



Brief of overview
INTEREL GUEST ROOM AUTOMATION

For Hospitality

Revolutionizing in-room
hotel technology

www.interelme.com



Company Overview

Product
Guest Room, Energy and Water Management System



Market
Upscale and Luxury Hospitality



Territorial reach
Global



- HQ in Singapore and Dubai
- R&D and Production Facilities in Italy
- Multinational presence
- Global partner network

Made in Italy 

Success
Awards & Selection of brands/customers



**Global corporate
standard status**



**Approved supplier in
regions of the world**



References with



System layout

A On/Off Lighting Control

All relays of the RCU are rated at 10A for resistive loads and 2A inductive loads

B Thermoregulation

Fan Coil Unit
Control of floor heating, fan coil units, heaters, etc.
Actuator Valves
Control of on/off, floating and modulating valve actuators.

C Primary Field Devices



D Sensors & Switches

Door/Window Contacts, Pulse Switches, Motion Sensors

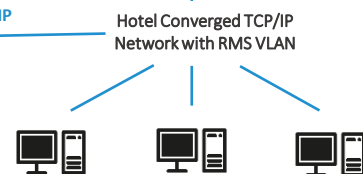
E Curtain/Sheer control

Multiple control options from 1 to 3 buttons with features like one-touch and hold/ release.

H Operator Console and Central Monitoring Platform



- Applications, Interface with PMS and other 3rd parties
- SQL Database
- OS: Windows Server 2012



TCP/IP Communication ensures reduced latency times

F Wireless Communication



G Expansion Modules for dimming, DALI, DMX



Hotel of Things™

Unified hardware and software platform enables applications

Application layer

Zero Timeout Setbacks	Predictive Proximity	Robot Locationing		Häfele			Digivalet
Way Finding	VIP mode	Housekeeping Trolley Tracker		Kaba		Alexa	iRis
Location Based Push Marketing	Kids Radar	Tray Tracker	Dispatch closest staff	Vingcard	Bartech	Google	crave
Guest Locationing		Asset tracking	Staff tracking	Salto	Indel-B	Watson	mcom
Location Services				Lock Integration	Minibar Refill	Voice Control	Locatel
							AR 2015

