HOTEL GUESTROOM AUTOMATION WE AUTOMATE YOUR VISION

















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Company contact details:

Name : ELECON INTERNATI

Address: 122 Soi Intraporn, Phabphla, Wangthonglang, Bangkok-10310, Thailand

Tel.: (66) 2933-5991-3

0000 5000



Website: www.eleconthailand.com



INTRODUCTION

Thailand based

ELECON INTERNATIONAL CO., LTD. was founded in 1995 with the aim of becoming an industry leading provider of electronic devices and components. In the following years the company has grown dramatically and applied considerable expertise towards the design and production of advanced, custom-made electronic solutions, aimed particularly for clients in the hospitality sector. Hotels and resorts wanting to ensure their guests enjoy the utmost comfort and convenience look to ELECON for very innovative, intuitive and stylish technologies.

ELECON's growth has coincided with a tremendous increase in tourism not only to Thailand but throughout Asia and the Middle East. With new hotels opening frequently, owners and designers rely on superior and reliable amenities to distinguish their properties within a highly competitive environment. In the case of switches, control panels and other components

used in guest room technologies some manufacturers rely on standardized products in order to maximize market penetration.

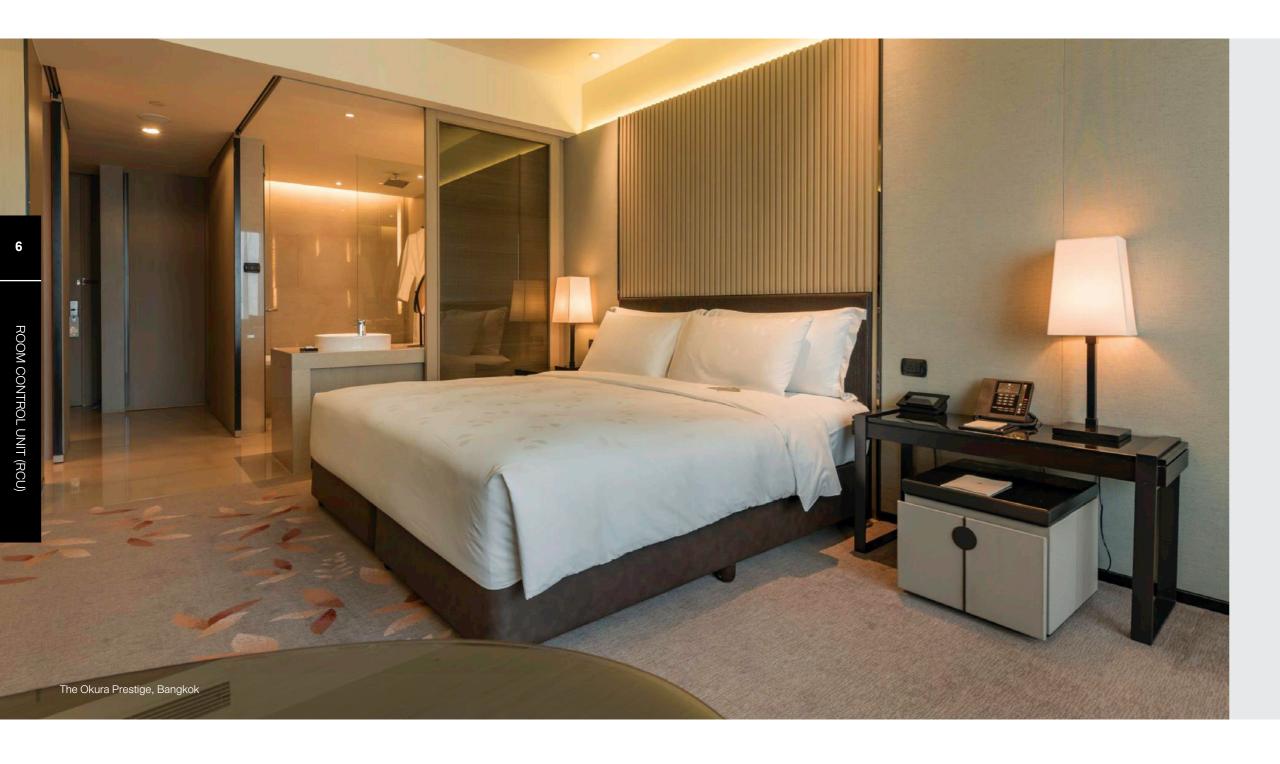
ELECON however has taken a different

approach. By focusing on the unique needs

of hotels, the company has established itself as one of the world's pre-eminent providers of hi-tech customized guest room amenities. Today, ELECON partners with and provides solutions for a great number of international hotel chains and groups. Indeed in Thailand alone, the company's state-of-the-art products are preferred by some of the highest profile clients Waldorf Astroia Bangkok, The Okura Prestige, The Sukhothai Bangkok, Rosewood Hotel & Resorts, Grand Hyatt Erawan Bangkok, Lancaster Bangkok, Banyan Tree, The Athenee Hotel Bangkok, Marriott Hotel, Centara Grand at Central World, Renaissance Phuket Resort & Spa and many others. The continuing satisfaction of ELECON

customers locally has led to an increased presence abroad. The company's reputation for customized solutions now extends to many countries including Myanmar Rosewood Yangon (The Heritage Hotel), Cambodia (Park Hyatt Siem Reap), Singapore (One 15 Marina), Malaysia, Vietnam, Sri Lanka, Dubai and United Arab Emirates.

