Guest Room Management System

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T&D ENGINEERING LTD. (TNDE) – BRIEF INFORMATION
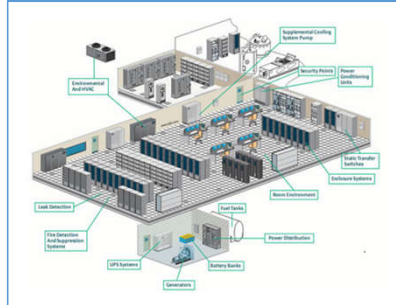
TNDE was established on DEC. 1, 1999.

Located in Vietnam, Hanoi, Nguyen Khanh Toan, 122480

30 employees (80% Automation Engineers)

20+ years in civil and industrial automation & development solutions

In-house R&D and production of hardware, software applications and solutions

More than 90% of product is for BMS and ELV solution

Private For-Profit SME

22 years with our partners

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TNDE - Products and Solutions

System integrator

DCMS

Video Door phone

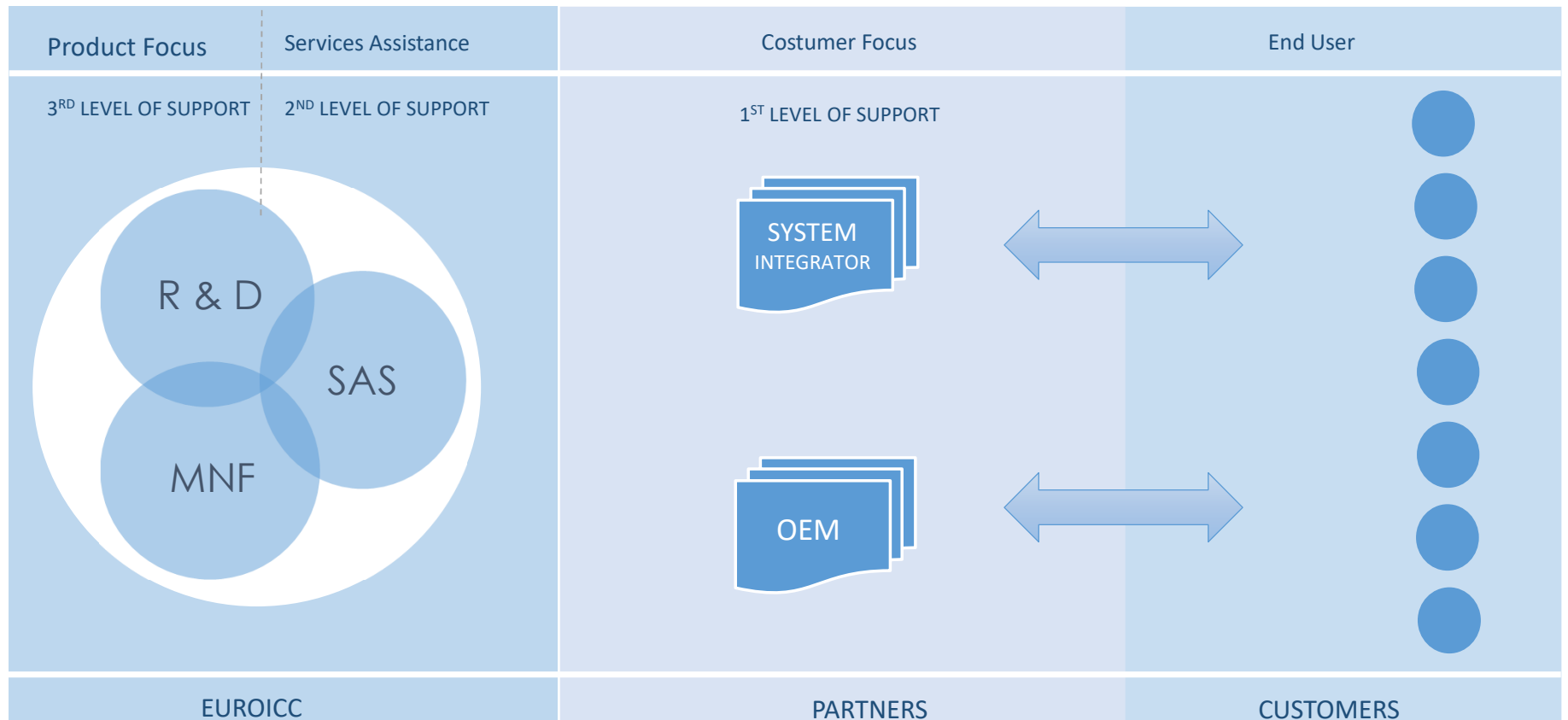## Smarthome

Video wall & Digital signature
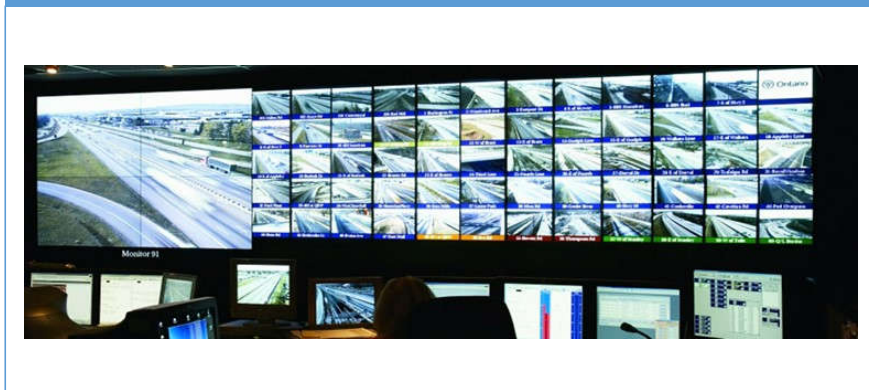
Hotel Guest Room Management System

TNDE - Business model

Product Focus	Services Assistance	Costumer Focus	End User
3RD LEVEL OF SUPPORT	2ND LEVEL OF SUPPORT	1ST LEVEL OF SUPPORT	

R & D

SAS

MNF

SYSTEM INTEGRATOR

OEM

EUROICC	PARTNERS	CUSTOMERS

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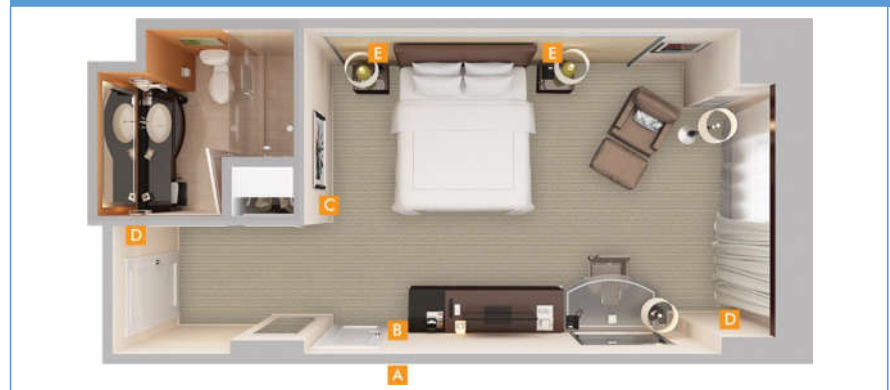
Our System offers

- Energy Saving and Management
- Full Guest Room Control
- Lighting and HVAC Control
- Integrated Room Solutions
- Wide Range of Functionalities

Advantages of Our System

ENERGY SAVING
We provide better energy consumption management that enables major savings in energy thus financial resources by reducing one of the largest operational costs in hotels.

PROGRAMMABILITY
We offer solutions for your needs giving you the possibility to program your perfect room setting in a small simple hotel or a grand luxurious one.

COMFORT
We bring the highest level of comfort to your guests with intuitive panels enabling easy access and control.
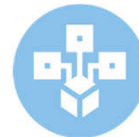
DESIGN
We make it possible for you to design your future glass panels by choosing different colors and pictograms to fit into your hotel interior design.

SAFETY
We secure the feeling of safety for both, your guests and hotel staff by applying high level access control and monitoring 24/7.

INTEGRATION
We enable easy integration with other systems HVAC, PMS, DOOR LOCKS etc, via BACnet or Modbus protocols TCP/IP and Bluetooth.