OS layer

connect  smart™

INTEREL Operating System

Hardware

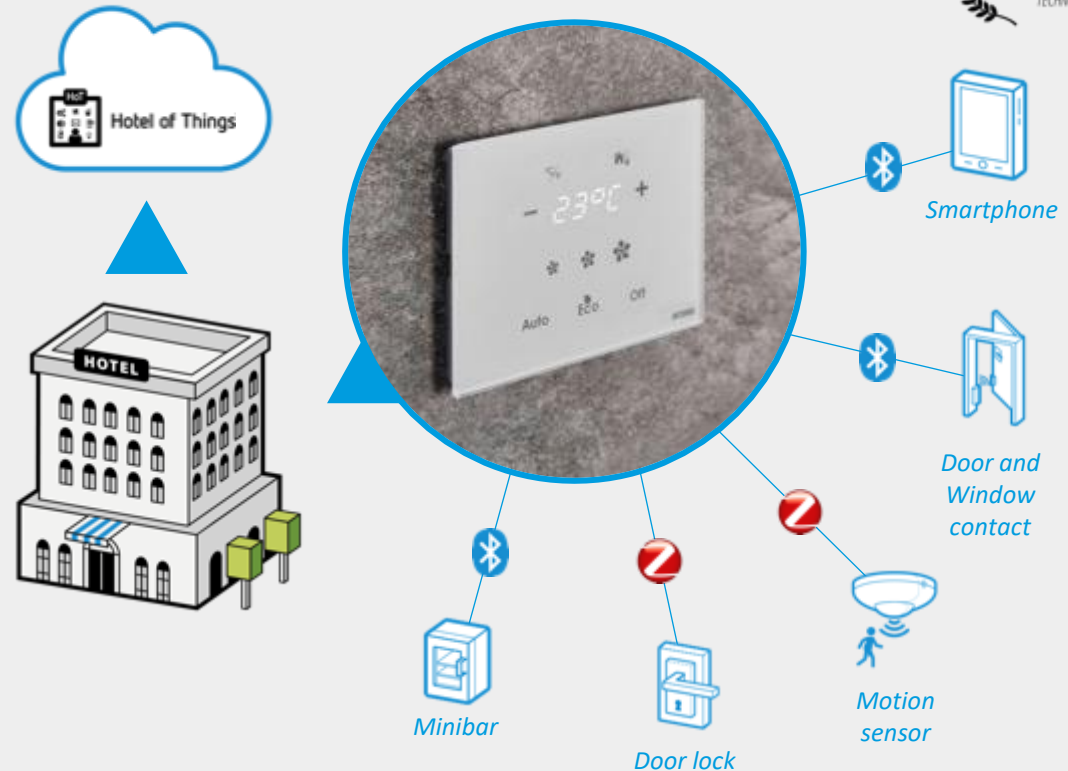
Water
Management System

Room Control
Management System

Energy
Management System

Future-ready IoT and Big data requires systems to be Online-ready

Interel offers the most advance Hospitality Room Automation solutions that is Online IP-ready platform, giving you an online sensor network across all hotel rooms, unlike any other.



Room Tray Tracking, example of IOT for Hotels

Receive alerts when used room service trays are left in hallways

Benefits:



INCREASE CLEANLINESS
Of hotel hallways & areas

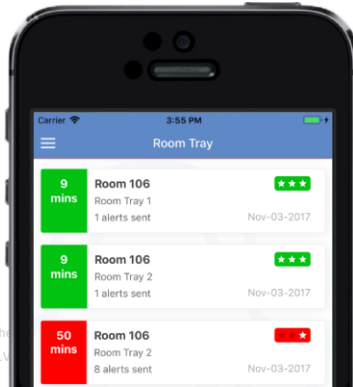


HIGHER STAFF PRODUCTIVITY
To ensure best-in-class hotels service



DECREASE TIME
To pick-up used room trays

Real-Time Tray Alerts



6mm ROOM TRAY TAG
place below tray

Guest Room Intelligent controller

INTEREL is ready for the MARRIOTT 2020 MOBILE-KEY READY INITIATIVE

- BLE Mobile key initiative happening across all Marriott hotels Internationally
- Hotel should Integrate design of Welcome scene and turn-on Room power **without a keycard slot (REMOVE)**
- Removes the need for a plastic keycard for guest experience and convenience
- INTEREL RCU wireless link to DOOR, means no hacking of door frame, NO door contact, reduces labor costs and fire certification issues
- Interel proposes wireless integration with door lock and RCU
- Reduces cabling as LOCK and Wi-Fi RCU can become online
- Future-ready for Smart Guest room controls and voice interfaces

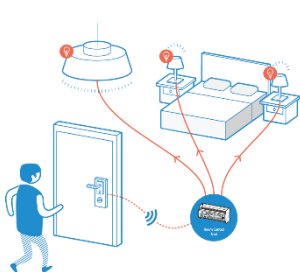
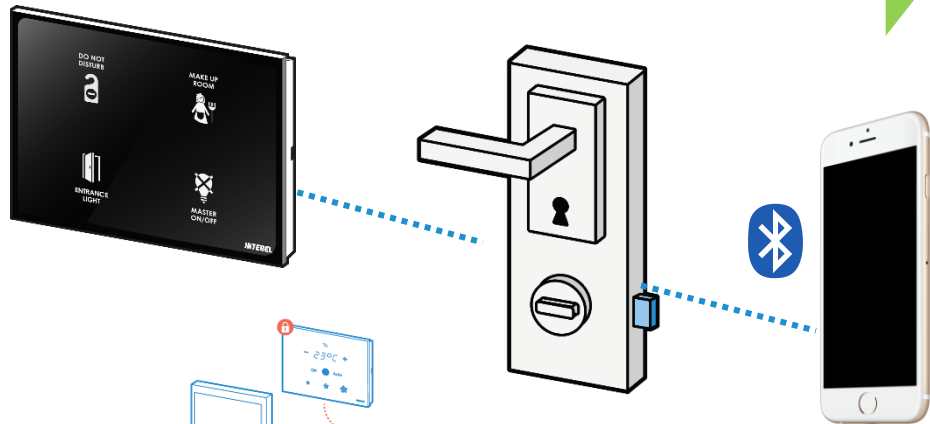
Optional - Room Level Door Lock Integration

