

inventronics

# HubSense<sup>®</sup> Flexible, intuitive to commission and scalable



Wireless light management and energy saving are made simple and efficient thanks to HubSense<sup>®</sup> with Qualified Bluetooth<sup>®</sup> Mesh.

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# Reduce the energy consumption of your building – with HubSense®

## The challenge

Climate change is a global phenomenon that influences political agendas on an international level.

According to the EU energy efficiency directive, buildings need to reduce their energy consumption by as much as 32.5 % by the year 2030.

Making energy saving a key pillar of your operational strategy saves costs and helps to make your building compliant with current legislation.

## The solution

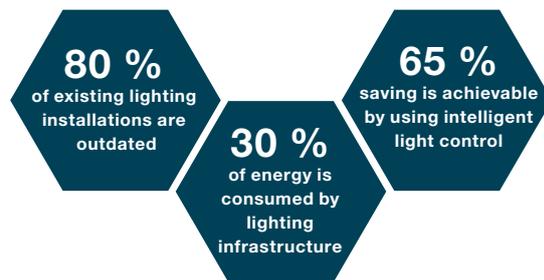
An EU energy study\* has found that as much as 80 % of the existing lighting systems in office buildings – where lighting represents up to 30 % of the energy consumed – are outdated. However, some of these might even still be functional in the year 2050. And this, in turn, would mean that their energy consumption would not change at all.

This is where **HubSense®** comes into play. HubSense® is our state-of-the-art wireless light management solution that enables you to efficiently control, monitor and reduce the energy consumption of your lighting system.

Replacing obsolete, inefficient lighting installations by modern, LED-based systems and combining them with intelligent control devices can result in energy savings of up to 65 % (or, in some cases, even more).\*\*

## Less energy consumption, more comfort

Modern human beings spend up to 90 % of their time indoors.\*\* Therefore, the atmosphere within buildings is essential, especially in workspaces. Refurbishing existing lighting systems can offer significant saving potentials. However, reducing the electricity costs and improving building operations should not be implemented at the expense of the comfort of its users. Therefore, finding the right balance is very important: Modern offices and other buildings must keep the energy consumption low while at the same time offering high levels of comfort to their users.

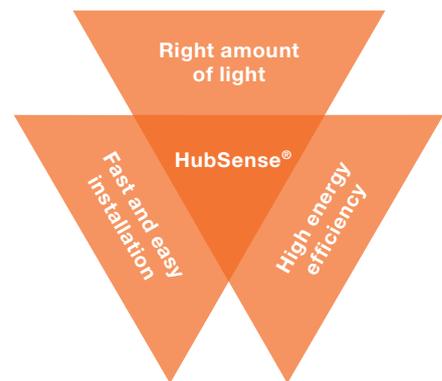
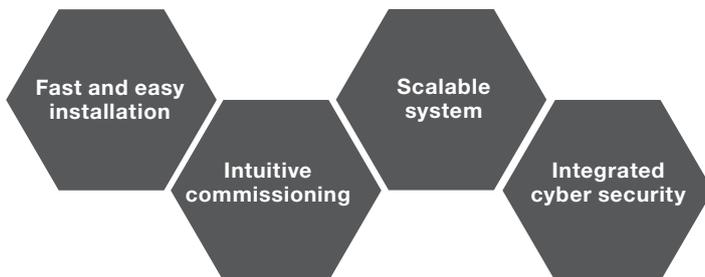


\*Reference: Lawrence Berkeley National Laboratory (LBNL)

\*\* Source: The National Human Activity Pattern Survey (NHAPS)

# Intelligent, intuitive, wireless and efficient: This is HubSense®

HubSense® is a wireless indoor lighting solution that is optimally suitable for retrofitting and/or replacing obsolete lighting installations, e.g. in offices. For wireless commissioning and control, our HubSense® systems use Qualified Bluetooth® Mesh technology, a standard intelligent decentralized communication protocol that ensures multi-user accessibility, intuitive control and long-term functionality.



