MyIQRF

RETROFIT commercial building to intelligent wiring

without changing the cable wiring | overnight upgrade to a smart building | strong in-house security
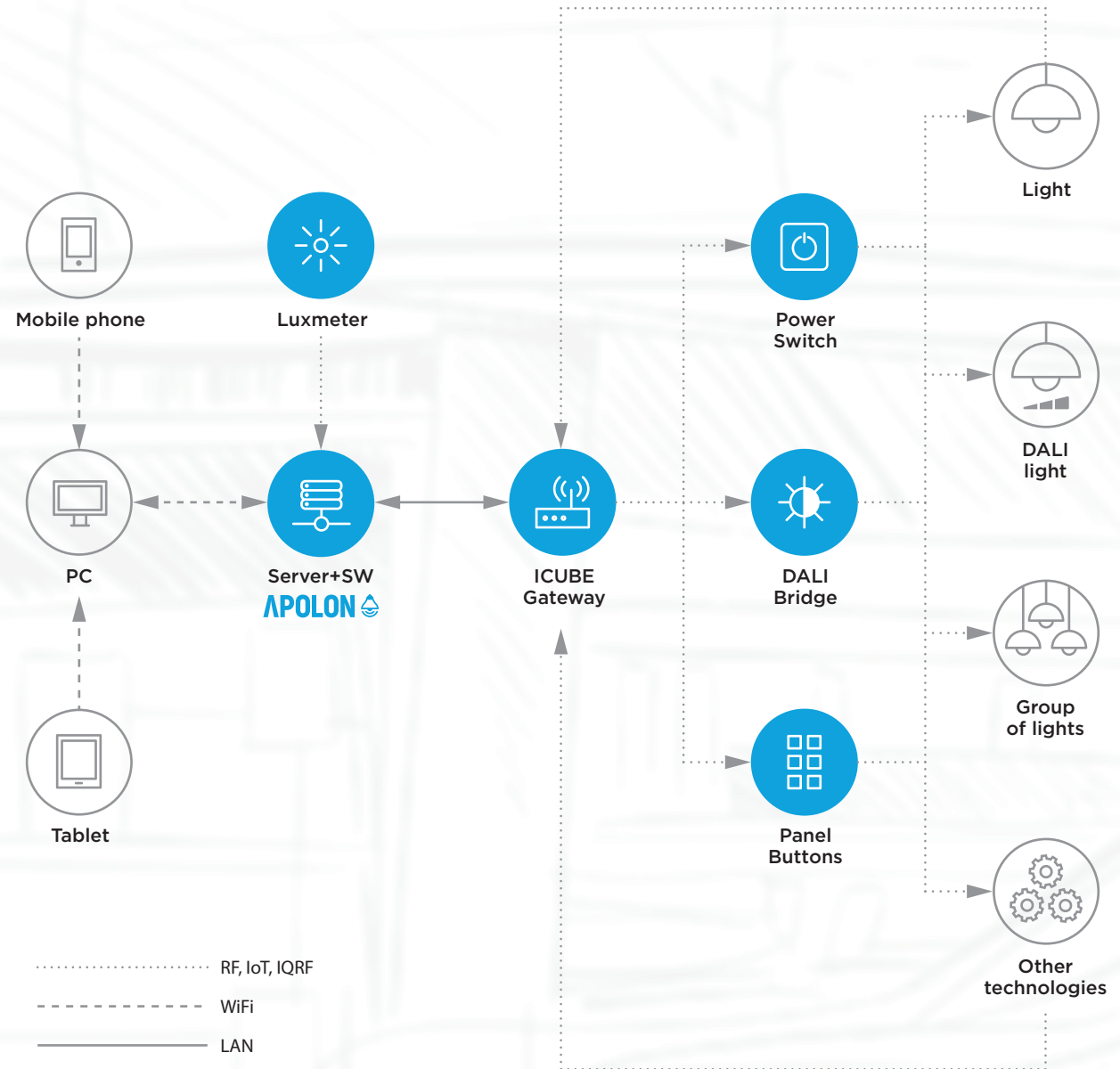
SOLUTION DIAGRAM

Simple installation process by connecting to the original wiring without the need to replace the lighting distribution wires, using the additionally connected necessary elements of MyIQRF PowerSwitch & DALI Bridge. Light control using the DALI standard enables digital control of light intensity, feedback on the status of individual luminaires and easy adjustment of the configuration when changing the way rooms are used.

This creates a lighting file that you control seamlessly in the IoT IQRF wireless network using the MyIQRF ICUBE Gateway connected to the LAN of the internal network. Scheduling of time schedules and lighting groups is done in the intuitive application of the Apolon server, which is the safest internal variant of lighting control without the need for a cloud. Remote connection and configuration can be performed using a VPN.

The control of lighting and their groups is performed by the user on additionally installed wireless buttons or using an internal application on the phone, tablet or internal website.