Combining technological expertise with a keen understanding of accommodation related requirements, ELECON creates a distinctive, personal touch of luxury for hotel guests worldwide. For more details please contact us directly to discuss your individual requirements.



ROOM CONTROL UNIT (RCU)

Our considerable experience in the hospitality industry gives us direct insight into the needs of owners, designers and operators. Two key concerns among hotels are the need to maximize energy efficiency while at the same time providing guests with maximum comfort. ELECON's Room Control Unit (RCU) products have been designed and manufactured to fully meet such needs.

ELECON also keeps in mind that every hotel is different and international branded properties can have special requirements and needs. Our design and manufacturing process allows us to customize systems for complicated room configurations including suite rooms containing multiple areas to control via a variety of input devices. ELECON RCU's are suitable for a wide range of accommodation types, from budget hotels and boutique properties to the most opulent six-star resorts. Common to all designs, however is the presence of important safety features in every unit, for example low-voltage input as part of wall switch and bedside control devices. ELECON can also provide a modern glass touch screen bedside device with customized graphics and look and feel. In addition ELECON's RCU is compatible with all industry standard low voltage gang switches.

Elecon's products have also been officially CE safety certified.

ROOM CONTROL UNIT (RCU)

Features:

- Housekeeping Service Panel
 (Do Not Disturb / Make Up Room / Laundry).
- Lighting Control
- Dimmer Control
- Air-conditioning (Elecon custom designed Thermostats)
- Fan Speed Control
- Curtains/Blinds Control
- Music controls in Bathroom/Bedroom
- Motion and Heat sensors
- Centralized control monitoring system (E.R.A.S)

Energy Saving Features:

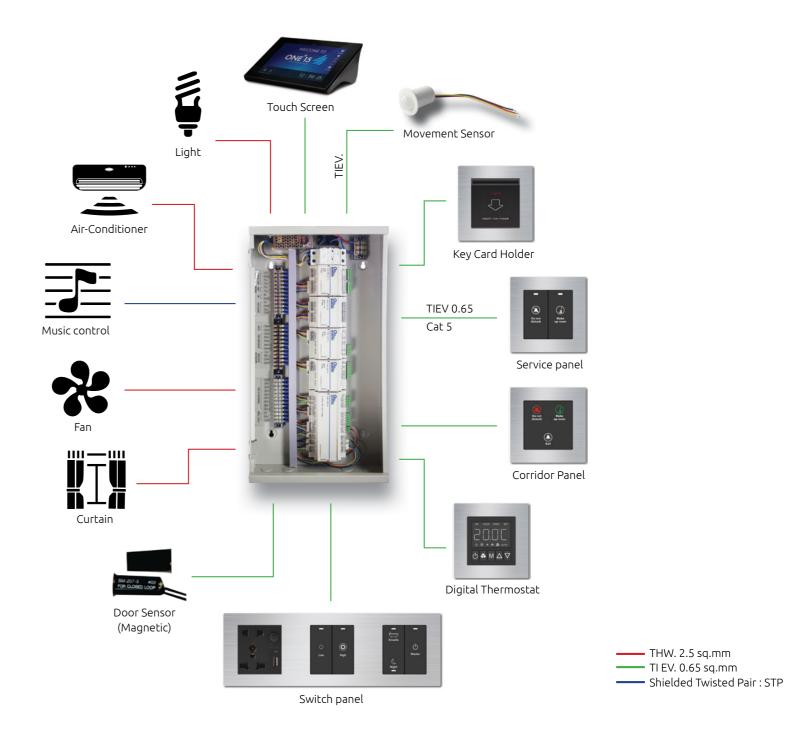
- Key-card holder (Micro switch or RFID type)
- Temperature Sensor at return air vent for accurate temperature control
- Automatic room energy saving with user programmable setback control
- Multiple setback control points for maximum energy saving.
- Option for online monitoring and control for maximum room energy management (network cabling required).
- Cost savings without compromising the guests comfort.
- Automatic sleep mode temperature control for optimum guest comfort and energy saving.
- Option to use motion sensors instead of key-card holder
- Option to use motion sensors for automatic light control
- Energy saving profiles for different room status; checked-in, occupied,occupied-vacant and checked-out.



ELECON RCU SPECIFICATIONS

RCU COMPONENT	SPECIFICATIONS
Case	Metal box with ventilation slots plus connection to bar ground (protection against electrical shock).
Case Dimensions (Standard)	W 230 (mm) x L 330 (mm) x D 110 (mm) W 300 (mm) x L 400 (mm) x D 120 (mm)
Form Factor	DIN rail modular design
Relays Control Circuit Control Relay Air-con & Lighting General Sockets	8 circuit (expandable) Air-con, Lighting and General Power Sockets 10amp 30amp
Switching Power Supply Primary Rated Voltage Secondary Rated Voltage Frequency Surge protected	110 - 240 VAC 12 VDC 50/60Hz IEC 61000-4-5 - Level 3 Criteria A - Common mode: 4V - Differenctial mode: 4V
Environmental Operational Temperature Relative Humidity	- 10 to +60 °C 0 to 90% (non-condensing)
Switch Panel Controls Lighting & Service Panels	12 VDC 12V(output for LED Button Back List) Panel options: Local brand Glass Touch Switch Soft Touch Switch/Panels Bedside LCD Control Panel Custom made panels