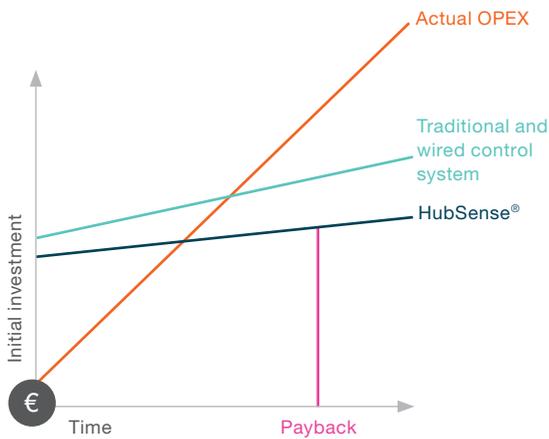
## Discover a truly innovative lighting system

HubSense® combines wireless LED drivers with sensor technology, offering advanced control for LED lighting systems. It provides light exactly where and when it is needed. And always at the required intensity.

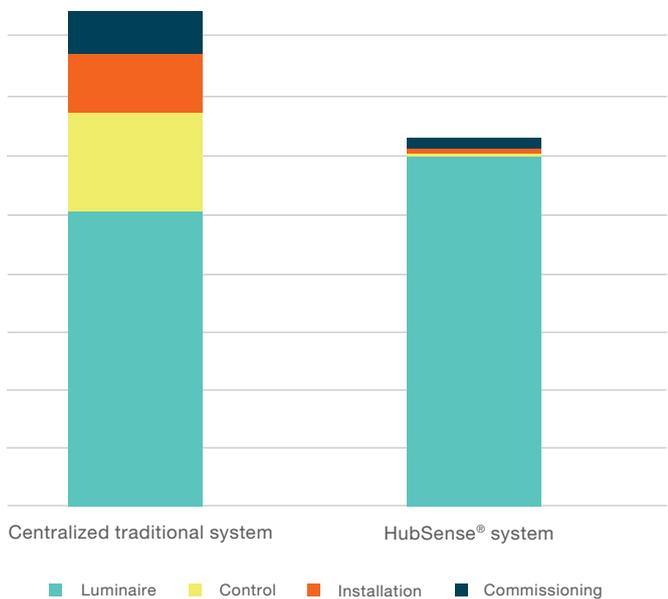


# Why HubSense® is a clever investment

HubSense® is a clever choice because an investment in this system typically pays for itself within less than three years. HubSense® payback is two years faster than an upgrade with traditional control systems. And that, of course, is not all, because HubSense® offers you a completely new level of efficiency along with unprecedented ease-of-use.



## Total costs





# Upgrade your lighting system to maximum efficiency

## Intelligent connectivity ensures peace of mind

Installing a HubSense® system is extremely easy because it requires no additional cables to be laid and just a smart device for commissioning. HubSense® components form a reliable, responsive and intelligent system that provides optimal occupancy coverage and control of lighting through precise motion monitoring. This means that artificial light is used only where and when it is actually needed.

Plus, thanks to the standard protocol implemented, with HubSense® you never have to worry about the correct functioning and interaction of your luminaires and drivers: all the components will automatically and reliably work together, ensuring your peace of mind.

- State-of-the-art motion detection
- Fine-tuned control
- High user-friendliness

## Distributed intelligence system

HubSense® doesn't need any further central controller device. Thanks to the distributed intelligence, HubSense® has no point of failure. Once set, the luminaires autonomously control the light installation, dimming up and down when and where needed.