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Typical Guestroom

Guest Room Panel Distribution

A Corridor status

308

B Card holder

C Bathroom panel

D Thermostat

22℃

E Bedside panel

Intelligent user interfaces

Combining frontal glass panel with variable add-ons provides the possibility of a great number of different devices

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Network infrastructure, functionality, communication and devices

TNDE System

On/Off Lighting Control

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

Thermoregulation

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

Curtain/Sheer control

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

Sensors & Switches

Door/Window Contacts, Pulse Switches, Motion Sensors

Operator Console and Central Monitoring Platform

RMS Server

- Applications, Interface with PMS and other 3rd parties
- jPLCPro

TCP/IP Communication ensures reduced latency times

Hotel Converged Network with RMS VLAN

Card Encoder

Primary Field Devices

RS 485 (Modbus)

308

22°C
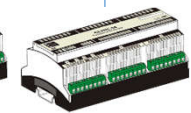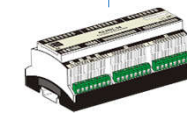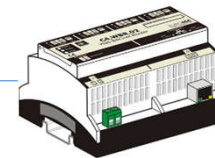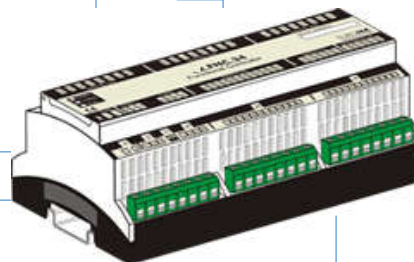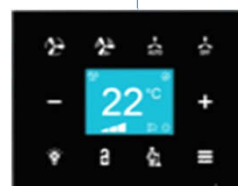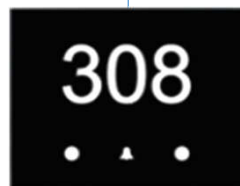
Expansion Modules

Expansion Modules

System is scalable and modular to meet various requirements. Lighting Control capabilities include switching and dimming halogen and incandescent lights, LEDs, and Fluorescents. Supported dimming technologies include 0-10Vdc, leading edge dimming and trailing edge dimming. Supported Lighting protocols include DALI.
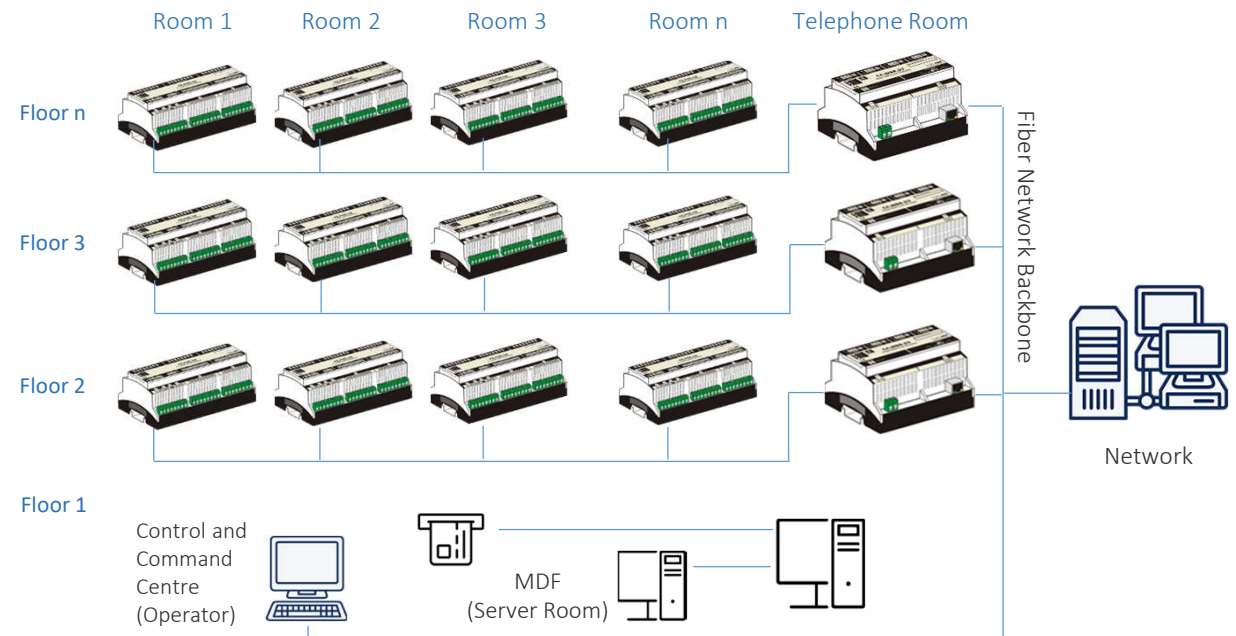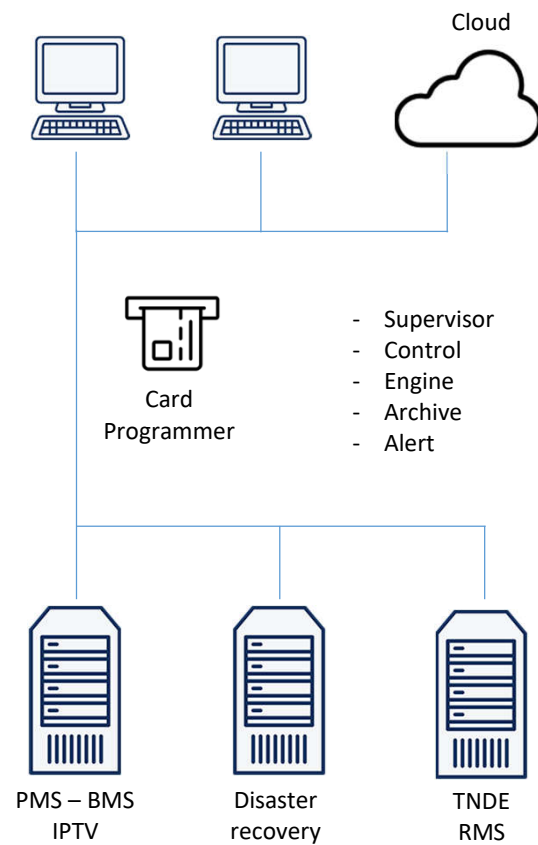
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Network infrastructure

