Intelligent Integrated Systems for Green Buildings

Lonix Automation – Intelligence since 1996
Intelligent Integrated Systems for Green Buildings

Lonix provides automation and building management systems for Intelligent Green Buildings.

The scalable Lonix technologies allow for efficient solutions for a wide variety of needs - ranging from offices, business centers, hotels, residential towers to palaces and private villas.

- Building automation / BMS
- Lighting controls
- Room controls
- Consumption measurements
- Home automation
- Hotel room controls
Lonix Ltd

- Technology Partner for leading System Integrators
Scalable solutions for different building types

- Business facilities
- Office facilities
- Shopping malls
- Blocks of flats
- Villas
- Schools
- Hotels
- Palaces
- Smart cities
Residential buildings

- Damac Signature Residence Showroom in Dubai Media City, UAE
- Waleed Paradise residential tower G+34 in Dubai, UAE
- Lootah Marina Tower, luxurious residential tower in Dubai, UAE
- Dorra Bay residential tower G+21 in Dubai, UAE
- Ontario Tower G+25 in Dubai, UAE
- O2 residential tower G+39, Dubai, UAE
- Palace of President of Uginvest, UAE
- Palace of Chairman of Damac, UAE
- Palace of Chairman of Tameer, UAE
- Villa of Mr. Ibrahim Fahim in Dubai, UAE
- Villa of Mr. Hani Nabulsi in Dubai, UAE
- Sharqan villa area in Sharjah, UAE
- Palace of Chairman of Bader Group in Manama, Bahrain
- Village of 600 smart houses in Brunstad, Norway
- Kurkino area of blocks of flats in Moscow, Russia
- Sundsberg intelligent residential area in Kirkkonummi, Finland
- Kaskisaari intelligent residential area in Helsinki, Finland
Offices, commercial and public facilities

- Avilon Plaza business center in Moscow, Russia
- Kolomenskaya museum in Moscow, Russia
- Krasnaya Rosza business center in Moscow, Russia
- Pension Fund office in Moscow, Russia
- Cardiological Institute power center in St Petersburg, Russia
- Business center in Rostov, Russia
- Gazprom office in St Petersburg, Russia
- SberBank in Nizhnyi-Novgorod, Russia
- Tax inspection center in Moscow, Russia
- Klaipedos Smelte refrigerator terminal, Lithuania
- Business center in Astana, Kazakhstan
- Karolinska Institutet, research institute in Stockholm, Sweden
- Järfälla kommun school complex, Sweden
- Ektorpshemmet senior home in Nacka, Sweden
- Anantara Desert Islands Resort & Spa on Sir Bani Yas Island, Abu Dhabi, UAE
- Lootah office in Dubai, UAE
- Department of Justice in Helsinki, Finland
- Technopolis technology center in Vantaa, Finland
- Shopping mall Jumbo in Vantaa, Finland
- Headquarters of Senate Properties in Helsinki, Finland
- Water Utility of Helsinki, Finland
- Alarm Center of Civil Defence of Turku, Finland
Robust systems - distributed intelligence

- Distributed intelligence
- Scalable systems
  - Building automation / BMS
  - Lighting controls
  - Room controls
  - Consumption measurements
  - Home automation
  - Hotel room controls / guest room management
- Versatile features
- Open, integrated solution - all systems function smoothly together
Common integration platform COBA BOS - integration of all low-voltage systems

- Heating
- Cooling
- Ventilation
- Lighting
- Leakage and humidity alarms
- Consumption measurements
- Emergency lighting
- Access control
- Video monitoring
- Burglar alarms
- Fire alarms
Open interfaces between solution layers

- **Service Layer**
- **Management Layer**
- **Control Layer**
- **Field Layer**

- **Remote usage with different devices**

- **Intranet: TCP/IP**

- **Internet**

- **Firewall**

- **Local User Interfaces**

- **COBA BOS Server**

- **Control Network**

- **Control Nodes**

- **Sensors and actuators**
  - Interface: 0-10 V, Ni-1000, Pt-1000, NC / NO, dry-contact

- **Buttons**
- **Valves**
- **Sensors**
- **Relays**
- **Occupancy sensors**
- **Smoke detectors**
- **Magnetic contacts**