- Distributed intelligence, no gateway needed
- System can be expanded step by step
- Shorter system downtime and less disturbance during retrofitting
- Peace of mind thanks to integrated cyber security

# HubSense® installation – as fast and easy as you like it



Conventional installation

HubSense® installation

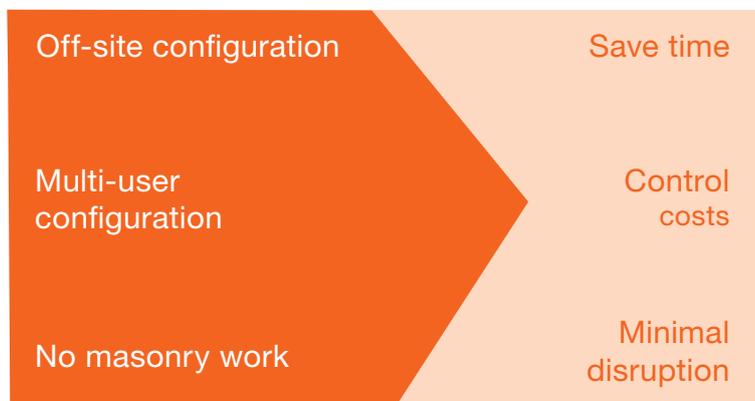
Reduced installation time

## Step by step: Fast and easy installation

With centralized lighting control systems, you typically need to configure and implement the entire building/site before it can be operative again, which can be quite time-consuming. Not so with HubSense®, which enables a phase-by-phase installation process: You don't have to retrofit entire buildings all at once. Instead, you can just start with one office and already have it work. Then, you can simply proceed step by step and office by office until you have retrofitted the entire building.

## Off-site configuration, on-site optimization

Another benefit of our wireless HubSense® system is that it can be configured off site before being optimized for individual usage purposes on site. This not only saves time and money, but also means less disturbances for the users of buildings during the installation/commissioning phase, e.g. for employees in offices.



# High lighting comfort meets high energy efficiency

The cutting-edge wireless solution offered by HubSense® meets all the requirements demanded of a state-of-the-art lighting control system.



## State-of-the-art sensor technology

For our HubSense® systems, we use high-quality and high-performance sensors that ensure a smooth light transition. These sensors are set according to human presence and movements, allowing maximum comfort – but without wasting energy for false triggering. HubSense® sensors keep the right quantity of light stable during the entire day.

During the daytime, our sensor-based lighting control systems always support the natural daylight with a balanced level of artificial light. That way, interiors are always properly illuminated and the atmosphere in the rooms is just as it should be: bright and comfortable.

## Additional savings thanks to low maintenance effort

Our HubSense® technology is a great investment on so many levels: Apart from profiting from the benefits of its innovative wireless functions, it allows you to reduce your energy consumption of your luminaires, which translates into significant cost savings. Plus, by reducing the amount of time your LED luminaires are in operation through the use of sensor technology, you can extend their lifetime.



### **Optimal flexibility for your facility**

Whether in single rooms, on entire floors or for complete buildings: HubSense® can be installed and used anywhere. On top of that, the system is very flexible and can be easily adapted, for example, when office layouts are altered and the lighting concept has to be changed. With HubSense®, you can easily reconfigure the lighting plan, without the need for complicated training. Floor-plans are digitally mapped for any part of your building, providing a holistic, flexible and sustainable solution that is easy to understand and intuitive to use.

### **Emergency Lighting testing features (EL-T)**

HubSense® is a complete lighting system, allowing also to control and monitor emergency lighting systems. HubSense® components can be added to each emergency luminaire and allow you to connect and control both regular and emergency devices together in a single mesh network. And last but not least, thanks to Hubsense®, you can perform functional and duration tests, enabling you to predict device failures, besides collecting reports for the Fire Safety Book and storing them.

If you have any questions, our technical support team is always available and ready to help you. This is a key point that makes our service different:  
[support@inventronicsglobal.com](mailto:support@inventronicsglobal.com)

### The ideal solution for modern buildings

With HubSense®, it becomes possible to divide larger planning areas into smaller zones. These sub-zones allow groups of luminaires to collaborate and deliver precise, personalized lighting experiences. Furthermore, the inclusion of battery-free pushbuttons for manual control empowers users to override automatic settings according to their individual preferences. This feature ensures reliability, as users can be confident that the manual control will consistently function as intended.