RMS Server Room & Operator Control Centre

Client for Frontdesk, Housekeeping,
Engineering, Security, Management

Cloud

Card
Programmer

- Supervisor
- Control
- Engine
- Archive
- Alert

PMS – BMS
IPTV

Disaster
recovery

TNDE
RMS

Room 1   Room 2   Room 3   Room n   Telephone Room

Floor n

Floor 3

Floor 2

Floor 1

Fiber Network Backbone

Network

Control and
Command
Centre
(Operator)

MDF
(Server Room)

- Saving on the Power Infrastructure
- Separate VLAN for RMS

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Programmable Glass Panels

Corridor Status Panel

- Supports Mifare 1K RFID card
- Additional functionality provided by pushbutton and LED indicators
- Configuration, programming and debugging is done using PC based tool through USB port
- Resource sharing between controllers through BACnet network. Sharing of the data is performed without intervention of the supervisory system
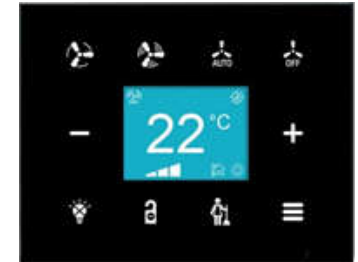- Jumper selectable standard polarizing and termination resistors on RS485 terminal

Card Holder

- Supports Mifare 1K RFID cards
- Card gap has backlight
- Configuration, programming and debugging is done using PC based tool through USB port
- Resource sharing between controllers through BACnet network. Sharing of the data is performed without intervention of the supervisory system
- Jumper selectable standard polarizing and termination resistors on RS485 terminal

Wall touch panels

- 9 or 12 capacitive keys with bicolor backlight
- Configuration, programming and debugging is done using PC based tool through USB port
- Resource sharing between controllers through BACnet network. Sharing of the data is performed without intervention of the supervisory system
- Jumper selectable standard polarizing and termination resistors on RS485 terminal
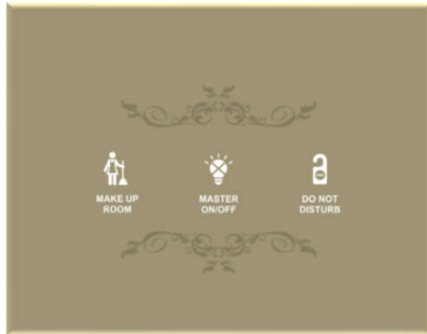
Room display unit

