently installed and where an upgrade path to multi-lane higher speed transmissions is required.

Recognising optical budget limits is vital in many modern cabling deployments because the total connector loss within a system channel governs the ability of the system to operate over the required distance for any given data rate.

The design of the HI-DEX solution allows for flexibility in that it is possible to incorporate multiple connections and achieve longer distances.

The 1U HI-DEX chassis can accommodate six independent fibre cassettes and the split cassettes tray design ensures that access can be made to individual 24f cassettes without compromising other live connections. It also presents a patching field of either 24 x LC connectors (12 duplex pairs) or 12x12 fibre MTP connectors for 40Gb/s and 100Gb/s applications.

Polarity issues with multi-fibre MPO/MTP connectors are avoided as an innovative design feature allows the cassettes to be flipped-over to change from Alpha polarity to Beta. To provide technicians and IT staff at the hospital with further on-site flexibility, the HI-DEX cassettes can be inserted or withdrawn from both, the front or rear of the cabinet.

A cable tracking system ensures the distance from patch adaptor to cable tie point remains constant whether cassettes are 'in' or 'out'. All of the fibre utilised in the HI-DEX solution is bend-insensitive, protecting the transmission line and ensuring maximum reliability and performance.

In a busy working environment, such as the IT department at IJsselland Hospital, dust caps can easily be misplaced and lost, potentially leading to higher losses and compromising data transmission. The Brand-Rex HI-DEX solution replaces dust caps with dust and laser protection shutters 'in-built' into the adaptors, providing safety and significantly reducing the risk of transmission loss.

The suite of HI-DEX products provides future proofing for multi-gigabit fibre channel infiniband and Ethernet technologies, supporting 10, 40, 100 and 400Gb/s and beyond.

Key features and benefits include:

- Superior performance - Ultra low loss connectivity ensures the challenging optical budget is achieved
- Increased density - Maximise density and minimise footprint - up to 144 fibres using LC presentations
- Unrivalled accessibility - Two point cassette removal ensures realistic access to patch
- Internal shuttered adaptor - Dust and laser protection negating the need for dust caps
- Modularity - Scalable design allows the isolated access to 24 fibre cassettes without compromising other connections

Implementation

Each 19 inch server rack at IJsselland was equipped with one HI-DEX chassis, complete with 12 LC-Duplex connections on a single cassette. Additionally, each of these 19 inch racks was connected with 24 ports and Augmented Category 6 pre-terminated assemblies, built using Brand-Rex' unique DC Zone cable positioned on space efficient angled patch panels.

