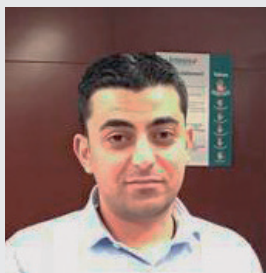


**Solution:** KNX Multibrand Air-Conditioning Gateways  
**Country:** Saudi Arabia  
**Company:** Arabian Homes  
**Summary:** Arabian Homes uses Intesis KNX gateways for the integration of Air Conditioning Systems to KNX hotel projects



### Benefits

- Integration of different Air Conditioning brands to KNX for hotels.
- Energy savings: Reduction of energy consumption lowers the hotel's electricity bill.
- Supervision and integral control of Air Conditioners.



*"We have chosen Intesis solutions due to the compatibility and flexibility to control several air conditioning systems and the integration of their gateways with multiple drivers of home automation companies"*

Sami Azmi, Business Developer Manager at Arabian Homes.

### The energy challenge for hotels

Many people, many rooms, many spaces. Hotels represent a tough challenge for experts in energy savings since they consume a lot of energy. Monitoring and reducing energy consumption is crucial, not the least for managers and owners who need full cost control.

It is especially important and valuable to be able to monitor and control consumption during peaks; significant gains can be achieved if energy consumption is reduced in times of maximum hotel occupancy such as during summer, Christmas, and Easter. Then, the hotel services are working at full capacity, with laundries, kitchens, restaurants and dining rooms being used during extended hours. All in all resulting in greater use of electricity and air conditioning.

### Choosing an efficient air conditioning system is key:

Improving the energy efficiency in a hotel is a continuous task which needs to balance between achieving a reduction in energy consumption and not adversely affect the comfort of guests.

Accordingly, the quality of energy services need to be maintained in harmony with the interests of the hotel customers. In addition to reducing the amount stated on the electricity bill, the hotel will also decrease the pollution and thus do more to protect the environment.

It is estimated that the average cost for air conditioning, lighting and water can be up to 25% of hotels' total expenses. Therefore there is obvious value in being able to control and monitor the equipment handling air conditioning, lighting and the generation of domestic hot water (DHW).

Within the energy costs of hotels, air conditioning is the biggest expense, on average representing more than 40% of the total energy costs. Therefore, air conditioning improvements offer a greater potential for savings.

## Climatization in hotels:

There are different ways to optimize air conditioning in hotels. Air conditioning and heating control must be carried out both in common areas such as living rooms, restaurants, reception, bathrooms, as well as in private areas like guest rooms.

At the air conditioning level, limiting the setpoint temperatures in public areas such as main rooms or large rooms can be very useful.

It is also important to limit the setpoint temperatures to prevent hotel visitors from misusing the air conditioning system in their rooms, which otherwise leads to overconsumption.



By using monitoring and control systems for optimization of energy consumption, immediate value can be obtained. Management of consumption and real time energy control allows for identification and resolution of unnecessary energy usage. Current control systems allow monitoring of a large number of variables including for example: setpoint temperature, open window, occupancy and scenes.



## Arabian Homes hotel projects in Saudi Arabia:

Arabian Homes was founded in 2000 and in Saudi Arabia is considered one of the pioneer companies in building projects with great technical capacity and complete solutions for engineering, supply and installation of automation systems.

For Arabian Homes, the integration of air conditioning systems into KNX for their hotel projects was not easy. This was mainly due to the need to integrate a wide variety of air conditioning brands and the many different requirements of each hotel project. In addition, the integration was more complicated due to the presence of different AC manufacturers using the KNX standard as well as the individual by each manufacturer of different types of KNX data (DPT). And finally, the project needed to meet the objective of maintaining the comfort of users while obtaining energy savings.

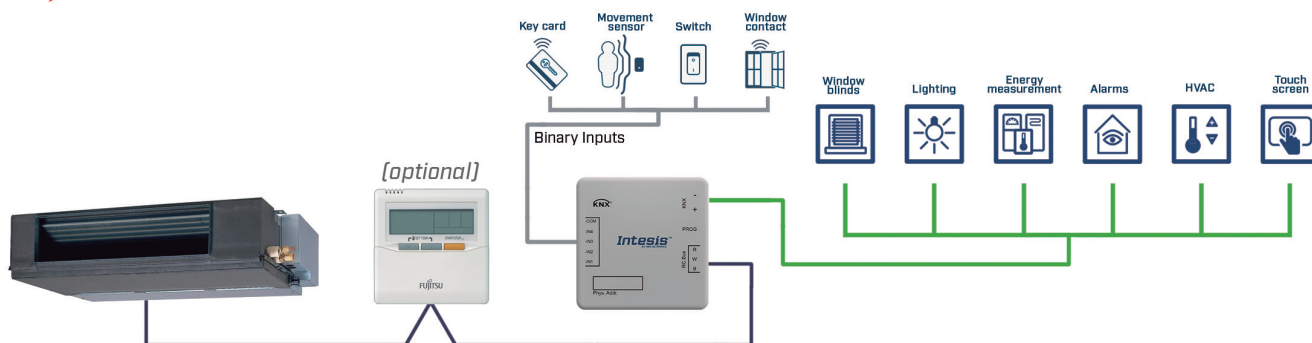
Arabian Homes selected the Intesis gateways, which any AC brands and model to be integrated and controller within a hotel complex.

An example of some of the Arabian Homes hotel projects: Hotel Verona, Daniat Makkah Hotels and Cecil Compound Villages.

The control and management of the air conditioning systems at these hotels, it has been possible to get real time status of the air conditioning Systems, to monitor alarms and maintenance signals specific to the AC units and establish remote control of the entire building.

By using Intesis solutions, Arabian Homes can ensure that the solution delivers energy savings with no compromise to guest comfort. Most of the air conditioners in the hotels are from Fujitsu and General Electric, Hager KNX thermostats. All in all, more than 1000 Intesis Fujitsu AC interfaces for KNX are used.





## How do Intesis Gateways enable integration to KNX?

The Intesis gateways establishes communications to AC units for supervision and control from thermostats, touch panels or KNX applications. It is also possible to establish simultaneous control from KNX and the remote control of the AC. This is possible since the Intesis gateways can work with or without the AC remote control.

In addition, the KNX Intesis gateways include binary inputs, offering the possibility of monitoring e.g. a card holder, presence sensors for occupancy, and window sensors, using standard sensors that are much more cost efficient than KNX's own devices. For example, these inputs can be used to automatically turn the unit on or off and adjust the setpoint temperature depending on whether or not there are people in the room. With this control capability, unnecessary electricity costs are avoided and great energy savings are achieved.

From a maintenance perspective, being able to monitor detailed information of errors and alarms in real time (like filter status), allows service teams to take immediate action to resolve issues. The ability to act faster to any problem improves guest comfort and reduces repair expenses.

The integration of Air Conditioning Systems to KNX with Intesis gateways has enabled Arabian Homes to achieve great energy savings in their hotel projects, reducing energy consumption while simultaneously optimizing the comfort of hotel customers.



## Intesis Air Conditioning Interfaces

Intesis offers high quality Air Conditioner interfaces for the integration of climate systems into BACnet, KNX, Modbus and 2.4 GHz wireless installations.

Enjoy the benefit of working with the market leader in the field of Air Conditioning integration that offers highly reliable solutions developed in collaboration with all major AC manufacturers.

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