

BIM VIRTUAL 2020



IP500® OEM Solutions for Commercial Buildings & Industrial Facilities

Most robust & approved IoT wireless network

IP500® OEM Representatives

The global standard for wireless connectivity provides:

Highest Wireless Performance

Lowest Cost of Ownership

Interoperability

Safety & Security Regulations



IP500 Applications as ECO System



IP500® – ECO system for Commercial Buildings



Direct connection to security serviWireless Congress and mobile deviWireless Congress



Wireless sensors make the smart building safe and efficient



Dynamic and secure management of security team and employees



Smart management of energy consumption & light systems

Smart acWireless Congress control for indoor and outdoor

IP500[®] Applications – OEM Solution - Lighting





LIVELINK WIRELESS

WWW.TRILUX.COM

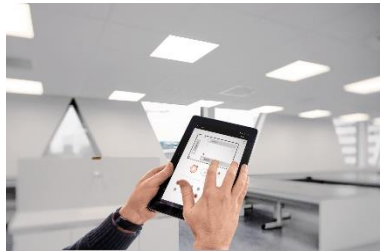
**LEADING
THE CHANGE**

LIVELINK WIRELESS WITH REDUNDANT IP500 INFRASTRUCTURE



INSTALLATION

- **Simple and fast replacement** of luminaires with **IP500 Network** and retrofitting of **DALI** control cables.
- Higher value to end user due to **interoperability** with sensing devices



COMMISSIONING

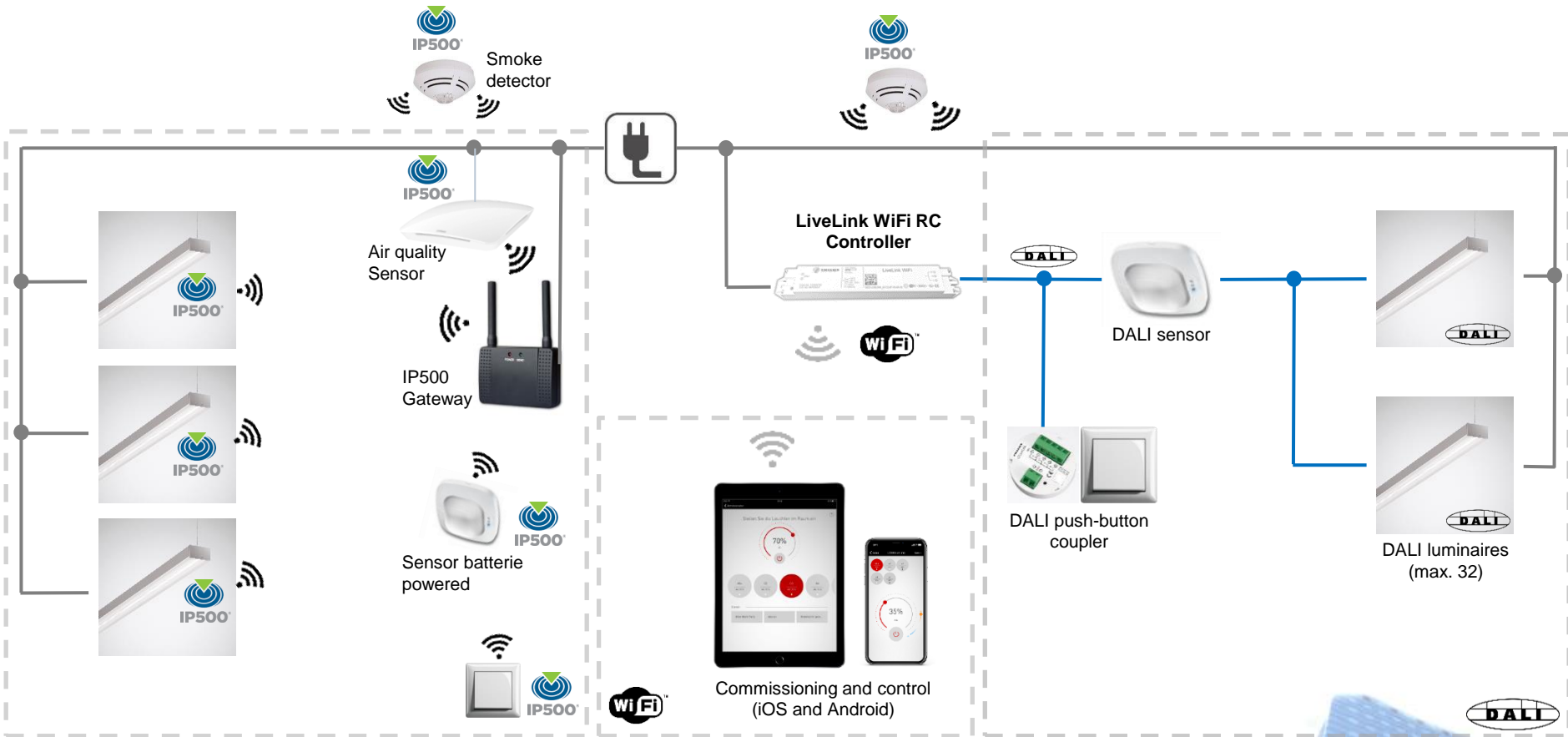
- **Easy setup and management** of the wireless **IP500 network** with the LiveLink Install App.
- Higher value for end user **easy commissioning** with sensing devices