- Color display
- 10 capacitive keys with bicolor backlight
- Embedded temperature probe
- High level of flexibility thanks to a wide range of IO resources
- Configuration, programming and debugging is done using PC based tool through USB port
- Resource sharing between controllers through BACnet network. Sharing of the data is performed without intervention of the supervisory system
- Jumper selectable standard polarizing and termination resistors on RS485 terminal

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Usability and Guest Experience as our core design principles

Design Capabilities

Look and Feel
Devices can be customized to match the interior design
Ability to incorporate logo or pattern prints
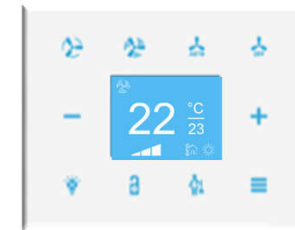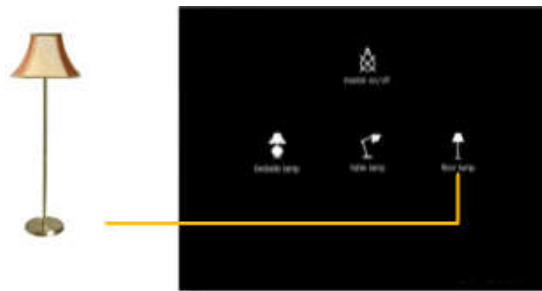Panel devices with elegant look and pleasing light.

User interface
Focus on User-friendly
Developed for hospitality environment
Icons allow quick and easy familiarisation
Text, fonts and icons are customisable

Mix of icons and text
Backlight icons for easy use at night
Multi-color status LED
Multi use panels, lighting, Air Con, Guest Services

Multilingual text labels make sure the system is
being understood on international level

Icons that match the real-world FF&E help the user
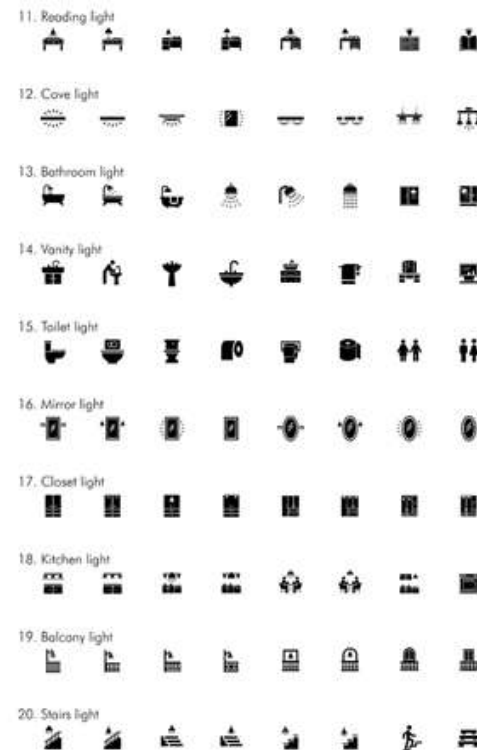to understand immediately what he is controlling
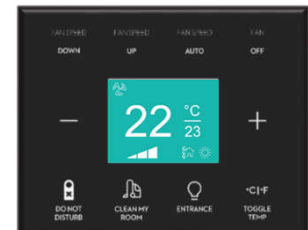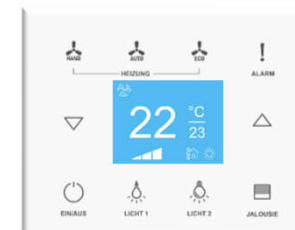
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Copyright protected icons library

Constantly growing
Option to create brand specific icon sets

Manage your hotel better with TNDE-Ata

What is TNDE-Ata?