RCU COMPONENT	SPECIFICATIONS
Safety Fuse	
Emergency Fuse Normal Fuse	3 Ampere 5 Ampere
Terminal Voltage Voltage Ampere	300 – 600 Volts 15 – 25 Ampere
Switch Wiring	Cat-5e/6 or TIEV 4/8 core
Network Wiring (RCU Loop)	Screened Twisted Pair with ground
Microprocessor CPU model Battery Backup PCB Networking	PIC 18Fxx2 DS1307 (10 years) Double Layer, FR4 matterail RS485/LAN
Expansion modules - I/O module (16 channel) - Relay module (6 relay) - Dimmer Module (4 channel) - DALI module - RS485 to LAN Modbus - VRV interface module - Repeater - Thermostat (0-10V) - NO/NC	
Interface	OPERA, Comanche, FCS , Hot SOS, Oasis, Okkami, Crave, Digi Valet





Mobile Device Integration



Elecon can provide a custom designed Room Control app with dynamic Hotel Information pages. In addition, should the customer require more functionality and a remote CMS (Content Management System) then we can recommend our mobile app development partners shown below.



Approved developers can request Elecon's API (Modbus™) reference guide.









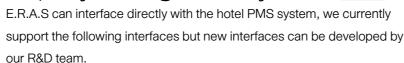
Elecon Room Automation System (E.R.A.S)

Elecon can provide an advanced Room Automation System. Each RCU has a network connection to the hotel based RCU server. The network can coexist with the hotel's existing network infrastructure using a new VLAN or elsebe installed as a new stand-alone network.

The RCU status indicators and air conditioning can be monitored in real-time by hotel housekeeping and engineering staff using the RCU client application to better service the guests.



Property Management Systems



- Opera/Fidelio
- OASIS
- Comanche
- FCS Unicorn (Bridge)

The interface with the hotel PMS provides check-in and check-out signals directly to the RCU for setting the welcome fast cooling mode and lighting scenes plus energy profiles when the guest leaves the room temporarily and energy saving plans when the room is unsold/checked-out.

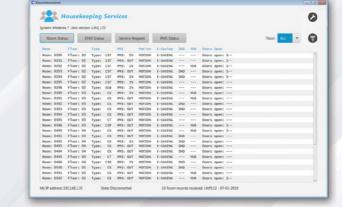


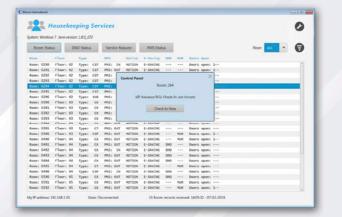
Elecon is licensed to connect to the HotSOS cloud messaging service by Amadeus for guest servicing requests and room status information.

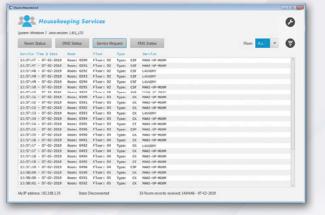
- Privacy (DND)
- Make Up Room
- Pickup Tray
- Pickup Laundry
- Pickup Luggage
- Other requests

Guest Room Monitoring Software

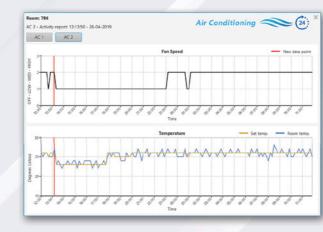
Providing unique centralized monitoring and control of Elecons' room control units our guest room management software is a one-stop solution that benefits the hotel engineering, housekeeping, front desk and management staff.











AC performance history charts



Front Desk Application RCU Check-IN/Check-OUT Option for hotels with no PMS interface

Housekeeping Assistant Application

To help staff provide a more timely service when working on the guest floors or walking between villa rooms over large areas the room status and guest service requests can be monitored in real-time.

*An Android device and WIFI connection to the RCU network server is required







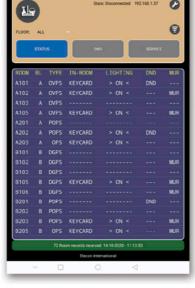
Room Status Signals

- PMS room status (Check-In/Out)
- Room occupancy:
 - Motion sensors
 - Keycard
- Energy saving status
- Doors open/closed

Service Requests

- Make Up Room
- Pickup Tray
- Pickup Laundry
- Pickup Luggage
- Other requests...
- Privacy (DND) status

*Features are subject to the RCU specifications







SAMSUNG







LCD Series Bedside control panel

Application:

The ELECON LCD Touch Screen Panels are installed on the bedside table to provide convenience for the guest. The panel provides a clock with alarm function and all of the room control functions are available including the thermostat, lighting controls and scene settings, curtains and guest service controls.

The button layout and graphic icons can be customized to match the room functionality and fit the design theme and dator of the room.

Features:

- Light controls
- Dimmer and scene settings
- Air conditioning temperature controls and fan speed
- Digital clock with Alarm/Snooze function and optional world time function.
- Do not disturb/Make up room / Laundry /
 Butler
- Curtains and Blinds control
- Support for multiple languages
- Customizable layout and graphics
- Proximity sensor for automatic panel backlight
- Automatic backlight brightness adjustment
- Multiple language support
- Customizable frame colour to match room decor
- Automatic centralized clock adjustment (network connection required).

