

## Bus technology ripe for the island

In the luxury Cretan resort, extensive KNX installation ensures comfort and efficiency

Winner  
KNX Award 2012  
Category  
Special



Landscape and technology: KNX scenarios conjure up light moods in the evening

*Crystal clear water, panoramic view, immaculate beaches, sun all year round, mild climate – the 5-star luxury beach resort Gran Meliá & Luxus Villas Daios Cove in Agios Nikolaos in the north east of the Greek island of Crete scores on all these points. And so much more: 300 rooms, suites and villas, their own swimming pools, charming gardens etc. The resort, which has been built in the tradition of Cretan villages, is also at the peak of technology. 20,000 light sources create light moods at night-time, set scenes in guest accommodation and ensure that the paths are safe. The lighting and other functions are controlled automatically and efficiently via KNX. The great challenge for the system integrator Automationsystems Triantafyllidis, was the enormous scope of the resort, which covers 30 hectares and has almost 6800 bus devices, divided on 300 lines, 32 areas and a kilometre long fibre optic network. The solution that was implemented impressed the KNX jury who presented it with the Special Award.*

### Remote maintenance from the mainland

Time programs, brightness sensors, scenarios and logic functions, control the interior, exterior and architectural lighting. In the conference rooms, blackout blinds, screens, projectors, lifts and dimming functions are integrated in scenarios. Even in the rooms, suites and villas, the ventilation, the heating and the air conditioning devices are activated automatically. Once the guests check in, they are greeted with a pleasant light mode. They can of course specify the lighting in the room themselves via push buttons. Automatic mode is reactivated once the guests leave the room, triggered by a master OFF button or by reception. The superfluous sockets are also switched off. It is convenient feature for the guests that they can signal at the touch of a button that they do not want to be disturbed, or that the room can be cleaned. There is even a plan for the 11 villas whose guests will be able to operate their room functions on the move using an iPad.

Via a KNX visualisation screen, the employees at the reception desk are able to control all the functions on the hotel premises and remain informed about the occupation status of each room and the requirements of the guests regarding the room service. Five touch screens are used for the control and operation of the individual areas such as the swimming pool (spa), the restaurants, the reception desk and the conference rooms. Two further monitors are responsible for managing general hotel functions.

Functional reliability is achieved with a separate bus voltage supply per guest unit. Malfunctions are displayed on a visualisation screen and can be quickly rectified. The problem of the topology is solved using IP routers, which are linked together via a fast fibre optic network for KNX and TCP/IP. One of the technical refinements of the KNX installation is that the entire installation can be maintained remotely via VPN using an OPC server by the system integrator which is located 900 km away, in Thessaloniki.

### Benefits provided by KNX in this project

- Automatic lighting control
- Lights can be switched and dimmed individually
- Integration of heating, ventilation and air conditioning
- Increased comfort for guests
- Efficient room management
- Energy saving through time programs and automatic setpoint reduction
- Central operation of individual areas via touch screens
- Monitoring of technical faults
- Remote maintenance

### Technical refinements

- Scenarios can be modified or overridden via access rights
- Integration of the media technology
- Simple operation for guests with a service function and central "OFF" switch
- Possible coupling with hotel management, comfort operation with iPad, central BMS
- Networking via IP routers
- Routing with OPC server for remote maintenance

### Companies involved

#### Building owner:

Daivos Cove Crete,  
[www.daivoscovecrete.com](http://www.daivoscovecrete.com)

#### KNX System Integrator:

Automationsystems  
Triantafyllidis,  
[www.automationsystems.gr](http://www.automationsystems.gr)

#### Area of application:

Luxury hotel, holiday resort

#### Functions:

- Lighting
- Heating, ventilation, air conditioning
- Technical monitoring
- Energy management
- Audio/video
- Visualisation
- Interfaces to other systems
- Remote monitoring/control

#### Scope

Number of KNX devices: 6728,  
various manufacturers

#### Costs:

1,700,000 euros