



CASE STUDY: PABELLÓN M IN MONTERREY

JMA Wireless Deploys the Largest In-Building DAS in Mexico

OVERVIEW

Incorporating Leading-Edge Cellular Innovation

Monterrey is a bustling metropolis with over four million people, making it the largest and most key metropolitan area in all of northern Mexico. It is known for being the most developed city in the country, host to many national and international companies, and since October 2015 home to Pabellón M, a world class complex that includes extensive commercial office space, a spectacular shopping center, an amazing auditorium, a first rate convention center and a luxury hotel. It is changing the face of the downtown Monterrey skyline. Neutral Host Solutions XX, also wanted to change the in-building mobile communications experience at large facilities such as

Pabellón M; therefore, it knew a global leader of wireless communication innovations, such as JMA Wireless, would offer the type of DAS (distributed antenna system) solution needed. With its JMA DAS platform, JMA Wireless has proven time and again that it is the company for ensuring robust cellular communications at large facilities similar to Pabellón M.

SITUATION

A Host of Mobile Communications Challenges

Pabellón M is unlike any other complex in Mexico. It includes:

- 25,000 square meters dedicated to a mall and eight movie theaters
- 30,000 square meters of commercial office space spread over 30 floors

Mobile Communication is Taken to the Next Level at Pabellón M

Pabellón M
25,000 sqm dedicated to mall and 8 movie theatres

35,000 sqm commercial office space on 30 floors

178 Room hotel on 8 floors

13 Restaurants

6 Levels of parking

Convention Center 2 floors with 3,800 capacity

Auditorium 4,200 seats



Pabellón M is a spectacular complex that has changed the Monterrey skyline

“From day one we realized we needed to involve JMA Wireless in this project. With its track record of successful DAS deployments in large facilities, we had the utmost confidence in the team’s technical knowledge and its innovative solutions. Plus, this state-of-the-art venue could only allow a discrete solution with enough technology to support the coverage and capacity requirements, which we found with JMA Wireless’ JMA DAS.”

FELIX MARTINEZ, DIRECTOR
NEUTRAL HOST SOLUTIONS XX

- 178 room hotel with 8 floors
- 13 restaurants
- 6 levels of parking
- Two story convention center that can host up to 3,800 attendees
- Auditorium with seats for over 4,200 spectators

A structure this large and comprised of so many different facilities brings with it a diverse set of mobile communications challenges.

Since Monterrey is a cosmopolitan city, visitors from all over the world come to Pabellón M for a variety of reasons - participate in a conference, attend a concert, stay at the upscale hotel, or just shop. Whatever the reason, it is important to provide an excellent in-building cellular experience for these visitors. It is crucial that multiple bands and multiple operators are supported easily.

Property managers of the commercial office space also realize that the ability to support multiple carriers and multiple bands is crucial to maintaining long term tenants. Many businesses no longer use traditional landlines, but instead have transitioned to cellular phones as the primary means of communications. Along with this communications strategy, many businesses also have implemented BYOD (bring your own device), which means employees can subscribe to any cellular operator. Similar to Wi-Fi, employees expect ubiquitous wireless coverage no matter the technology or cellular service used.

On any given day, thousands of people are at Pabellón M either shopping, attending a conference or concert, or working. Having thousands of mobile phone users with a high demand for cellular connectivity in a concentrated area leads to another issue known as densification. This issue is compounded even further when the convention center and auditorium are hosting events at the same time. It can lead to tens of thousands of people requiring cellular coverage simultaneously.

Pabellón M's concrete construction poses another barrier to cellular signals reaching users inside. The commercial office tower at Pabellón M is the tallest skyscraper in Monterrey with many floors above ground as well as four floors underground. The above ground as well as below ground areas require cellular service.

The auditorium, in particular, offers its own set of challenges. Coverage is necessary for two different mobile operators, each with different capacity requirements. The space had to be configured to accommodate the base transceiver stations (BTSs) for the two carriers.

Lastly, it is critical that today's wireless networks in large public facilities, such as Pabellón M, provide the necessary cellular capacity and coverage to ensure mobile connectivity during emergency situations. The system must not only guarantee coverage for first responders, but for customers at the shopping center, employees in the office building, guests staying at the hotel, and those attending events in the conference center and the auditorium. They all must experience the same level of mobile connectivity during a crisis.

SOLUTION

No Deployment is too Large for the JMA DAS

Neutral Host Solutions XX worked with telecommunications experts, CT Optics. CT Optics and Neutral Host Solutions XX both knew it needed a DAS with a proven track record of success in some of the largest venues in the world; therefore, the JMA DAS from JMA Wireless was selected. System integrator, EVEN Telecom, deployed the multi-carrier, multi-band JMA DAS at Pabellón M. Presently, the DAS configuration at Pabellón M is comprised of 54 zones that can support 36 sectors. It supports 3G and 4G LTE signals at the PCS, AWS and AMPS bands.

Furthermore, this complex deployment includes 27 low power Remote Units (RUs), and over 1,000 connectors, among other equipment. Only a single fiber was used to connect each Remote Unit with the system's Master Unit, which reduces installation costs by a minimum of 50 percent. be reallocated to residences on the week-ends or in the evenings when people are at home. This capability not only efficiently supports the needs of the different areas, but also provides better utilization of spectrum.

Finally, the C-DAS technology is a future-proof solution that can readily support additional carriers and the latest technologies. Any changes can be accomplished with minimal downtime so as not to impact the user experience.

Case Study: Pabellón M in Monterrey



This complex deployment includes **27 low power Remote Units (RUs)**, and **over 1,000 connectors**, among other equipment.

RESULT

Keeping Pace with Pabellón M's Growth

Pabellón M now houses the largest in-building DAS in all of Mexico. As Pabellón M's commercial office building continues to lease out space, and more and more events are hosted in the conference center and the auditorium, the JMA DAS will enable cellular service readily for the growing number of mobile users. In addition, this future proof solution will be able to cost effectively and efficiently support whatever new technologies and bands are required to keep Pabellón M's tenants and guests connected and happy.



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:
jmawireless.com

About CT Optics

CT Optics is a company with vast experience provided by innovative people. Its principal goal is to resolve the technological needs of ISPs and mobile operators. Its team of creative, agile, open-minded, up-to-date and professional people strive to provide the telecommunications market with excellent solutions (products and services).

FOR MORE INFORMATION:
ct-optics.com

About Neutral Host Solutions XX

Neutral Host Solutions XX is a Mexican telecommunications service company specializing in last mile access in complex developments. They create an access infrastructure that can be used by all mobile operators and Internet broadband providers via a neutral host. The team offers extensive experience in the mobile phone industry, with an emphasis on implementing and operating projects focused on DAS (distributed antenna system).

FOR MORE INFORMATION:
nhsolutionsxx.com.mx

About EVEN Telecom

EVEN Telecom is a Mexican company founded in Monterrey Nuevo Leon. It is focused on turnkey services for the telecommunications infrastructure market and network maintenance of fixed and mobile telephony.

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