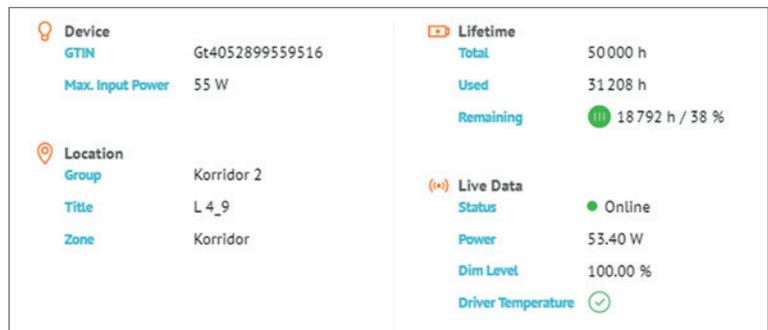
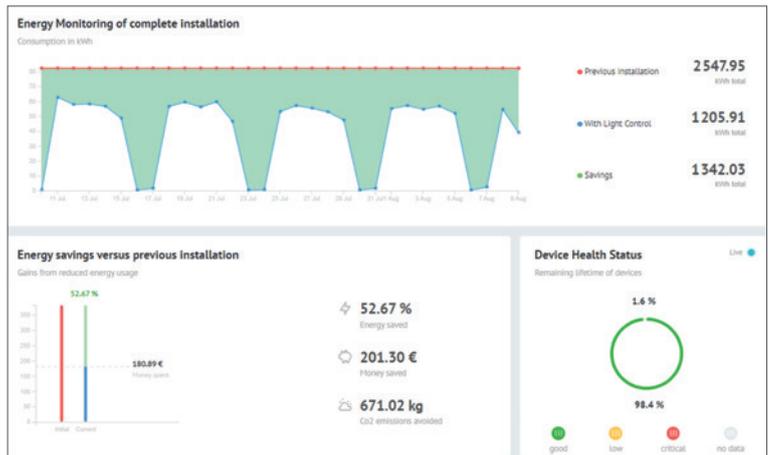


## An open system that you can trust

### Why HubSense® uses Qualified Bluetooth® Mesh

At Inventronics, we rely on standardized solutions because recognized committees of experts continuously check and improve these systems and consider only the benefit of the end user who can rely on a maintained protocol that offers interoperability. We use Qualified Bluetooth® Mesh within our HubSense® luminaires because it is a widely adopted, open, yet secure networking solution that offers compatibility across various systems along with verified cyber security. Moreover, we are sure that, in contrast to most proprietary systems, it will remain in the market and will continue to be supported for many years into the future. Using proprietary wireless communication systems can be risky because their future is often uncertain.

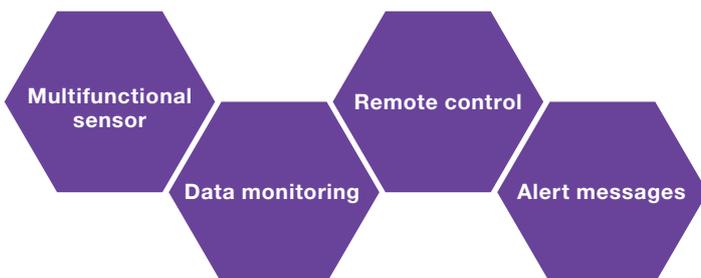




### Data management ready for IoT

HubSense® allows you to collect data from the digital ceiling, offering the possibility of monitoring or further processing. Moreover, the system can remotely control all luminaires and receive infos and alerts for necessary maintenance work. Emergency luminaires testing creates a report for the Fire Safety Book and may trigger required maintenance.

Please note that these images are for reference only. They do not show an actual HubSense® display.



# Ideal for a broad range of applications

Sensor-based HubSense® systems are perfect for application areas such as schools, offices and retail, but also for industrial projects like warehouses and factories, as well as for parking garages.