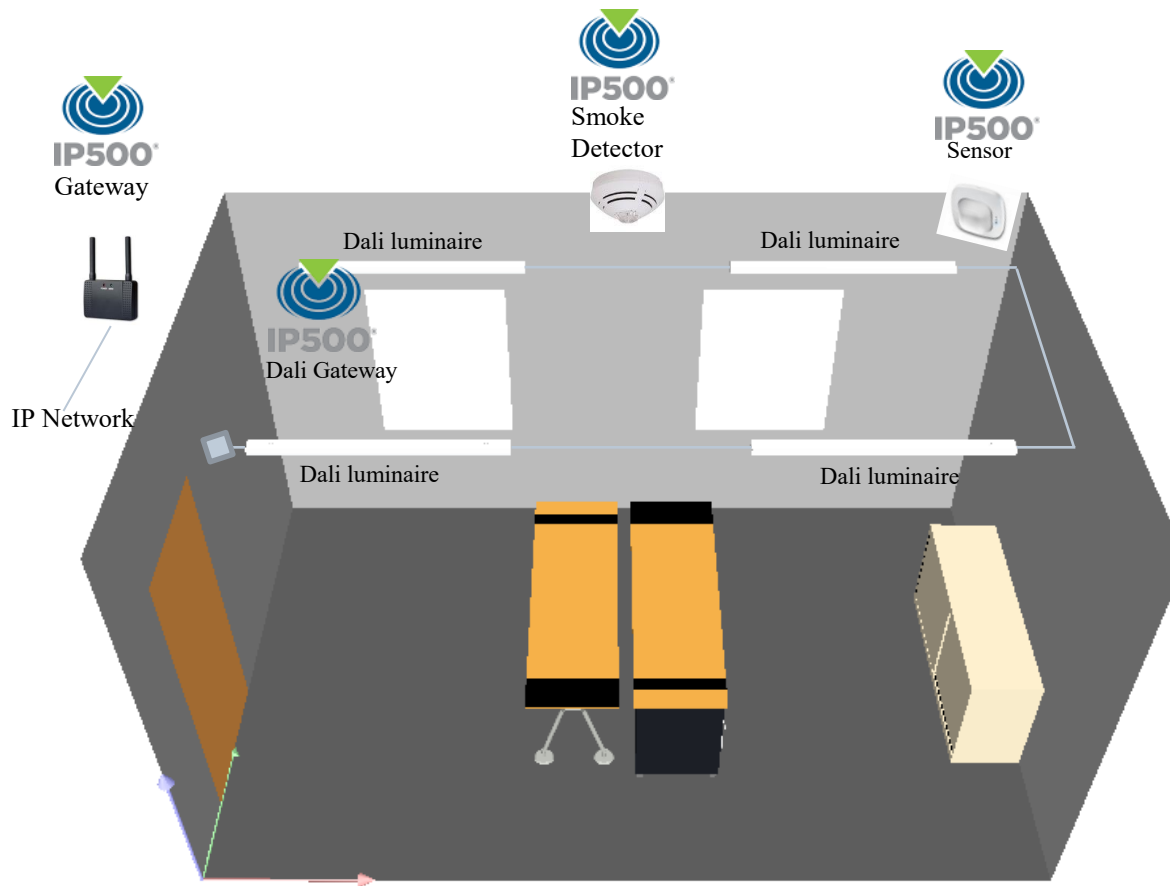
FLEXIBILITY

- **Mixed operation of DALI** and **IoT** lighting devices in **same IP500 Network**
- **Flexibly and scalable extended** from small to large wireless IP500 network with IP500 redundant infrastructure

LIVELINK IP500 WIRELESS – OVERVIEW



LIVELINK WIRELESS – EXAMPLE SINGLE/DOUBLE OFFICE



Office with 4 surfaced luminaires (e.g. Solvan Flow)

- 4 (64) Dali luminaires
- 1 IP500 / Dali Gateway
- All luminaires and the push-button coupler are connected with mains voltage - DALI wiring needed

— Mains voltage with 2 wire Dali

IP500[®] Applications – OEM Solution – DALI / IP500 Converter

Product Flyer – DALI / IP500 Converter



b.ag, India

b.ag, India

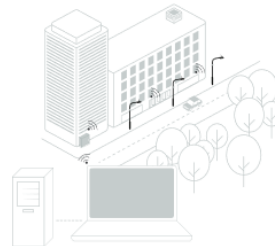
THE RISING OPEN STANDARD FOR WIRELESS SMART DEVICES IN BUILDING AUTOMATION

APPLICATIONS

- Access Control, Locks
- Fire & Smoke Detection
- Escape route systems
- Intrusion Detection
- Lighting & Climate Control
- Messaging & Localization and more...

