# ISDE, Celaya Guanajuato, Mexico

## Marbella Residences Community Home Automation

Vivitare Casas in Celaya Guanajuato, Mexico, wanted the Marbella community of 104 homes to "shine" when compared to other new homes being constructed nearby. What it didn't want was to spend so much to make that shine possible that they would make the homes prices more than potential homeowners would be willing to pay.

The company tasked its information technology (IT) department with identifying technologies that would provide homeowners with quick solutions – and responses – to one of their main concerns: feeling secure – secure against robberies, water and gas leaks, and smoke and fire alarms, etc. The department decided to work along with Aditel Mexico distributor and representative of ISDE from Spain. Thanks to the experience of projects like Altos del Hipodromo neighborhood in Spain and Ferroparque's Building in Mexico, ISDE and Aditel Mexico offered a control system inside each home, with all connected to a surveillance post. This allowed security guards to respond quickly in an emergency, even if the owners aren't inside their home.

## The Challenge

One of the main challenges was installing a more than 7 kilometer long and private (not mixed with Internet protocol) communication infrastructure that let each of the 350 controllers connect to the surveillance post. In addition, each control system needed to be able to expand to integrate future functionalities such as lighting, blind control or human machine interface (HMI), etc.

## The Solution

The team chose the LonMark protocol for the following reasons:

- Ability to install a long and private communication infrastructure

- Open integration with a great amount of hardware and firmware available on the market (i.e. air conditioning, lighting) allowing the system to expand to allow new features inside each home.



- Real-time alarm reporting from the supervisor post so they could act as quickly as possible.

- Flexibility in the choice for different devices and peripherals (sensors, buttons, etc.)

- Local Integrators, which can be called to conduct the control system maintenance.

- Scalability and allowance of different topologies according to the needs of each floor

The protocol is based on a central controller (SICOV-300-F or ISDV-300-F), which has a LCD and a touchscreen keyboard that allows each owner to arm/disarm the technical and intrusion alarms, lighting control and also measure water and electricity consumption.

Besides the central controller, the team installed an INP-121-F that allows Access Control to the house by using a proximity reader. The right proximity card not only allows the owner to enter the house but also can be used to arm/disarm the intrusion alarm and automatically cut the lighting power. Each lock has a micro-switch that allows the owner to know when the door is closed so they can set the alarm in case it should open with the intrusion alarm set.

*Visit www.lonmark.org/connection/case for more case studies*

"Tahiti" Type Home
"Bali" Type Home
"Bahamas" Type Home
Router IR-FTT-FTT
Surveillance Post

The project includes three i.LON SmartServers from Echelon and two GSM kits (IKSM-100-F) from ISDE. The use of the SmartServer and the message module is shared to split the cost of the devices among all the houses.

To enter the community by car, there are two access control by proximity readers that allow owners to use the same proximity card as they use to enter their homes.

The installation has a central supervision station, which receives different alarms from each house depending on whether there is a water leak, fire or smoke, or a possible intrusion. The team also integrated different subsystems using the LonMark configuration tool from Echelon.

## The Result

With the LonMark-based control system, Vivitare was able to give homeowners in the Marbella neighborhood that extra shine with the security and comfort they need to feel in their homes. In addition to automatic lighting control, each home can be controlled remotely by SMS, a webpage or by the neighborhood security guard whether they are inside or away from their homes. Even better, pricing to install these features throughout the housing development was reasonable enough for the value the features added, with potential homeowners willing to pay slightly higher costs for these benefits in the Marbella homes.

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