- **I/O Cabling**

- **LON**

- **LAN**
Common BMS

- Robust systems
- Accurate controls
  - Chillers/Heat Exchangers (HEX)
  - Chilled water pumps
  - Pressurization units
  - Fresh Air Handling Units (FAHU, AHU)
  - Fan Coil Units (FCU)
  - Water tanks (under ground, over head)
  - Pumps (transfer, booster, sewage, other)
  - Fans (make-up, exhaust, garage, stairwell, smoke)
  - Lighting of common areas
  - Elevator alarms
  - Room controls
  - Consumption measurements: Electricity, water, energy

- Integration with security and central battery systems through the common platform
Home automation

- Modes of the residence
  - Home / Away / AwayLong / Night / Special
- Cooling controls
- Ventilation / air-handling controls
- Lighting controls
- Curtain and shade controls
- Entry with access reader
- Burglar alarms
- Consumption metering: Water, electricity, energy
- Leakage alarms
- Cameras
- Touch screen panel PC
  - Mode settings, lighting controls, cameras, AV controls, etc
- Graphical browser-based user interface
- Integration with common BMS and security
Apartment design

- Home/Away modes influencing all systems
- Touch screen browser UI
- Lighting control (on/off)
- Lighting control (dimming)
- Occupancy detector (lighting controls and burglar alarms)
- Curtain control
- Cooling control (FCU)
- Temperature and fan speed control panel
- Access control and keyless entry
- Electric locking
- Burglar alarms
- Leakage alarms
- Night switch
- Lighting switches
Browser-based user interface

Ease of use through versatile media
Individual room
Cameras
Hotel room controls

- Room status affects all systems
  - Occupied / unoccupied / sold / vacant
- Energy saving features
  - Temperature setpoint changed with room status
  - Lights off when unoccupied
  - Consumption measurements: Clean water, chilled water for A/C, electricity
  - System monitoring and trending
- Comfort features
  - Temperature control, setpoint deviation and fan speed control
  - Preset temperature based on occupancy
  - Lighting controls, on/off and dimming, scenes, entry lighting upon occupancy
  - Curtain controls, open/close, closed automatically upon leave
  - Service Call and Do-Not-Disturb
- User interfaces
  - Browser in IPTV
  - Main user interface for room controls in the reception
- Integration with BMS and security through the common platform
Hotel room design

- All lights on
- Day lighting scene
- Night lighting scene
- Lights off
- Do not disturb
- Service call

Bedside PB
- Bedside panel
- Bedside lights

Controlled socket
- Mirror lights PB (optional)

Temperature control panel

Card holder
- Lobby lights PB
- Main lights PB
- Lobby panel

Lobby lights

Bathroom lights PB
- Bathroom lights

Cooling valve & fan speed control

Main lights

Curtains PB
- Curtains open
- Curtains close

Window contact

Controlled socket
- Mirror lights (optional)

Mirror lights PB (optional)
Browser view in IPTV

ECOS Hotel Dubailand

You have now stayed 3 days in this hotel. You will earn 165 ECOS credits at the current ECO Index Value.

Ecological Index Value

Click here for details about ECO Index Value.

Previous 1st ECO Index Value details

- Clean Water: Average
- Chilled Water for A/C: Poor
- Electricity: Good
Retail units

- Systems function smoothly together
  - Staff in / Shop open / Cleaning / Away

- Features
  - Cooling controls
  - Ventilation controls
  - Lighting controls
  - Consumption metering: Water, electricity, energy
  - Access control and burglar alarms
  - Cameras and video monitoring

- Integration with common BMS and security
Central monitoring of all systems

TCP/IP

Central monitoring and maintenance of the area

Integrated Automation and Security Systems

COBA BOS
Contribution to Green Buildings

- Energy and Atmosphere
  - Reduced energy consumption
  - Controls, measurement and verification
- Water efficiency
  - Water use reduction
- Indoor Environment Quality
  - Outdoor air delivery monitoring and control
  - Thermal comfort design, controls and verification
  - Lighting controls
- Innovation in Design
Benefits of Lonix systems

*Green Buildings with Forefront Technology*

- Energy savings
- Indoor comfort
- Versatile features
- Cutting-edge technologies
- Integrated systems - easy to use
- User-friendly interfaces through any device
- Automatic monitoring and adjustment of all systems
- Efficient enabler of sustainable development and Green Buildings