TNDE-Ata is a Room management system (RMS) application which incorporates room monitoring and control. TNDE-Ata represents a scalable and modular system which provides real-time monitoring of numerous events such as door state, room fan speed, presence in the room and temperature measurements.
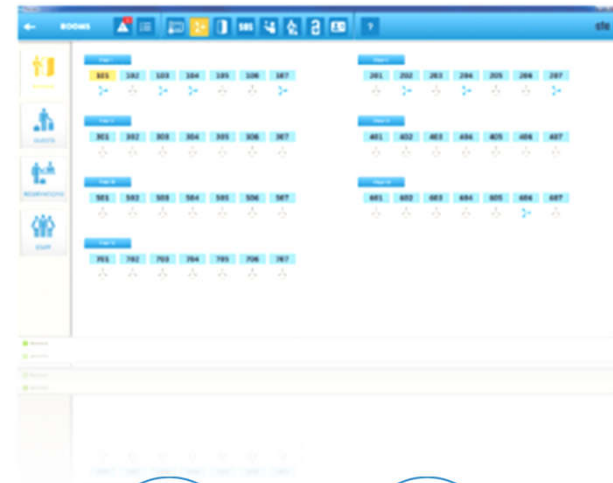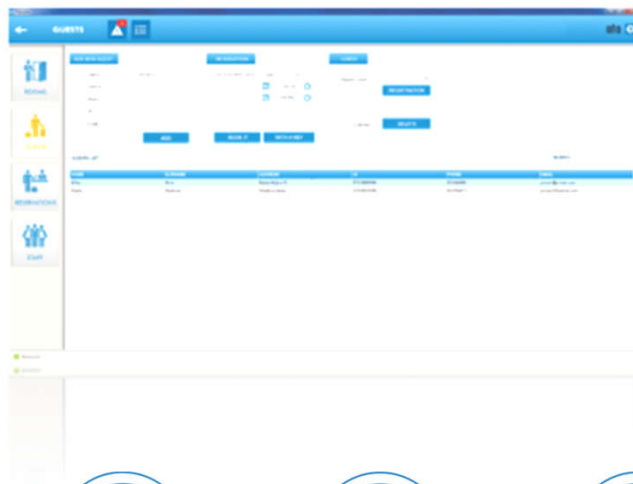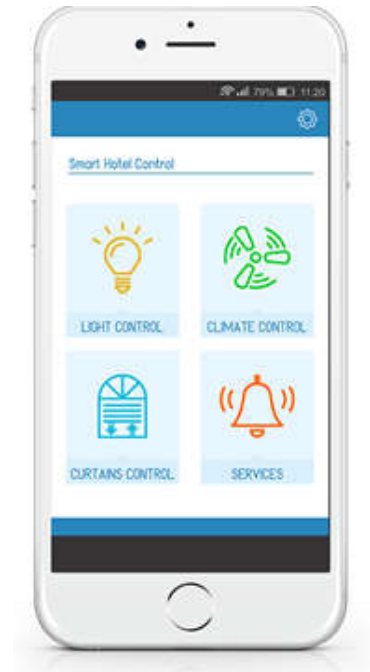
ROOM
MONITORING

ROOM
MANAGEMENT

STAFF
MANAGEMENT

MOBILE
APP

PMS
INTEGRATION

Why Use TNDE-Ata?

YOUR HOSPITALITY PARTNER

ENERGY EFFICIENCY

**GUEST COMFORT**

MODERN DESIGN

INTUITIVE

MODULAR

TNDE-Ata has numerous features:

- Monitors the status of the room (DND, MUR, SOS)
- Supports seasonal programming of temperature settings
- Supports encoding keycards for guests and staff
- Possesses integrated alarm system which tracks all emergencies
- System log tracks all events in the hotel
- Provides staff management module
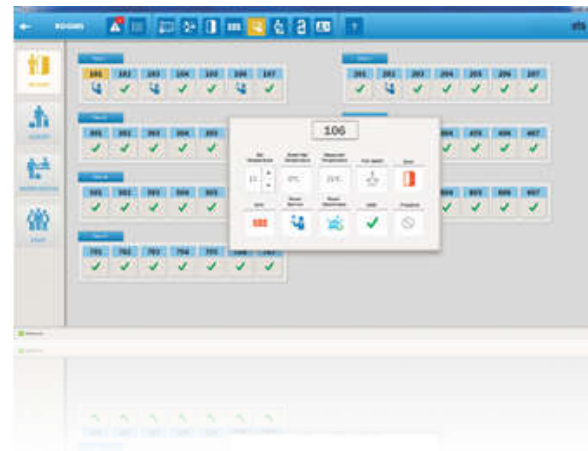

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# Room Controls – Access Control

- Access control uses RFID cards with unique ID code. There are three types of cards:

  - **Guests**
  - **Maintenance**
  - **Admin**

- Each usage of the card is registered and sent to monitoring computer.

- Maintenance cards types can be further divided into cards for cleaning ladies, handymen, doormen, with different usage rights.

- When a card is issued its ID is sent to the room controller and saved in controller memory.

- First level of integration with Salto door lock systems.