Operational benefits

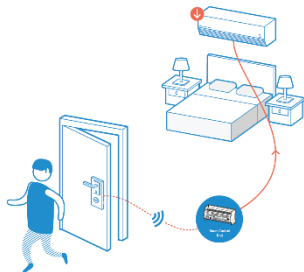
Real Time Welcome Scene

Energy & Workflow Savings

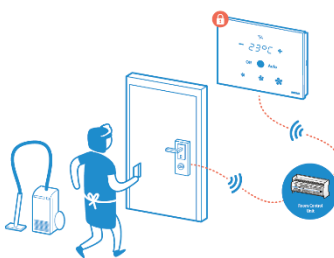
Faster turn-around of Rooms



1 Welcome scene without dedicated door contact



2 Energy saving based on guest presence

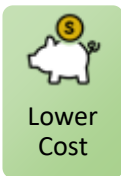
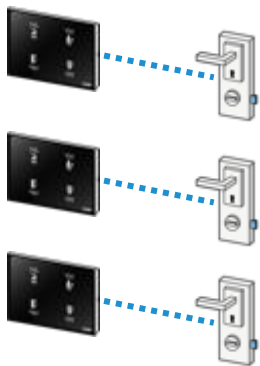


3 Workflows based on card-level detection



INTEREL's doorlock infrastructure

Door locks use available GRMS infrastructure to go online



Traditional doorlock network

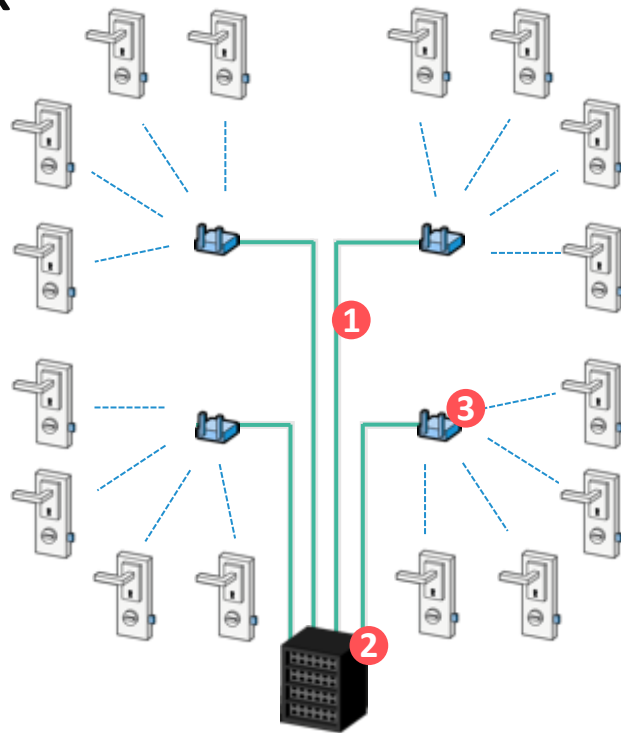
Cost for Passive items

- Cable & conduit **1**

Cost for Active items

- Network Ports **2**
- Access Points **3**
(Average 10 locks per access point)

Cost of Configuration & Installation



INTEREL Touch Panels Overview



Characteristics of Control Panels

- Tempered glass
- Mix of icons and text
- Backlit icons for easy use at night
- Multi-color status LED
- Dimmable luminosity
- Built-in Motion sensors (PIR)
- Multi use panels: lighting, Air Con, Services
- Multi-standard wall mounting – 98x98 or 128x98