## Offices

- 80 % energy saving
- Payback time: < 2.8 years



## Warehouses

- 92 % energy saving
- Payback time: < 1.2 years



## Schools

- 85 % energy saving
- Payback time: < 2.5 years



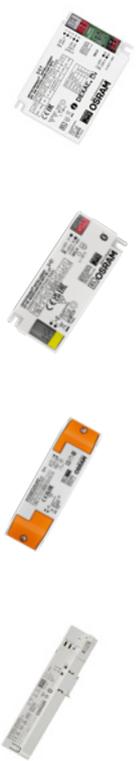
## Parking garages

- 95 % energy saving
- Payback time: < 1.5 years

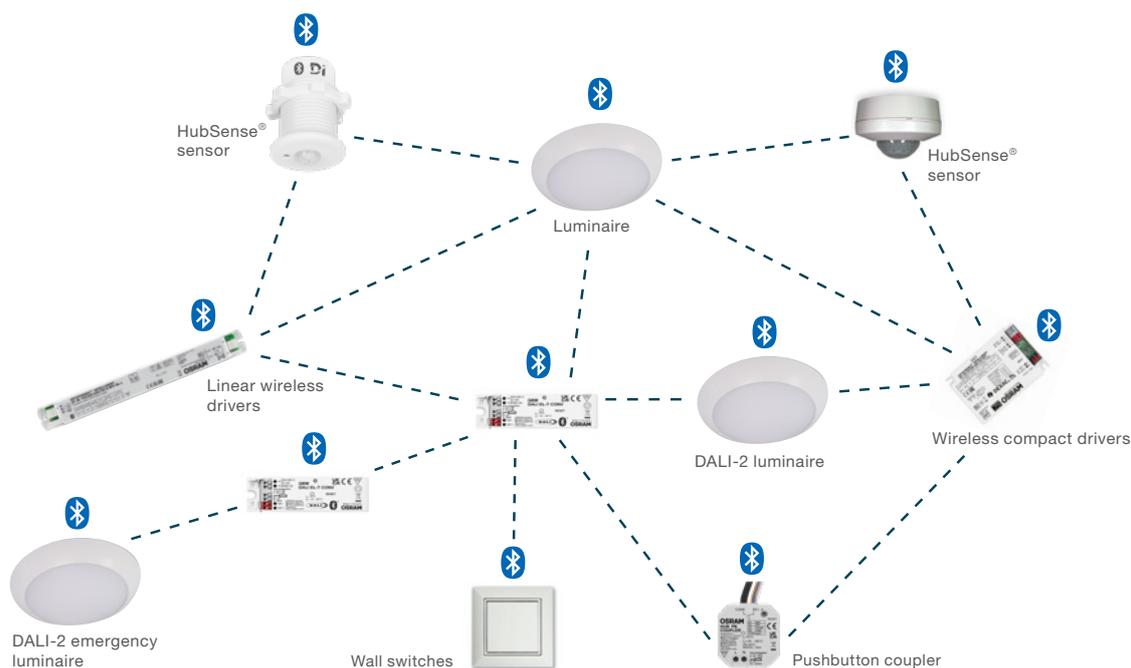
# HubSense® sensors and converters

Product image	Product name	Product description	Product EAN
	QBM DALI CONV LI	Bluetooth Mesh to DALI-2 converter for luminaire integration	4062172117388
	QBM DALI EL-T CONV	Bluetooth Mesh to DALI-2 converter for emergency luminaire integration	4062172282482
	QBM D4i LS/PD LI R	Office daylight and presence detection sensor for luminaire integration up to 5 m height and 8 m detection	4052899627154
	QBM D4i LS/PD HB R	HighBay daylight and presence detection sensor for up to 17 m height and 18 m detection	4052899627178
	QBM D4i LS/PD LB R	LowBay daylight and presence detection sensor for up to 3 m height and 12 m detection	4062172367325
	QBM D4i LS/PD MB R	MidBay daylight and presence detection sensor for up to 12 m height and 20 m detection	4062172367301
	QBM D4i LI R	Bluetooth Mesh radio transmitter for luminaire integration	4052899627192
	QBM 220-240 LS/PD CI	Independent Bluetooth Mesh sensor for daylight and occupancy detection up to 4 m height and 8 m detection	4062172161145
	QBM 220-240 LS/PD HB	Independent Bluetooth Mesh sensor for daylight and occupancy detection up to 14 m height and 22 m detection	4062172161169
	EASYFIT EWSSB by EnOcean	Batteryless Bluetooth Low Energy (BLE) wall switch (double rocker)	4062172082044
	EASYFIT EWSSB by EnOcean	Batteryless Bluetooth Low Energy (BLE) wall switch (single rocker)	4062172082068
	HUB PB coupler	Wireless pushbutton coupler for up to 4 pushbuttons	4062172353007
	QBM gateway	Qualified Bluetooth Mesh gateway for data monitoring and remote control	Coming soon
	Batten mount adapter	Plastic adapter for luminaire integration	4062172271929