YOUR RELIABLE AUTOMATION PARTNER

YOUR RELIABLE AUTOMATION PARTNER

YOUR RELIABLE AUTOMATION PARTNER

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The glass color and patterns are fully customizable allowing for a plethora of options for designers

Vertical panels
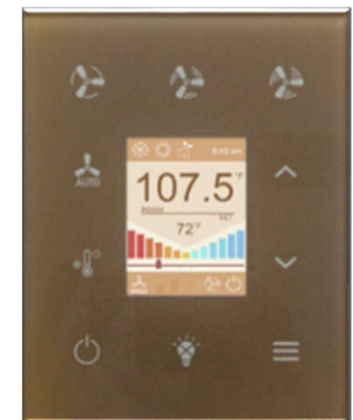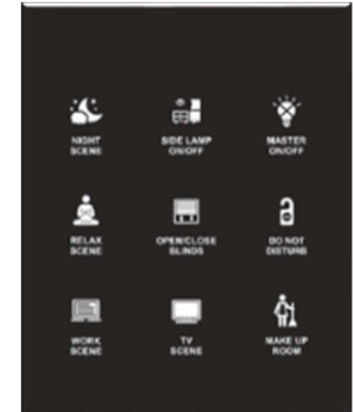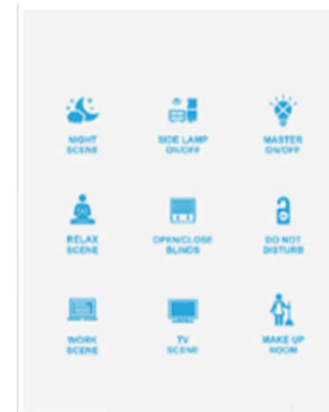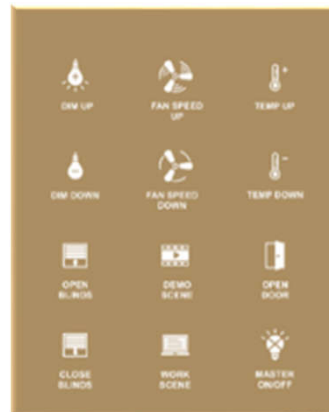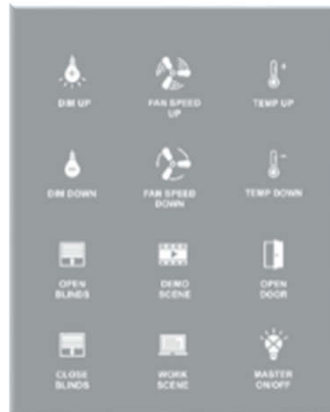
Color and design customizations
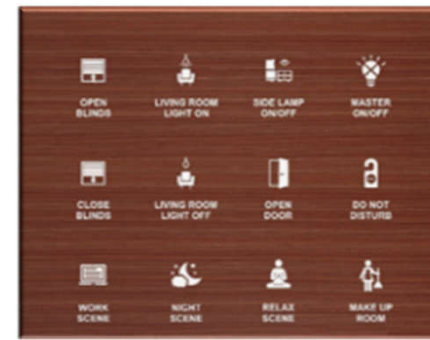
Natural materials textures
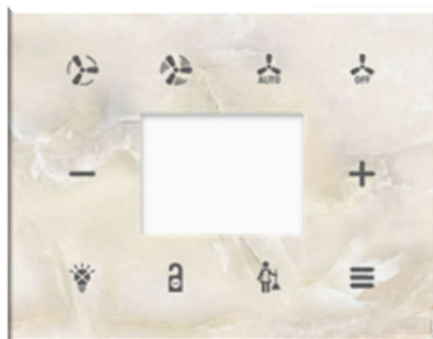

Onyx texture

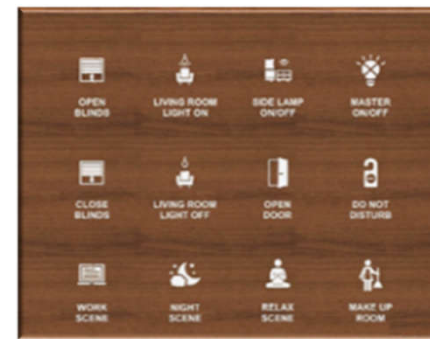Black marble texture

Wood texture

Leather texture

Onyx texture

White marble texture

Wood texture

Leather texture

Reference