Complete Design Customization

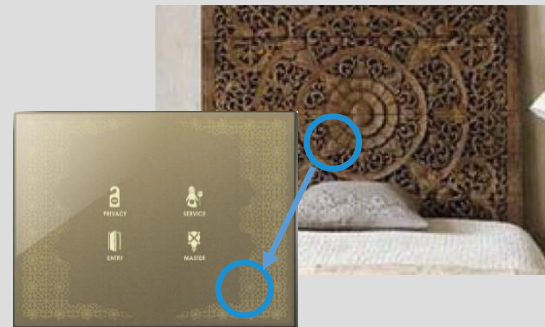
Colors

- Choose from 700+ RAL colors



Patterns

- Ability to incorporate logo or pattern prints from FF&E



Text/Language

- Text can be multi-lingual
- Customized font size & style to meet brand standards



Backlight

- Every button can change 6 different colors +
- Different colors allow an enhanced interaction with the guest & hotel staff



Panels with built-in USB and power sockets

- Up to 2 sockets can be built-in
- Sockets can be left or right mounted
- Different socket types and colors can be installed (USB, universal power socket, etc.)
- Eliminates separate socket outlets that have to be installed next to control panels



Solutions

- A. SMART Thermostat with
 - A. Built in Motion Sensor
 - B. Touch Sensitive technology
 - C. Customizable Glass Colour and Icons

- B. RCU – IOT *Ready*
 - A. IOT ready BLE - included in Thermostat
 - B. Programmable Control
 - A. 26x Digital Outputs
 - B. 24x Digital Inputs
 - C. Smart HVAC control
 - D. ETHERNET Port

- C. Connectivity with PMS - EMS included
 - A. Pre-Cool Room on Check In
 - B. Improved Guest Experience
 - C. Energy Management – Guest Occupancy Control

- D. Two Options for Presence Detection:
 - A. Wireless (ZIGBEE) Motion Sensors and Door Contacts
 - B. Wired (dry contact)

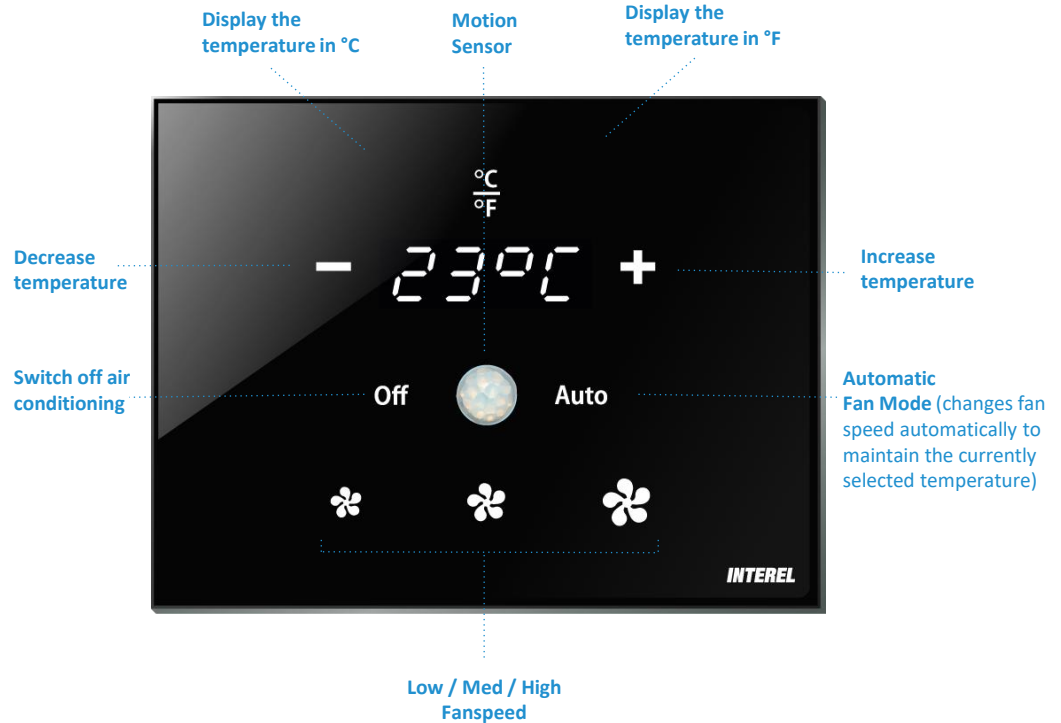
- E. WorkFlow Interface (HotSOS, FCS) – *DND/MUR – Room Status - optional*

