

SAHMRI selects CommScope network infrastructure solutions to support world-class medical research

Customer

South Australian Health Medical Research Institute (SAHMRI)

Country

Australia

Challenges

To implement and maintain a secure network infrastructure at a major research facility where connectivity performance is critical to research efficiency.

CommScope solution

CommScope's SYSTIMAX® 360 solutions were used, including iPatch, a solution that gives systems managers a real-time view of the network physical layer, fast troubleshooting, and improved security—reducing network downtime and making maintenance more cost effective



“The direct and indirect operating cost benefits of intelligent infrastructure soon outweigh any extra initial cost. Up-to-the-moment information on connection status helps minimize costly network downtime. Displays on the patching frames provide technicians with guidance as they make moves, adds and changes, so they work faster with fewer errors.”

—Michelle Gheorghiu, project director,
SAHMRI

SYSTIMAX® 360 solutions deliver reliable, high-performance connectivity with iPatch® intelligent infrastructure for flexible, easy network management.

Fast, flexible network infrastructure is a vital part of the South Australian Health Medical Research Institute's (SAHMRI) new research facility in Adelaide, the capital city in South Australia.

To meet its requirement for world-class connectivity, the institute chose GigaSPEED X10D®, LazrSPEED® and TeraSPEED® solutions from CommScope. These solutions are monitored and managed using the iPatch® solution to enable efficient changes and improved network security.

Network infrastructure is critical

SAHMRI is a new, \$200 million facility built to attract researchers from Australia and around the world. Every aspect of the stunning 10-floor building is designed to make full use of innovative systems that support state-of-the-art research activities.

Network infrastructure is the foundation for all scientific and administrative systems at a major research establishment, so network performance is critical to research efficiency. To ensure SAHMRI was built with the best available infrastructure, the project team assessed a wide variety of structured cabling options. After rigorous comparisons of performance, operating costs, quality and support services, the team chose SYSTIMAX 360 solutions from CommScope.

Their decision included iPatch, a solution that gives systems managers a real-time view of the network physical layer. iPatch enables fast troubleshooting and improved security, reducing network downtime and making maintenance more cost effective.

“The direct and indirect operating cost benefits of intelligent infrastructure soon outweigh any extra initial cost,” said Michelle Gheorghiu, project director at SAHMRI. “Up-to-the-moment information on connection status helps minimize costly network downtime. Displays on the patching frames provide technicians with guidance as they make moves, adds and changes, so they work faster with fewer errors.”

Integrated infrastructure

In addition to connecting data systems, the SAHMRI network also supports other extra-low-voltage systems, including building management, security, Voice over Internet Protocol (VoIP) and lighting control. With so many critical applications depending on the same infrastructure, SAHMRI needed copper and fiber cabling with industry-leading performance and reliability.

To select the right CommScope solutions for this requirement, SAHMRI worked with TAF & Associates—part of the CommScope PartnerPRO® Network—and Aurecon Consulting. Their decision was to use GigaSPEED X10D copper cabling for horizontal connections and a combination of TeraSPEED and LazrSPEED fiber for network backbones.

GigaSPEED X10D exceeds the full Category 6A/Class E_A standards for 10G data transmission over unshielded copper cabling. It delivers 10 Gbps data transmission up to 100 meters with four connectors in the channel. The cable also has the smallest diameter in its class, saving space and making installation easier.

TeraSPEED singlemode, zero-water peak-fiber cabling delivers 50 percent more usable wavelength range than conventional single-mode fibers. It supports up to 16 channels of coarse wave division multiplexing (CWDM) and up to 400 channels of dense wave division multiplexing (DWDM). LazrSPEED 550 multimode, laser-optimized fiber supports 10 Gbps transmission over backbone connections up to 550 meters without the need for expensive electronics.

Copper and fiber connections in the SAHMRI installation are managed using iPatch panels that allow system managers to

monitor network connections and attached devices from a desktop PC. The iPatch software can also automatically alert managers to any unauthorized network connections changes.

Change orders can be created and sent to displays on the distribution frames. On-screen instructions guide technicians on where to make new connections. When completed correctly, the iPatch software notifies system managers and updates network diagrams held in the iPatch database.

Consolidation points

The network infrastructure designed and installed at SAHMRI by TAF & Associates has nearly 5,000 Category 6A outlets. To provide connections for all current and future systems supported by the network, the building’s 10 floors are flood-wired with GigaSPEED X10D cabling. This is linked back to 18 distribution frames via multiple distribution points on each floor, making it easy for the institute to reconfigure work areas.

As research teams initiate new projects and complete existing ones, systems and equipment can be added or removed from the network very quickly. In this dynamic environment, iPatch helps optimize the allocation of cabling resources and ensure new connections are made quickly and correctly.

“With the vision, knowledge and control they get from iPatch, our facilities managers can stay a step ahead of demand for connectivity throughout the building,” said Ms. Gheorghiu. “They can instantly see what connections are available—and they know that the network diagram in the iPatch database is always accurate. This is essential for providing high-quality service to researchers at the institute.”

The SAHMRI installation is the first in Australia that manages all extra-low-voltage services using the iPatch solution. To complete the configuration and commissioning of all these systems, TAF & Associates deployed a team of 10 engineers and technicians. In total, they installed 366 kilometers of GigaSPEED X10D cable routed above ceilings to dropdowns connecting desk-mounted outlets.

All these connections and their fiber backbones are monitored and managed via 90 iPatch panels and 17 iPatch rack manager units installed on the distribution frames.

To accommodate the consolidation points for the horizontal cabling, the TAF team worked with Aurecon to design floor plates that provided sufficient space. They also designed the backbone cables with redundant fibers, connecting all floors to improve network resilience.

Reginald Evans, regional sales director for CommScope, explained, “Ground-breaking medical research is increasingly dependent on fast, powerful data systems. These systems can only deliver ideal results when they are connected via a reliable, high-performance network infrastructure. SYSTIMAX 360 solutions from CommScope ensure that SAHMRI researchers always have the connectivity they need. By including iPatch intelligent infrastructure in a network with flood wiring and consolidation points, the institute can quickly and easily adapt to the team’s changing research needs.”

Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.



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