Specifications:

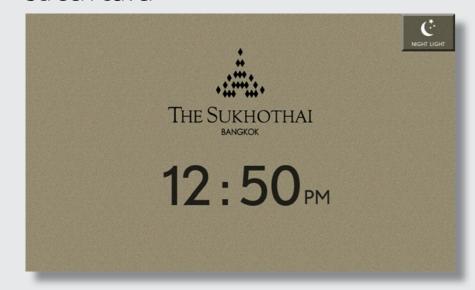
The screen is a color active matrix TFT-LCD that uses amorphous silicon TFT as a switching device. This model measures 7 inches diagonally with an LED backlight and a edge-to-edge front glass panel.

- 7 Inches Color VGA TFT Module
- Display resolution (pixel): 800(W) x 480(H)
- Color resolution: 262,144 colors (256K 18bit)
- Display area: 152.4 (W) x 91.44 (H) mm.
- Pixel pitch: 0.1905 (W) x 0.1905 (H) mm.
- Color Configuration: RGB Vertical stripe
- Overall dimension:
 - 178.5 (W) x 110.0 (H) x 19.8 (D)
 - (approx.)mm.

Language



Screen saver



Services



In room dining



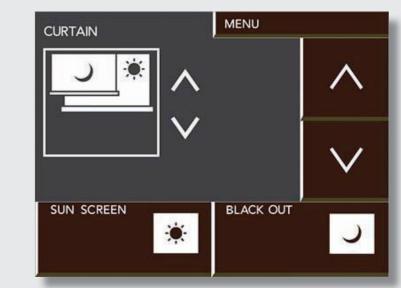
Home



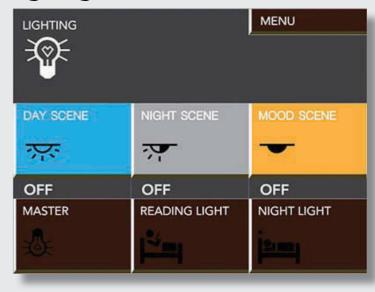
Thermostat

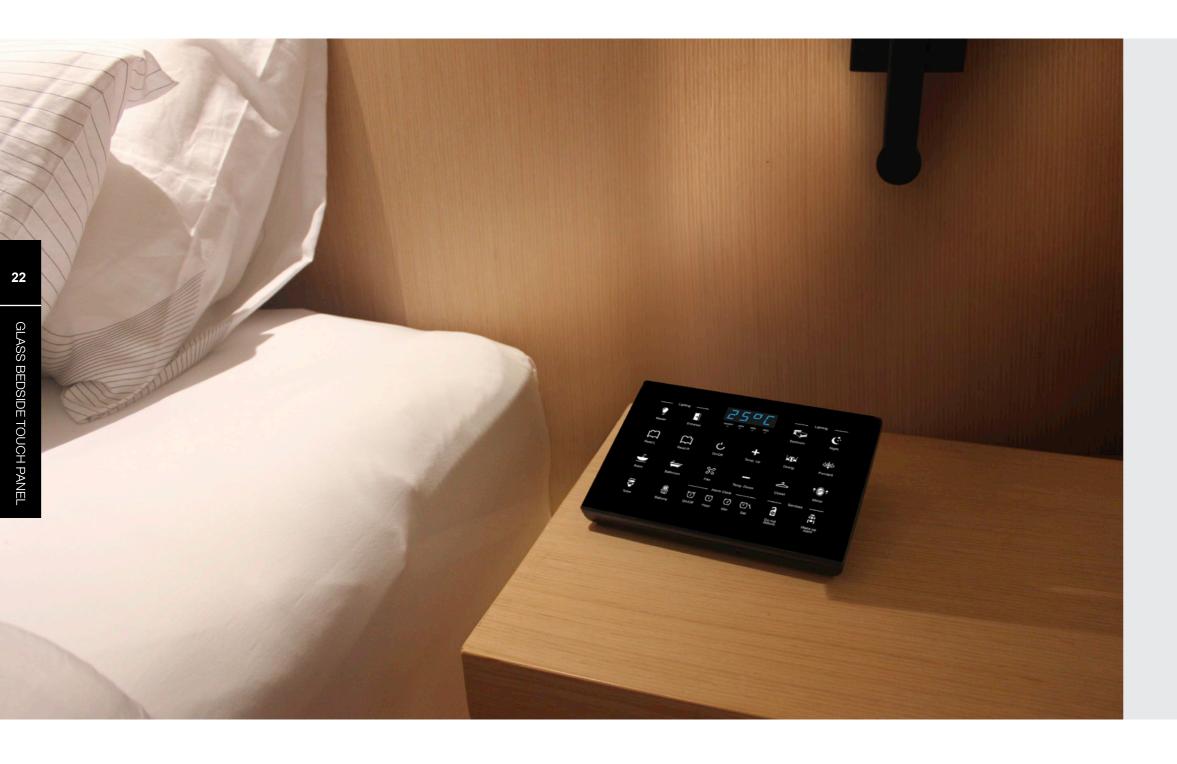


Curtain



Lighting





GLASS BEDSIDE TOUCH PANEL

Glass Bedside Touch Panel

The Elecon glass touch bedside panel shown here provides a robust, reliable and cost effective user interface for the room lighting and air conditioning settings and service controls. Designed, engineered and manufactured by Elecon it features a custom designed front surface with backlighting to highlight each touch point.