- F. Tablet App / IPTV Integration – *optional*

- G. Door Lock Zigbee Interface – *optional*

Innovative Room Thermostat

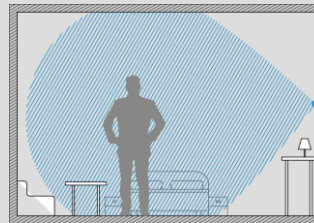
1. Hospitality-specific thermostat
2. Internationally recognized and backlit icons
3. Direct selection buttons instead of menus and toggle buttons
4. Built-in temperature and humidity sensor
 1. Built-in motion sensor is optional
5. Dimmable display and buttons
6. Housekeeping staff locking
7. Operator defined welcome, vacant and unoccupied room settings
8. Programmable logic & buttons for A/C, Lighting, Guest Services
9. Customisable vacant room temperature (tailored to property)
10. Fanspeed Control



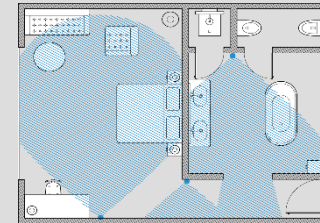
Comes with Built-in presence sensor – remove key card slot



- More discreet in terms of room design
- Lower total cost of ownership
 - Savings on containment & cabling (installation labor costs)
 - Savings on cost of external presence sensor



Presence sensor coverage (side view)



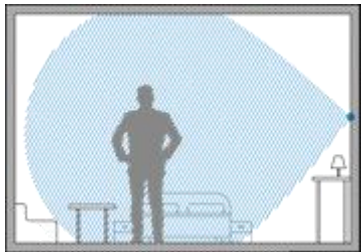
Presence sensor coverage (top view)



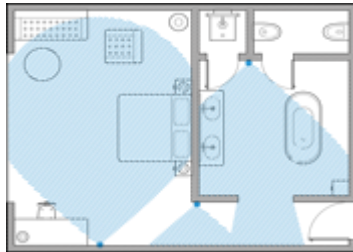
Lower Cost of Installation



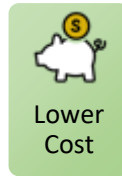
INTEREL Built-in Motion Sensors



Motion sensor coverage (side view)



Motion sensor coverage (top view)



Ceiling-mounted Motion Sensors



- Cost for containment and cabling (labor costs for installation)
- Cost of external motion sensor



Also works with other Momentary Push button Switches,

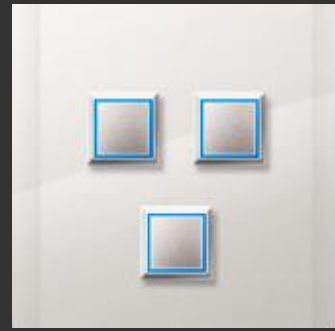
Example



Metal



Plastic



Glass



Glass

INTEGRATION

MOBILE & IP-TV , Housekeeping INTEGRATIONS

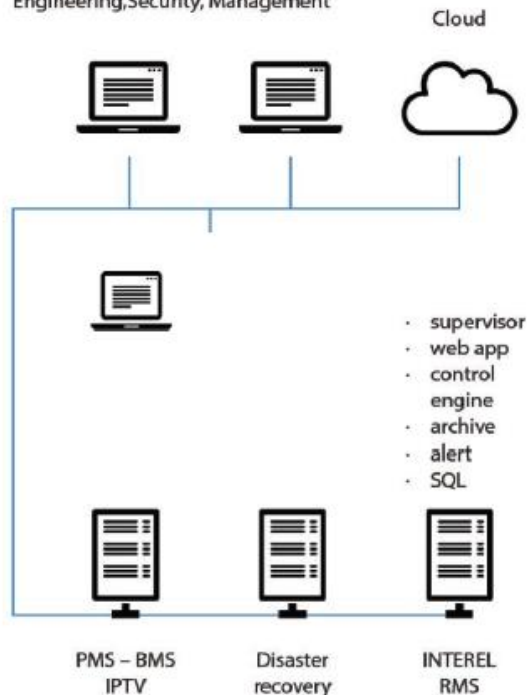


API's make integrations between the above vendors and the INTEREL Guest Room Management System seamless.
INTEREL API was created in a "open" manner so that the integration with many other IP-TV Vendors is possible or easy to achieve.

