



SYSTIMAX® Solutions

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José Jesús Bernardo Campillo García
Secretario de Salud de Sonora

A Mexican state health service equips 21 hospitals and 230 health centers with **CommScope’s 10G fiber and copper infrastructure**

SYSTIMAX® GigaSPEED® X10D and LazrSPEED® Solutions underpin state-of-the-art administrative and medical systems, and help unify health services in Sonora

The state of Sonora, located in the Northwest of Mexico, has a population of over 2.2 million inhabitants. Approximately 950,000 people rely on Servicios de Salud de Sonora for medical care. This government organization, based in Hermosillo – the state capital ensures universal access to comprehensive and quality health-care services.

Through its hospital and health center clinics, Servicios de Salud de Sonora handles 80% of the population's outpatient visits. In order to maintain a high clinic-service quality, the organization has upgraded its network infrastructure to support data transmission at 10Gb/s.

"We believe that structured cabling at our facilities should provide a solid basis for demanding network applications, including VoIP and telemedicine solutions, as well as medical record filing systems," stated Francisco Edmundo Munguia Varela, Deputy Administration Secretary of Servicios de Salud de Sonora.

"The installed infrastructure will enable us to implement cutting-edge medical systems and equipment that are key to enhance hospital efficiency and help provide world-class services to our patients."

Specific applications being implemented and under development include state-of-the-art inventory control systems, digital medical records and X-ray equipment among others. Many of these applications require a high-performance IP network in order to connect with servers and provide information every time the organization needs it.

The starting point for the design of a network infrastructure meeting this requirement was the SYSTIMAX GigaSPEED X10D Solution. The 10G copper solution exceeds Category 6A cabling specifications and provides a reliable, end-to-end 10 Gb/s performance.

For longer connections, the IT area of Sonora's Health Department chose SYSTIMAX LazrSPEED 150 and 300 multimode fiber solutions. They can support 10G connections over 150 and 300 meters, respectively, without the need for costly electrical wiring for singlemode fibers.

CommScope's infrastructure solutions were chosen because of their performance, cost-effectiveness, warranty and documentation as well as certification quality. SYSTIMAX GigaSPEED and LazrSPEED solutions were also available for immediate delivery and installation by locally recognized CommScope BusinessPartners.

The IT section of Sonora's Health Department which was responsible for application design and implementation supervision explained why they chose the SYSTIMAX portfolio; "Apart from its other benefits, the SYSTIMAX GigaSPEED X10D Solution features a fully-round cable and the thinnest on the market. This was a major factor in our cost-benefit analysis because it afforded us considerable savings in cable pathways and cabinets."

The IT area of Sonora's Health Department added that: "We also valued the fact that CommScope guaranteed on-site inspection visits and provided project certifications almost immediately after project completion. And we are fully confident in the quality of its workforce, infrastructure, logistics and BusinessPartner qualifications."

The CommScope BusinessPartners selected for this project were Pregasistemas S.A., based in Obregón, and Global VoIP S.A., based in Hermosillo. During this project, these companies worked with the Project Coordination and Analysis Department and the Office of the Deputy Administration Secretary of Servicios de Salud de Sonora.

Together, organizations had to face several installation challenges. Most sites where the project was implemented were hospitals and health centers, and many of them could not be closed down during or after the performance of installation tasks. It was key to avoid post-installation and delivery-time problems. In addition, there was often a very limited time for installation, and so the different contractors had to work in parallel, mostly at nights and weekends.

Special care was required for installing cabling without disrupting operations or affecting hygiene. For installation in the so-called "white areas", such as OR's, which are contamination and dust-free areas, installation technicians had to be trained in hygiene standards.

CommScope's role was key to several aspects of the project. At the design stage, it helped justify the introduction of 10 Gb/s connectivity in hospitals, thus putting Servicios de Salud de Sonora at the forefront of networking technologies. The leading-edge applications now supported by the 10G infrastructure include electronic medical record filing systems, HR incident management, the national vaccination program and IP-based surveillance.

"Our 10G networks are now helping us optimize the use of human, financial and material resources," said Francisco Edmundo Munguia Varela. "They also play a key role in developing and implementing quality systems that contribute to improving processes."

During the installation, CommScope's experts made routine on-site inspection visits, and provided each site with the project completion certification according to the schedule set by Sonora's Health Department. They also checked that technical specifications and documentation provided to the customer were accurate and duly and timely delivered.

Some hospitals have opened new telecommunications areas, which enable the centralized management of communications infrastructure. This greatly simplifies network management and access control.

With a 10G solution providing a 500-Mhz bandwidth with a very small loss, it is possible to use cabling for all protocols without affecting data quality or transmission speed. State-of-the-art diagnostic imaging equipment particularly benefits from the greater bandwidth and the low error rates, which prevent physicians from wasting time in front of workstations waiting for images to arrive.

"Reliability is one of the key reasons why we choose CommScope as a provider," added José. "The quality of their products, and the services and support provided by them ensure the best system performance. CommScope's comprehensive warranty and application assurance are our project backup."

The implementation of a new network infrastructure at clinics throughout Sonora was the largest investment, whose benefits will last for several years to come. Now that 10G networks are an integral part of these facilities, they can face the future with the absolute certainty that they can take advantage of the benefits of new medical technology implementations. Their structured cabling has the necessary bandwidth to support these new implementations and the flexibility for easily adding new services and users.

"Information technology can bring enormous benefits to the health sector," added Sonora's Secretary of Health Mr. José Jesús Bernardo Campillo García. "Investments in applications such as 3-D X-ray diagnostic imaging, telemedicine and remote consultations, among other services, contribute to bringing our specialists to isolated communities and help save lives."



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