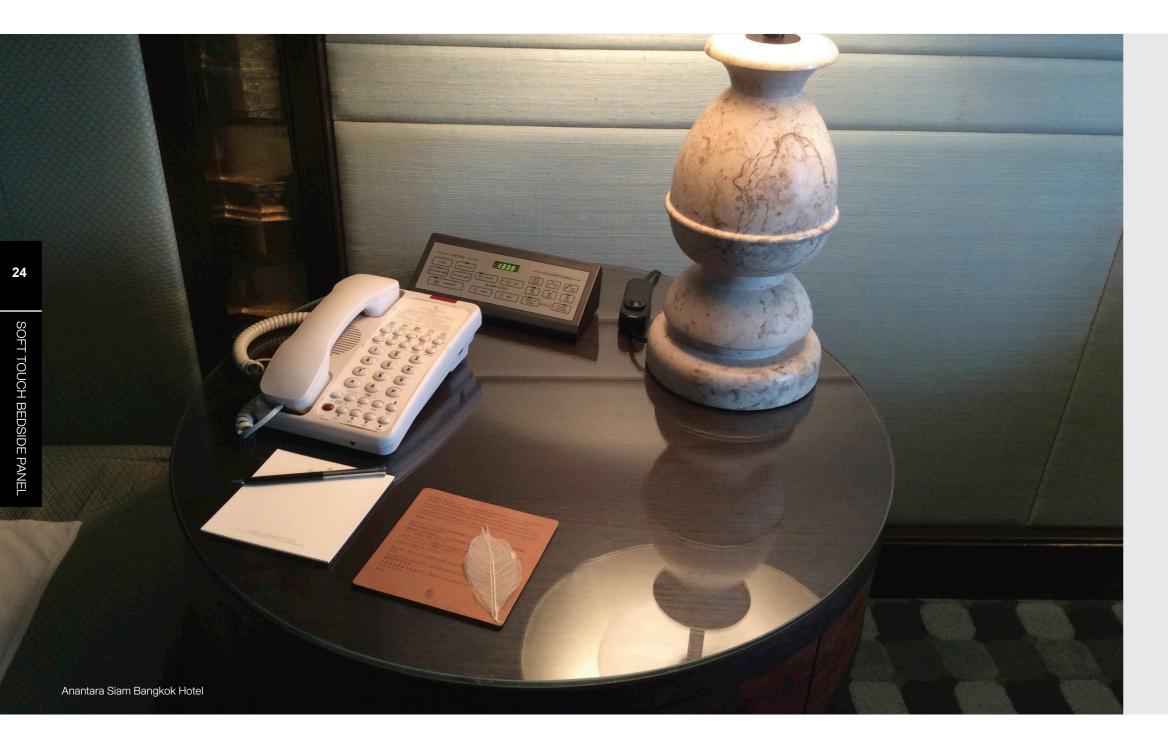
Using capacitance switch technology each button zone is highly sensitive and responds instantly to the slightest touch. The illuminated screen comes alive in bold colors, sharp images and easily legible text. Button layouts, color, text and icon symbols are fully customizable according the hotels preference.

Features:

- Light controls
- Light scene settings
- Air conditioning temperature and fan speed
- Digital clock with Alarm/Snooze function
- Service controls; Do Not Disturb, Make Up Room
- Curtains and Blinds control
- Customizable layout and graphics
- Customizable frame colour to match room decor
- Low-voltage wiring for safe operation
- Inexpensive installation
- Multi-way switching for full function control anywhere in the room.

Specifications:

- 7 Inches diagonal glass screen
- Dimensions including base: 178.5 (W) x
 110.0 (H) x 19.8 (D) (approx.) mm.



SOFT TOUCH BEDSIDE PANEL

Application:

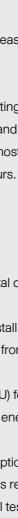
The ELECON Soft Touch Bedside Panel is installed next to the bedside and provides convenience for the guest to control all of the room settings from one handy panel. The panel is a Soft Touch (Membrane) Button Type.

Features:

- Light control with soft touch switches
- Dimmer and scene settings
- Air conditioning temperature controls and fan speed
- Remote TV/Music, channel and volume control
- Digital clock with alarm and world time function
- Do not disturb/Make up room
- Curtains and Blinds control.
- Button functions, design, layout and colors are customizable









DIGITAL THERMOSTAT

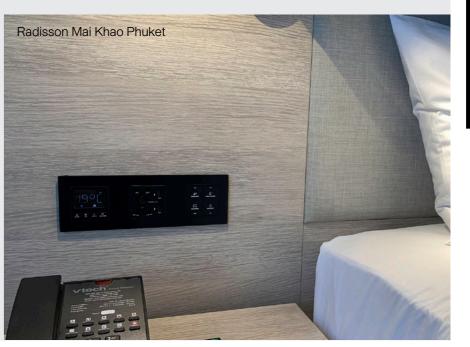
Elecon's Digital Thermostats provide easy to use controls for temperature and fan speed control.

Our thermostats can be built into existing standard brand frames to match with existing switch panels and room decor. In addition Elecon can provide customized thermostat panels in glass or metal with different finishes and colours.