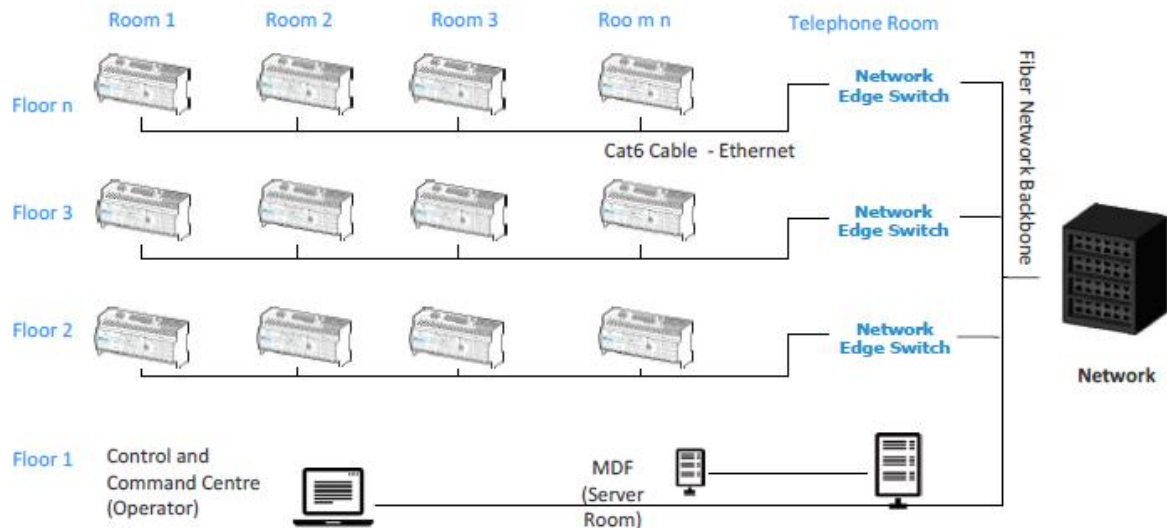
Network infrastructure – IP @ room level

RMS Server Room & Operator Control Centre

Client for Frontdesk, Housekeeping, Engineering, Security, Management



System Overview – Online Network



- Savings on the Power Infrastructure
- TCP/IP Connection at room level to ensure Real Time Communication
- Separate VLAN for RMS
- RCU max current output to devices is 720 mA @ 12Vdc

END2END SECURITY



Dedicated crypto chip allowing asymmetrical encryption

All communication encrypted with industry standard

AES128bit

The complexity of the hotel environment makes it vulnerable to multiple points of attack. Our End2End security guarantees encryption and authentication between end points independently from any infrastructure.

Some competitor systems have security issues as this video from an IT-Expert illustrates: <https://www.youtube.com/watch?v=mHNq7kGK0KU>

SUMMARY OF MAJOR USPs

connectBsmart[®] Infrastructure

- Greater operational efficiency and better guest experience
- “Future-proofing” for hotels (creates a platform for future technologies)
- Enable IoT in your hotel over the next years without additional CAPEX



Generate Rev



Energy & Ops Savings

End2end Security

- AES128bit Encryption (Banking and Healthcare Security Standards)



Security

Touch Panel Technology

- INTEREL’s largest icons in the industry greatly improve the usability and guest experience
- INTEREL’s patented technology allows user interfaces beyond the backbox constraints



Guest Experience

ZigBee Door-lock interface

- Huge saving by eliminating network infrastructure and cabling otherwise necessary for online door locks
- Real-time Welcome Scene, Occupancy & other door lock events
- Enables mobile key technology



Guest Experience



Energy & Ops Savings

Total cost of ownership approach

- Saving through built-in motion sensors / sockets, Wireless connectivity, Energy Saving Technology, Operational Savings
- Integration via Powerful API’s to 3rd party systems



Energy & Ops Savings

WWW.INTERELME.COM