Automated dimming and lighting switching processes work by communicating with wireless luxmeters depending on the intensity of the ambient light.

Mobile phone · Luxmeter · PC · Server+SW APOLON · Tablet · ICUBE Gateway · Power Switch · DALI Bridge · Panel Buttons · Light · DALI light · Group of lights · Other technologies

········· RF, IoT, IQRF

– – – – – WiFi

————— LAN

Commercial solution for modernization and automation of an existing building with intelligent management and energy savings. Designed for lights, power windows, shading and other technologies.

MyIQRF POWER SWITCH

The MyIQRF Power Switch is a kit designed for wireless switching of devices remotely, such as: controlling lights, blinds, lowering the screen after turning on the projector, or starting the extractor fan when turning on the saw or grinder in the workshop. The MyIQRF Power Switch is a kit of transmitter and switching modules. Both parts communicate using an IQRF wireless mesh network.

For more information about this technology is available at www.iqrf.org.
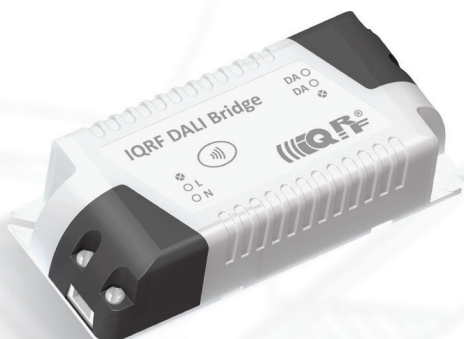
MyIQRF DALI BRIDGE

Brings DALI communication via IQRF wireless network. It is used to automate the control of the device depending on the level of need for power intensity/ groups/ addressability of light sources.

Thanks to wireless IQRF IOT communication, there is no need to pull many new cable harnesses through the building while maintaining the existing cables with the same functionality provided by DALI lighting control.

MyIQRF LUXMETER

For automating the control of the device in position at the level of ambient light intensity.

Two devices in one - twilight switch control the intense lighting and light switches at the same time when the intensity of the ambient lights is demanding - at the intense intensity of the ambient lights they trigger dimming by means of shades, blinds and awnings.

Adjustable time delay values (elimination of mandatory fluctuations in light intensity) and adjustable ranges of lighting values.

The solution is designed mainly for integrated and additional existing retrofit installations in office buildings, industrial halls or shopping centers.

MyIQRF PANEL BUTTONS

Toggle buttons that replace the wired version when physical switches are needed. They use mains voltage and control the lighting wirelessly.

The industrial variant makes it possible to control up to 7 groups of lighting in one block directly in one place.

MyIQRF ICUBE GATEWAY

Interconnects individual elements for wireless communication using IQRF mesh networks. LAN connection with conversion to IQRF IOT communication eliminates the need to pull new many cable harnesses through the building when making existing cables with new functionality of direct control of terminal electrical powered elements.

MyIQRF APOLON SERVER+SW

Secure in-house application for wireless lighting control in the IQRF mesh network, database collection of data on electricity consumption, measuring of CO_2, NOx and control of additional elements such as motorized windows or shading.

Touch orientation in the application according to the internal plan of the building, user definition of control of device groups, using time diagrams or autonomously using luxmeters, CO_2 and humidity sensors. It records the status of individual devices over time, stores them in a connected database and from stored data can export statistics of electricity consumption, etc.

The most important premises of an intelligent „retrofit" solution in the customer's words:

1   **Do not stop or restrict the normal operation of the commercial building for the already necessary reconstruction of lighting after more than 10 years from the approval.**

2   **The highest possible in-house safety of intelligent energy management of building lighting and immediate demonstrable operational savings.**
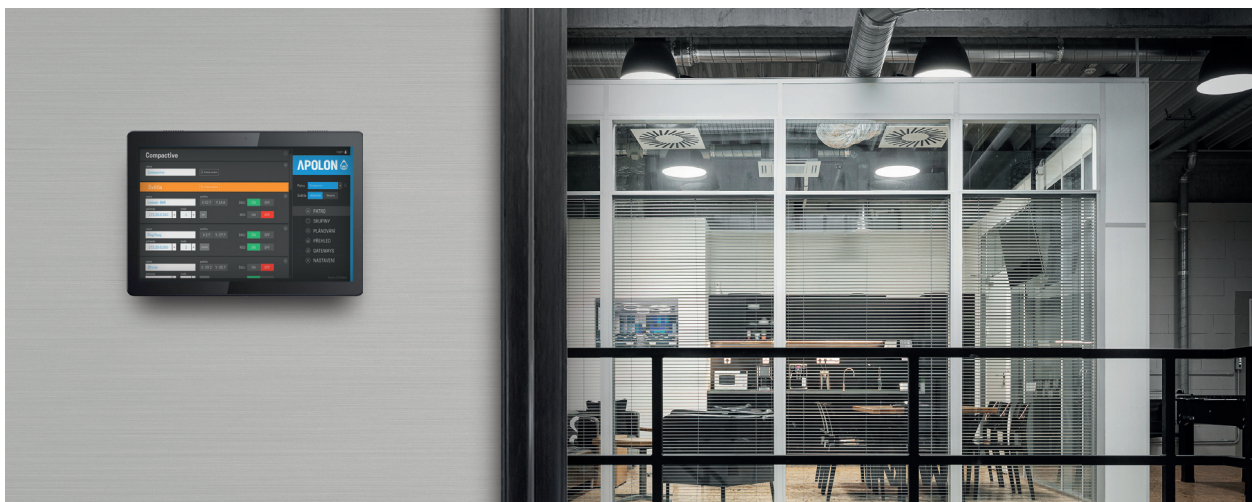
Our assignment for the development of the entire „retrofit" industrial solution for the modernization and automation of control, monitoring of electrical distribution technologies of the existing building with intelligent management for effective electricity savings was based on our partners with customers. These are experienced facility managers and technical management managers of shopping centers, office buildings and industrial enterprises.