Features:

- Microprocessor controlled
- Programmable settings mode
- Four digit display for precise digital control
- Low voltage (12VDC)
- Low installation costs, easy to install and operate
- The relay control unit is separate from room display panel
- Multi-way control
- Interface with PIR sensor (via RCU) for energy management
- Occupied/Unoccupied mode for energy saving
- Auto restart after power failure
- Central control and monitoring (option)
- Customizable thermostat panel as required
- Engineer mode to access special test functions
- Celsius/Fahrenheit switch and Auto fan mode (options)
- Separate temperature sensor installed in return air duct



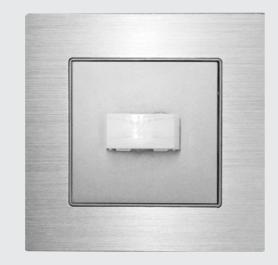


MOTION AND PRESENCE SENSORS

Energy saving for our customers is one of our top priorities when designing our products. We always consider the hotel owner's expenses in maintaining the hotel without compromising the beauty, elegance and services of the hotel.

ELECON's motion sensors are used for both motion and presence detection to save energy when the room is unoccupied. With the combination of unique technology and ELECON's superior logic intelligence and fail-safe modes we can reliably check when a guest is present in the room or sleeping. This ensures that the energy use of the room can be optimized without any inconvenience to the guest.

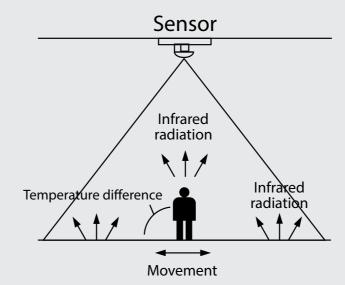
In addition to using ELECON's motion sensors for energy saving they can also be applied to switching on night lights or bathroom lights automatically or to detect intruders who have entered the room without a key card.



Motion sensor wall type



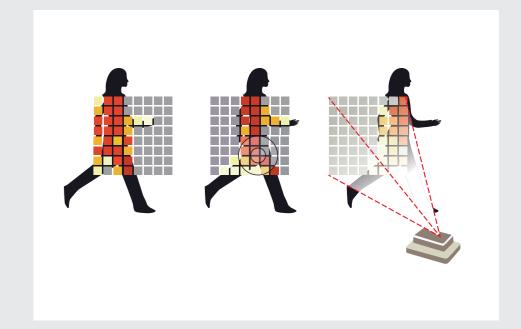
Motion sensor ceiling type

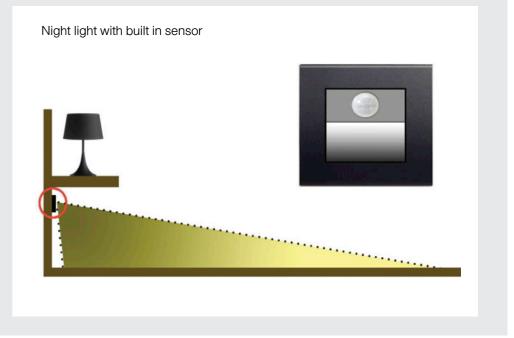


What is passive infrared type?

this sensor detects changes in infrared radiation which occur when there is movement by a person (or object) which is different in temperature from the surroundings.

- 1. As this sensor detects temperature differences, it is well suited to detecting the motion of people by their body temperature.
- 2. Wide sensing area.







DIMMER

Dimming Guide

Lighting is a major use of energy in all hotels. When dimming is used in combination with Elecon's other energy saving technologies owners and operators can benefit from major cost savings.

Light dimming is also an essential part of modern lighting control to set the scene and mood of a room and to provide an outstanding guest experience.

There are various types of dimming control devices available, but the most popular are 'phase control' (or phase-cut) dimmers, these can be of the "Leading Edge" or "Trailing Edge" phase control type as described here. Dimming is done by controlling 220VAC loads or 12-24VDC loads for LED's.

After extensive research and development Elecon has developed special dimming modules to cater for both mains 220VAC and low voltage LED lighting loads.

