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**Lorenzo Rene Rojas Ruiz,**  
Data Center Head Jose Luis Manzo Bautista  
SYSTIMAX SCS Design, Engineering and  
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Head of the Institution's IT Division

## The "Instituto Tecnológico de Estudios Superiores de Zamora", Mexico Education Institute, Achieves Higher Network Performance with CommScope Infrastructure

**SYSTIMAX® GigaSPEED® X10D and LazrSPEED® Solutions remove barriers to expansion and improvement of teaching and administration**

Students and staff benefit from faster, more responsive IT systems made possible by 10G network connections across the campus. At the same time, high performance solutions from CommScope open the way for new generations of applications that will help students develop the skills needed in an increasingly technology dependent society.

The Instituto Tecnológico de Estudios Superiores de Zamora is among the largest higher education institutions in the Mexican state of Michoacán. Its 20 hectare campus in the city of Zamora employs 170 staff and provides courses for more than 2,000 students. Courses are offered by the Institution in disciplines including information technology, engineering, language studies and accounting.

The Institution's eight main campus buildings were, until recently, served by Category 5 network cabling dating back to its foundation in the mid 1990s. As student numbers increased and the Institution's facilities grew more sophisticated, this obsolete network infrastructure became badly overloaded.

By the middle of 2009, it was clear that a new network infrastructure was needed. The existing system was slowing down the Institution's work and preventing it from installing new, more advanced systems.

"Lack of bandwidth was holding back our plans to give student more choices and better facilities, so upgrading the network infrastructure was a priority," said José Luis Manzo Bautista, head of the Institution's IT Division. "To remedy this we began a project to select and install state of the art copper and fiber infrastructure in our data center and across the campus.

"The first step was to gather information on the technical alternatives. Even at this early stage, CommScope and its BusinessPartner, DDR México, came to the forefront with their ability to provide all the necessary information quickly. This helped our project committee to analyze the different proposals and prepare a report that was the basis for the purchasing decision."

The networking equipment selected after considering all the options included CommScope's SYSTIMAX copper and fiber solutions. For 10Gb/s copper connections over distances up to 100 meters, the committee chose the SYSTIMAX® GigaSPEED® X10D Solution. This meets the full specifications of the Category 6A/ClassE<sub>A</sub> standard for 10G connections over UTP (Unshielded Twisted Pair) cabling.

The SYSTIMAX LazrSPEED® multimode fiber solution was selected for 10G connections over longer distances. This has performance exceeding the OM3 international standard and delivers 10Gb/s data transmission speeds without need for expensive electronics.

Commenting on the choice of network infrastructure, Lorenzo René Rojas Ruiz, Data Center Head, and Institutional IT Manager and MCTC Jose Luis Manzo Bautista, said: "We decided on the highest performance solutions because they allow us to install advanced, network intensive applications without concerns about bandwidth. And, with 10Gb/s performance in the datacenter, network backbone and horizontal connections, there will be no need for major infrastructure upgrades for many years."

During preparations for installation of the new infrastructure, CommScope and DDR worked with the Institution to optimize design of the network. When installation began, DDR also had to work closely with academic and administrative staff to avoid disrupting courses.

"We were pleased with the way our new structured cabling system was completed on time without any significant disturbance to our work," said José Bautista, who acted as project resource manager. "The deadlines were tight, but all of them were met.

"This is the first time we have used CommScope solutions and now they are fully operational they are providing all the extra performance we need and are proving very reliable."

Among the new equipment already supported by the network is an IP switchboard and video surveillance system. A new organizational database is also accessible via network outlets in classrooms, offices and laboratories across the campus. The Institution's video conferencing facilities and language laboratory are also benefiting from the greatly increased network bandwidth now available.

Commenting on the project, Jorge Herrera, Sales Manager, CommScope Enterprise Solutions said: "Without high performance systems, it's difficult for a college to educate its students to succeed in societies that are increasingly dependent on technology. They recognize this at The Instituto Tecnológico de Estudios Superiores de Zamora. By choosing 10G solutions from CommScope, they can be confident that their network infrastructure will support the new more advanced systems they will need in the years ahead.

"And, with our industry leading warranties and reliability, the risk of costly, disruptive network faults is greatly reduced."



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