Most customers operate buildings that have been in operation for 10, 15 or more years and it is very difficult to reconstruct the existing building in terms of lighting without stopping and moving out, which would cost considerable resources not only for technical renovation, but mainly for regaining tenants or reputation compared to brand new buildings that already contain intelligent control elements.

www.MyIQRF.com retrofit industrial solution (allowed us to bring to existing buildings elements of the latest wiring such as highly safe wireless switching control and lighting control in combination with luxmeters and time schedules, ventilation control using temperature, humidity and co2 sensors, including shielding control. Thanks to the intuitive Apolon software, which uses the building's map data, time diagrams and control of simply user-defined groups of lights, other electrically controlled elements, using existing IT technology and a mobile phone, we have obtained a simple, easy-to-use tool (mobile control room). the whole solution - without the need to disassemble or renew cable distribution.

The installation process is feasible „overnight" by disconnecting the cabling of individual lights and connecting IQRF elements, luxmeters, installation of IQRF wireless communication gateway for remote control of elements, launching a secure internal web server for configuration and control of the entire system.

It is a unique, highly safe „retrofit" industrial solution for the electrical installation upgrade of existing commercials buildings with intelligent automation elements and effective management of operational savings.

Ing. Petr Jašek
Project manager COMPACTIVE s.r.o., Complex installations

MyIQRF POWER SWITCH

Input voltage	12/24 V DC, 110/230 V AC, 50/60 Hz
Quiescent current	10 mA
Maximum switching current	8 A
Operating temperature	-10 to +60 °C
Communication frequency	868 MHz
Network topology	IQRF Mesh
Security	AES-128
Cover protection	IP30
Protections	Short circuit/overload/overvoltage
Dimensions	82×82×28 mm

MyIQRF DALI BRIDGE

Input voltage	110/230 V AC, 50/60 Hz
Supply wattage	0,25 W max.
Communication frequency	868 MHz (916 MHz on req.)
Network topology	IQRF Mesh
Operating temperature	-10 to +60 °C
Cover protection	IP30
Dimensions	88×38×22 mm

MyIQRF LUXMETER

Input voltage	110/230 V AC, 50/60 Hz
Quiescent current	10 mA
Maximum current	100 mA
Measuring range	0–2550 lx
Measuring sensitivity	10 lx
Operating temperature	-10 to +60 °C
Communication frequency	868 MHz
Network topology	IQRF Mesh
Cover protection	IP30
Dimensions	82×82×35 mm

MyIQRF PANEL BUTTONS

Input voltage	110/230 V AC, 50/60 Hz
Quiescent current	100 mA
Maximum current	150 mA
Operating temperature	-10 to +60 °C
Communication frequency	868 MHz
Network topology	IQRF Mesh
Cover protection	IP30
Number of buttons	1–7

MyIQRF ICUBE GATEWAY

Operating Voltage	5 V
RF Output Power (max.)	10 dBm
Communication frequency	868 MHz (916 MHz on req.)
Network topology	IQRF Mesh
Interface	microUSB
	RJ45 Ethernet
	USB (1x)
Operating temperature	-10 to +40 °C
Dimensions	50×54×36 mm

MyIQRF APOLON SERVER+SW

Applications	Web applications, device independence (Win, OSx, iOS, Android)
User access	Host/user/administrator/maintenance
Client type	www prohlížeč (Chrome…)
Minimum requirements for PC/server	I3, 4 GB RAM, 20 GB HDD
Operating system	Linux, Node.js
Database system	SQLite
Work in a virtual environment	YES
Remote access	YES (HTTPS)
Licensing	By type of installation (monthly/yearly)

⊕ **High added value**
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