Toreo Parque Central Elevates the Shopping Experience Thanks to JMA Wireless

Overview: Early Adopter of Technological Innovations

Since 1976 Grupo Danhos has been a developer group dedicated primarily to the development, leasing, operation and management of shopping centers, offices and mixed-use projects in the metropolitan area of Mexico City. In late 2015, they opened the spectacular Toreo Parque Central Mall. As an early adopter of technology, Grupo Danhos incorporates the latest innovations into its properties. Toreo Parque is no exception. The five floor, 230,000 square meter facility offers robust cellular communications throughout to its shoppers and retailers thanks to the leading edge JMA Wireless Teko DAS (distributed antenna system) platform.

Situation: Outstanding In-building Mobile Communications can be a Challenge

Mexico City’s Toreo Parque Central Mall offers an exceptional shopping experience. It boasts four floors of retailers plus an outdoor rooftop terrace on the fifth level for a little rest and relaxation during a busy day of shopping. The second floor even includes a park like setting, incorporating trees and other landscaping. In addition, on each level of its parking garage shoppers can drop off their cars to a service area that will wash and wax them. However, with the increasing usage of smart phones in malls, Grupo Danhos knew that the ultimate...
shopping experience would not be complete without a robust in-building cellular network.

Since Grupo Danhos believes in incorporating the latest and most innovative technologies into its properties it turned to JMA Wireless and neutral host provider, Intelli Site Solutions, for a wireless network that could support powerful in-building cellular coverage and capacity for its multitude of shoppers and retailers. However, in order to accomplish this goal many concerns had to be taken into consideration and overcome first.

Currently, Mexico’s population is a little over 128 million people and approximately 81 million of them are also mobile phone subscribers\(^1\). More and more of these users are upgrading their devices to smartphones, which are being increasingly used during the shopping experience. Only a robust in-building wireless network can support these mobile devices that are used by shoppers to compare prices, redeem coupons, read online reviews, check inventory availability, share videos or photos on social media sites, and much more.

Next large malls nowadays must overcome the issue of densification, which is defined as dense areas of mobile subscribers with a high demand for cellular connectivity. This issue can be prevalent during the holiday season, key sales events or just certain times on the weekend. The system must be powerful enough to not only support the thousands of shoppers, but the many retail associates who also may need wireless access.

The system needs to be future proofed too. As new technologies and bands come into the market it must be able to easily support them. The system cannot be down for extended periods of time for upgrades. Furthermore, as new facilities are built in the area it must be able to expand easily in order to support them too.

Another barrier to providing superior cellular coverage is the construction of the mall. The steel and concrete used impedes cellular signals from the outside. These signals must be powerful enough to enable mobile communications not only in the stores and the parking areas, but also in the elevators.

Finally, Toreo Parque prides itself on its security and onsite paramedic services. However, peace of mind cannot exist unless the wireless network is able to support the shopping mall during emergency situations. First responders as well as customers and employees need robust communications to ensure a situation does not turn into mayhem.

Source:
\(^1\)Statista Website

To ensure excellent wireless coverage throughout the mall many of the Remote Units are deployed in the four elevator shafts.
Solution: Using Creative Deployment Methods to Deliver Robust Mobile Communications

Intelli Site Solutions decided to deploy the Teko DAS platform from JMA Wireless because it is the right solution to support Toreo Parque’s mobile communications needs now and moving forward. Presently, the multi-band, multi-carrier DAS provides coverage for the wireless carrier, Telefonica. However, in the near future there are plans for the DAS solution to support other wireless carriers who are in the final stage of negotiation. The system currently is comprised of three sectors, with plans to expand it to six sectors. Since the Teko DAS platform is future proofed it will easily support these changes when necessary.

The multi-band solution ultimately will support GSM 850, UMTS 850, UMTS 1900, LTE 1900 and LTE 2100. A single optical fiber will be used to distribute these frequency bands to 12 low power Remote Units (RUs). The Teko DAS platform uses 25 percent to 50 percent less fiber than competitive offerings, making it an extremely cost efficient solution. To ensure robust wireless connectivity anywhere, Roberto Carlos Perez, Engineering Director for In-Building DAS Projects at Intelli Site Solutions, worked closely with the JMA Wireless team to develop a unique performance design that included RUs in the four glass elevator shafts. Additionally, JMA Wireless’ state-of-the-art connectors and the Teko DAS Power Distribution Unit were deployed. The Teko DAS Power Distribution Unit remotely monitors and controls the power of the RUs. Its software control voltage monitoring improves power consumption and overall efficiency, thereby further reducing costs and increasing system flexibility.

Result: Meeting the Wireless Needs of Today and Tomorrow

Today, Toreo Parque offers premier wireless communications to go along with its status as a premier shopping center. The Teko DAS platform offers a future proofed and modular design that enables it to support new carriers and technologies. Its leading edge technology will enable it to be easily leveraged as phase two of development brings with it new office buildings and a hotel.

“The Teko DAS was very quick and intuitive to deploy. In addition, the JMA Wireless team was extremely knowledgeable and helpful. The entire deployment experience was easy, and we are looking forward to working with JMA Wireless on phase two of this project.”

Roberto Carlos Perez
Engineering Director for In-Building DAS Projects at Intelli Site Solutions
About JMA Wireless
JMA Wireless is the leading global innovator in mobile wireless connectivity solutions that ensure infrastructure reliability, streamline service operations, and maximize wireless performance. Employing powerful, patented innovations their solutions portfolio is proven to lower the cost of operations while ensuring lifetime quality levels in equipment and unrivaled performance for coverage and high-speed mobile data. JMA Wireless solutions cover macro infrastructure, outdoor and indoor distributed antenna systems and small cell solutions. JMA Wireless corporate headquarters are located in Liverpool, NY, with manufacturing, R&D, and sales operations in over 20 locations worldwide. For more information see jmawireless.com

About Intelli Site Solutions
Intelli Site Solutions is a 100 percent Mexican company dedicated to the deployment of cellular network infrastructure, installation services, network planning and monitoring, as an interior and exterior “neutral host”. As a “neutral host” we can work with all operators, concentrating them in a single facility and reducing the visual impact of the infrastructure while optimizing space. Our infrastructure is designed to be multi-operator (i.e. Telcel, Iusacell, Telefónica, and Nextel) and multi-band while our technology supports current technology and is future proofed for new technologies. Our high-tech systems, based on fiber optics, ensures adequate coverage and intensity for voice telephony and data indoors. For more information see http://www.intellisite.com.mx.