Trailing Edge Dimmers

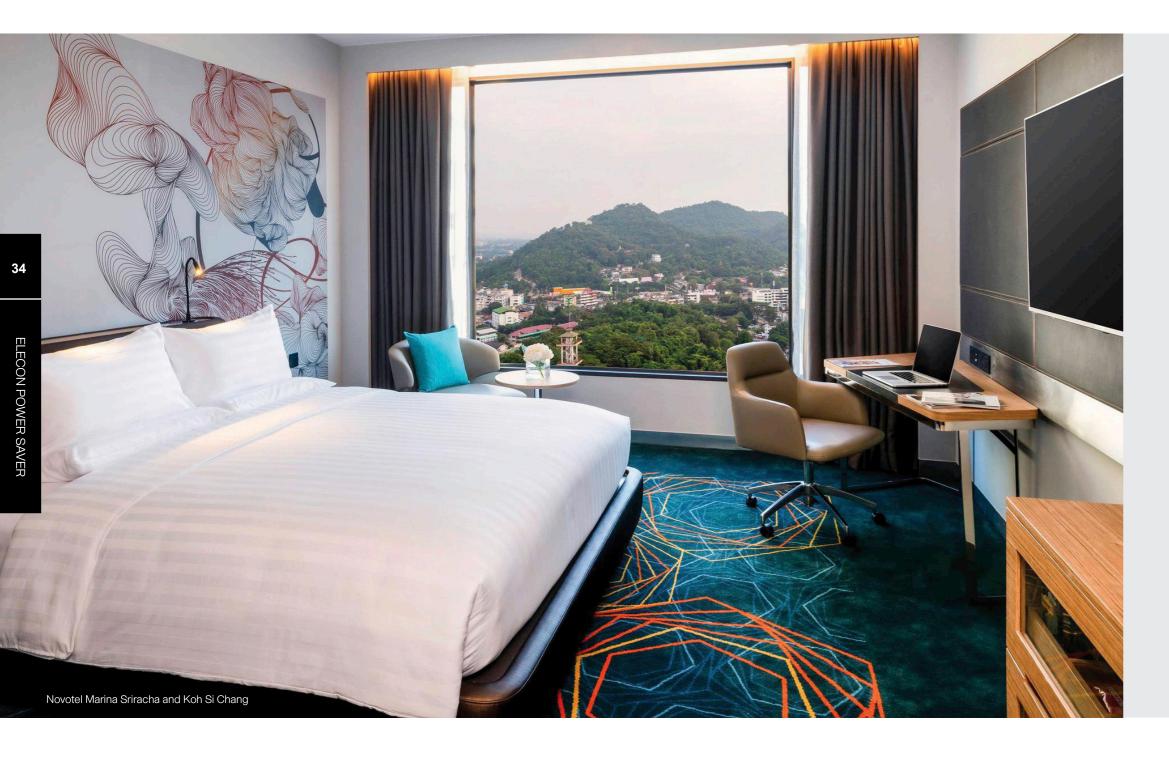
Trailing edge dimmers are more sophisticated than leading edge dimmers, and usually have a 'MOSFET' or 'IGBT' switch rather than a 'TRIAC' and coil and are sometimes called 'electronic' dimmers. This benefits the user with smoother, silent dimming control and no "buzzing" noise.

A trailing edge dimmer also has a lower minimum load (often 10W) compared with leading edge dimmers, making it a better choice for dimming low-powered LED lighting circuits.

Trailing edge dimmers can also benefit older incandescent and halogen bulbs with the 'soft start' (low in-rush current) feature built into the dimmer control circuit which prevents "filament" bulbs from dying or exploding of thermal shock when first switched on.







ELECON POWER SAVER

Introduction:

The Elecon Power Saver unit was invented to help hotel owners and managers efficiently control the guest room energy consumption.

Two main models:

- Magnetic Relay Model (3 circuits 24vdc 30amp) Heavy duty version for controlling Split-Type Air Conditioning units
- Relay Model (optional 3 or 6 circuits 12vdc 30amp) For controlling central Air Conditioning systems with Water Valve activation

The Power Saver can be supplied with a Key Card Holder/Key Tag Holder using either a microswitch contact or RFID sensor. The keycard or keytag can be branded with hotel logo.

Operation:

When the guest first walks into the guest room and inserts the keycard into the Keycard holder the Power Saver will supply electricity to all lighting circuits, air conditioning and power outlets.

When the guest leaves the room and removes the keycard the Power Saver will remove the power from the room and switch off the A/C after a preset delay of 30-45 seconds

(programmable). Essential power for the minibar or charging sockets are not affected.

Optional equipment:

A thermostat and service panels for Do-Not-Disturb, Make-Up-Room, Bell can also be supplied.

Specifications:

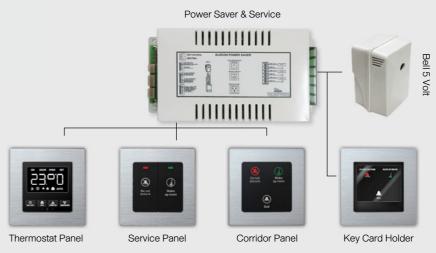
Made from the plastic ABS V-0 Flame Retardant Anti-fire

nti-rust

Air ventilation is provided by vents on the left and right sides

Dimensions:

H105mm x L245mm x W120mm





MULTIMEDIA HUB

Active Multimedia Hub

ELECON's Active multi-source media hub (AMH) offers the simplicity of requiring no more than a single HDMI cable from the hub to TV. All source signals including AV and VGA are converted to an HD signal and sent via HDMI. For the guest this means no need to access complicated menus via the TV remote control in order to change the input source type, instead any input source will be converted automatically at the hub.

The AMH panel can also provide USB plug and play functionality via a compatible TV. For this function an extra USB will be required between the hub and a USB supported TV port.

To automatically change the TV to the hubs HDMI output the TV must support the HDMI CEC function. Elecon's engineers will be glad to confirm compatibility with your TV make and model.

Features:

Stylish and Customizable appearance

The hub components are customizable to each property's requirements for blending with the

hotel decor. Style features include a new aluminum finish in range of colors.

Convenient Bluetooth access

An advanced Bluetooth module provides quick connection for enjoying stereo music through the TV from mobile devices or computers that support Bluetooth.

Multiple audio/video interfaces

The hub provides VGA, AV, HDMI, USB and Bluetooth connectivity.

HD Conversion via Single Cable

A simpler, neater design allows for easy installation and eliminates cord clutter.

Plug and Play

Auto-detect function makes device connection quick and convenient.

1080P HD video transmission

Dual-channel technology ensures full HD video transmission up to 1080p.

