

## Hvidovre Hospital gives its Network Infrastructure the Right Treatment

**CommScope's SYSTIMAX® GigaSPEED® X10D, TeraSPEED™ and LazrSPEED® cabling in the server room and across campus deliver up to 10G performance at Danish hospital**



With 725 beds, Hvidovre Hospital is one of Denmark's largest, treating over 40,000 in-patients annually. Its 35 departments also include the country's largest maternity unit with over 5,000 births a year, so all the hospital's 3,500 staff must be able to respond quickly when situations demand.

To ensure it's network is up to the job, Hvidovre Hospital keeps its cabling infrastructure up to the latest standards with solutions from CommScope's SYSTIMAX® Solutions' portfolio.

Working with the SYSTIMAX Prestige BusinessPartner, Topnordic, the hospital has added numerous new outlets to the Hospital's network. In addition to improving network availability across 300,000m<sup>2</sup> of low-rise buildings on the main site, new outlets have also been added in a separate psychiatric unit located nearby at Brøndby.

"As well as in-patients, the hospital has clinics that handle more than 210,000 visits a year – and it is also a major medical research center," said Carsten Rimborg who has responsibility for installing new cabling and outlets. "To meet network requirements from all the different departments, many of which are growing rapidly, we need the best available cabling performance and reliability. This particularly applies to the server room, which serves every department."

**SYSTIMAX®**  
SOLUTIONS

“As more critical systems are installed at the Hospital, we need state-of-the-art structured connectivity that will support rapidly growing bandwidth demands in years to come. The combination of SYSTIMAX infrastructure solutions supplied by CommScope gives us the end-to-end performance and reliability that is essential to our systems.”

Carsten Rimborg, Hvidovre Hospital

After having worked closely with Topnordic and CommScope it was decided to install SYSTIMAX GigaSPEED X10D copper cabling in the server room. This offers 10 Gb/s performance and exceeds the full specifications of the Category 6A/Class E<sub>A</sub> cabling standard. As a result, it can comfortably support 10G Ethernet over a 100 meter, four-connector channel.

The GigaSPEED X10D cabling is complemented by 10 Gb/s SYSTIMAX LazrSPEED multimode fiber. This delivers reliable 10 Gb/s performance over distances of 300 meters or more without need for expensive electronics.

The hospital's outlets are connected to the wiring closets at up to 1Gb/s via GigaSPEED XL, UTP (Unshielded Twisted Pair) copper cabling. This connects outlets throughout the wards, operating theaters and clinics. In addition to these medical facilities it also serves administrative offices and research areas.

Among applications supported by the cabling infrastructure are data, Voice over IP and building management. Even more important, vital medical systems also rely on the cabling to deliver critical information to theaters and wards.

For longer distance cross campus connections, the Hospital chose SYSTIMAX TeraSPEED single mode fiber. This enhanced single mode fiber, using zero water peak technology, has 50% more usable wavelength than conventional fiber. With this extra transmission capacity, it can carry up to 16 channels using coarse wave division multiplexing or 400 with dense wave division multiplexing.

“As more critical systems are installed at the Hospital, we need state-of-the-art structured connectivity that will support rapidly growing bandwidth demands in years to come,” said Carsten Rimborg. “The combination of SYSTIMAX infrastructure solutions supplied by CommScope gives us the end-to-end performance and reliability that is essential to our systems.”

Design and planning of the new infrastructure was a cooperative effort between Johnny Larsen who administers the network and has responsibility for the server room at Hvidovre Hospital together with Topnordic and CommScope. The fiber installation across the campus and the new cabling in the server room was then handled by a strong team from Topnordic.

As well as installing new cabling and outlets, the team added SYSTIMAX 1100 series patch panels in the server room to connect the GigaSPEED X10D Solution. For the new fiber cabling they installed SYSTIMAX 600G2 panels which, like the 1100 series panels, are housed in SYSTIMAX racks and enclosures.

“Structured cabling systems in large hospitals must have the right combination of copper and fiber solutions configured in the optimum way,” said Dorte Blichfeldt, Sales Director, SYSTIMAX Solutions, CommScope in Denmark. “Our SYSTIMAX portfolio can reliably meet all the requirements with performance to spare. Working with hospital technical staff and our BusinessPartners, we can design, deliver and guarantee installations to support even the most network intensive applications - such as medical imaging and on-line access to patient records.”