# HubSense®-compatible LED drivers

Product image	Product name	Product description	Product EAN
	OTI DX 35/220...240/1A0 NFC	DALI driver 35 W	4062172017961
	OTI DX 25/220...240/700 NFC	DALI driver 25 W	4062172017947
	OTI DX 50/220...240/1A4 NFC	DALI driver 50 W	4062172061865
	OT WI 15/220...240/1A0 NFC BL LP	Bluetooth driver 15 W	4062172227810
	OT WI 25/220...240/700 NFC BL LP	Bluetooth driver 25 W	4062172227834
	OT WI 40/220...240/1A0 NFC BL LP	Bluetooth driver 40 W	4062172227858
	OT WI 15/220...240/1A0 NFC BL LPI	Bluetooth independent driver 15 W	4062172227872
	OT WI 25/220...240/700 NFC BL LPI	Bluetooth independent driver 25 W	4062172227919
	OT WI 40/220...240/1A0 NFC BL LPI	Bluetooth independent driver 40 W	4062172227933
	OT WI 40/220...240/1A0 NFC BL T-B	Bluetooth track driver 40 W, black	4062172310574
OT WI 40/220...240/1A0 NFC BL T-G	Bluetooth track driver 40 W, grey	4062172350129	
OT WI 40/220...240/1A0 NFC BL T-W	Bluetooth track driver 40 W, white	4062172310598	

## Wide range of HubSense® components:



# HubSense®-compatible LED drivers

Product image	Product name	Product description	Product EAN	
	OTI DX 100/220...240/700 D NFC IND L	Non-isolated DALI driver 100 W	4062172050883	
	OTI DX 150/220...240/850 D NFC IND L	Non-isolated DALI driver 150 W	4062172050920	
	OTI DX 35/220...240/400 D NFC L	Non-isolated DALI driver 35 W	4052899590380	
	OTI DX 75/220...240/600 D NFC L	Non-isolated DALI driver 75 W	4052899590403	
	OT WI 35/220...240/400 D NFC BL L	Bluetooth non-isolated driver 35 W	4062172267373	
	OT WI 75/220...240/550 D NFC BL L	Bluetooth non-isolated driver 75 W	4062172267397	
	OT WI 100/220...240/750 D NFC BL L	Bluetooth non-isolated driver 100 W	4062172267410	
	<b>NEW</b>	OTI DX 35/220-240/700 NFC L	DALI linear LED driver 35 W	4062172372893
	<b>NEW</b>	OTI DX 50/220-240/1A4 NFC L	DALI linear LED driver 50 W	4062172372916
	<b>NEW</b>	OTI DX 80/220-240/2A1 NFC L	DALI linear LED driver 80 W	4062172372930
<b>NEW</b>	OT Wi 35/220-240/1A0 NFC BL L	Bluetooth linear LED driver 35 W	4062172311205	
<b>NEW</b>	OT Wi 50/220-240/1A4 NFC BL L	Bluetooth linear LED driver 50 W	4062172311243	
<b>NEW</b>	OT Wi 80/220-240/2A1 NFC BL L	Bluetooth linear LED driver 80 W	4062172311281	

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