Play and Charge through USB1

USB media playback including video and device charging capability.

Integrated internet access

Convenient wired internet access through standard RJ45 interface.

¹Compatible TV with CEC signal support required.







SWITCH & SIGNAGE

ELECON Custom Switch Panels and Sub-panels can be made in different sizes, colors, finish and styles depending on the client's requirements.

We always strive to offer well designed switch panels to match the beauty and elegance of the hotel design without compromising quality. We offer a variety of different switches that will satisfy the needs of all hotel owners.



Room Signage

Sindhorn Kempinski Hotel Bangkok

THE SUKHOTHAL MANAGES THAT SUCKNOWN.

5806

125.00 mm.



131.00 mm.





6057 ► XX &

150.00 mm.



MODERNO SERIES





INFINITY SERIES







IMPRESS SERIES















The Okura Prestige, Ba









sewood Yangon

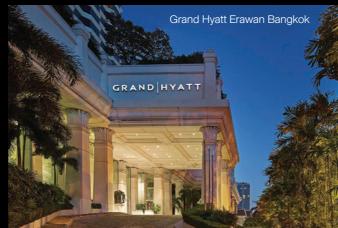
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Banyan Tree Samui











CLIENT REFERENCES

Avista Grande Phuket Karon - MGallery Avista Hideaway Phuket Patong - MGallery

Aloft (Bangkok)

Anantara Siam Bangkok Hotel

Angsana Bintan

Angsana Laguna Phuket

Banyan Tree Bangkok

Banyan Tree Bintan Villa Resort

Banyan Tree Krabi

Banvan Tree Phuket

Banyan Tree Samui

Centara Grand at Central Plaza (Lardphrao, Bangkok)

Centara Grand Beach Hua Hin

Centara Grand Beach Resort Phuket

Centara Grand Mirage Beach Hotel (Pattaya)

Centara Grand West Sands Resort (Phuket)

Cinnamon Lakeside (Colombo)

Crowne Plaza Bangkok

Crowne Plaza Nha Trang

Dusit D2 Chiang Mai

Dusit Thani Bangkok

Dusit Thani Laguna (Phuket)

Dusit Thani Pattaya

The Bangkok Edition by Ritz Carlton

Four Points by Sheraton (Bangkok)

Grand Hyatt Erawan (Bangkok)

Hansar Samui Resort and Spa

Holidavinn Samui

Holidayinn Bangkok Silom

Holidavinn Sriracha

Hilton Phuket Arcadia Resort & Spa

Hua Chang Heritage Hotel (Bangkok)

Hua Hin Marriott Resort & Spa (Hua Hin)

InterContinental Bangkok

InterContinental Pattaya Resort

Kimpton Maa-Lai Bangkok

Le Meridien Bangkok

Le Meridien Chiang Rai Resort

Le Meridien Khao Lak Beach & Spa Resort

Marriott Merlin (Phuket)

Marriott Resort & Spa, Nai Yang Beach (Phuket)

Marriott Resort & Spa Pattaya

Marriott Resort & Spa Rayong

Marriott Bangkok The Surawongse

Meliá Phuket Mai Khao

Movenpick BDMS Wellness Resort Bangkok

Novotel Bangkok Sukhumvit 20

Novotel Bangkok on Siam Square

Novotel Impact (Bangkok)

Novotel Phuket Phokeethra

Novotel Sriracha

Novotel Phuket Kata Avista Resort & Spa

One 15 Marina Club (Singapore)

Park Hyatt Siem Reap

Pullman Bangkok Hotel G

Pullman King Power Bangkok

Pullman Pattaya (Chonburi)

Pullman Bangkok Grande Sukhumvit

Radisson Blu Plaza (Bangkok) Renaissance Pattaya Resort and Spa

Renaissance Phuket Resort and Spa

Rosewood Phuket by Rosewood Hotels & Resorts

Rosewood Yangon

Siam Kempinski (Bangkok)

Sindhorn Kempinski Hotel Bangkok

Sindhorn Midtown Hotel Bangkok

Solaria Nishitetsu Hotel Bangkok

Sofitel So Bangkok

Sofitel Phokeethra Krabi Resort & Spa (Krabi)

Swissotel Le Concorde (Bangkok)

Sunway Pyramid Hotel (Malaysia)

The Athenee Bangkok (Luxury Collection)

The Lancaster Bangkok

The Landmark Bangkok

The Okura Prestige Bangkok

The Standard Huahin

The Sukhothai Bangkok

The Westin Grande Sukhumvit (Bangkok)

The Westin Siray Bay Resort & Spa (Phuket)

Veranda High Resort Chiangmai MGallery by Sofitel

Veranda Resort Pattaya MGallery by Sofitel

Vinpearl Luxury Da Nang (Vietnam)

Vinpearl Luxury Nha Trang (Vietnam)

Waldorf Astoria Bangkok

Wyndham Grand Phuket Kalim Bay

Modena by Fraser Bangkok





BANGKOK HEADQUARTERS

PHUKET BRANCH





ELECON INTERNATIONAL CO.,LTD (HEAD OFFICE)

122 Soi Intraporn Phlabphla, Wangthonglang, Bangkok 10310 Thailand,
Tel. +(66) 2933-5991-5 | Fax. +(66) 2933-5990 E-mail. info@eleconthailand.com, sales@eleconthailand.com
website: www.eleconthailand.com