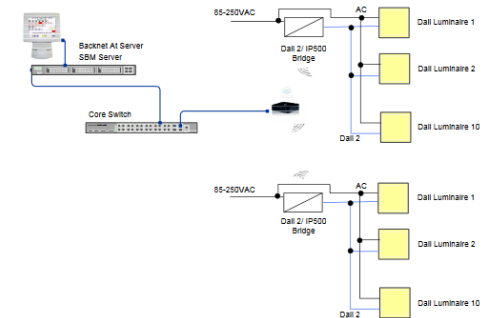
FEATURES

- Open non-proprietary solution, 2nd source will be available
- Interoperable BACnet /IP
- IPv6 ready (Internet of Things) Ultra-Low Power
- Powered by Battery, Energy Harvesting or AC/Mains
- Compliant with EN-Security & Safety Regulations
- Backwards compatible



b.ag, India
DiFi
Wireless Lighting Control System

The mesh network technology allows smart devices to be mobile, and to achieve a reliable message delivery in a wireless mesh network.



Layer	Protocol	Reason
Application	BACnet ...and more	<ul style="list-style-type: none"> • Existing, accepted building automation standard • Trained installation personal available • Complementary wired products available • Tool chains and support available • Suitable for low-power-devices
Network	IPv6	<ul style="list-style-type: none"> • Easy to install • Save for future installations • Defined interface to IPv4 • Use existing Ethernet cabling • Availability of existing IT-personal for rollout and maintenance
Adaptation	6LoWPAN	<ul style="list-style-type: none"> • Compress IPv6 headers
Data link	IEEE 802.15.4 - 2006 sub 1 GHz	<ul style="list-style-type: none"> • Long range • Low power • Secure • Hardware available from multiple vendors



THANK YOU FOR YOUR ATTENTION!

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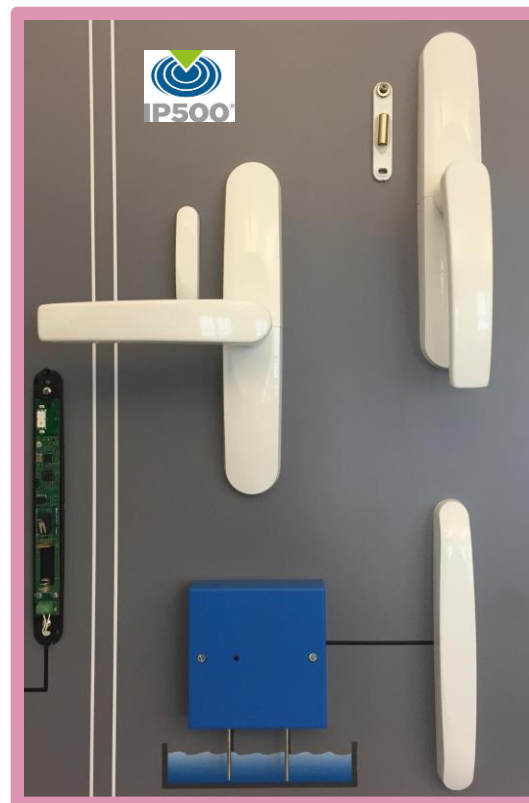
IP500® OEM Solution – Examples

IP500 Window Drives & Roof Sensors



- Controlling standard SHEV drives with relais interface and IP-500

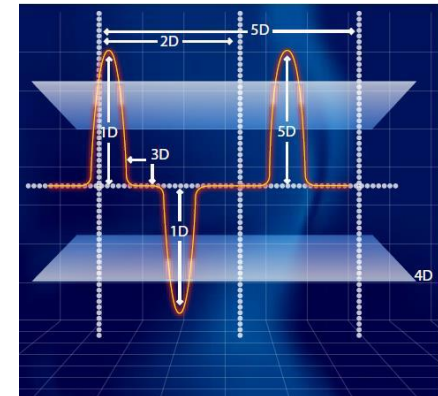
IP500 Window locks / Handles & magnetic Sensors



IP500 Motion Sensors



United Technologies

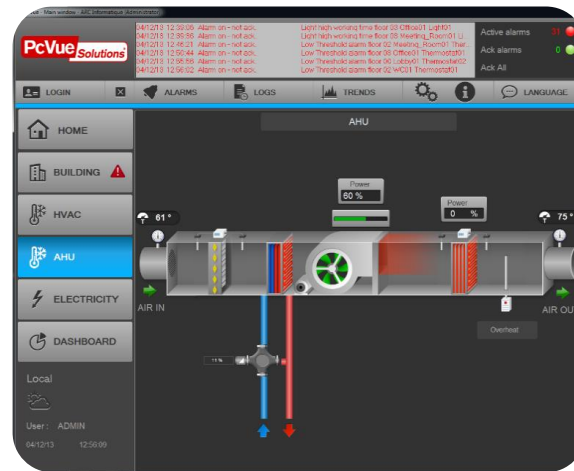
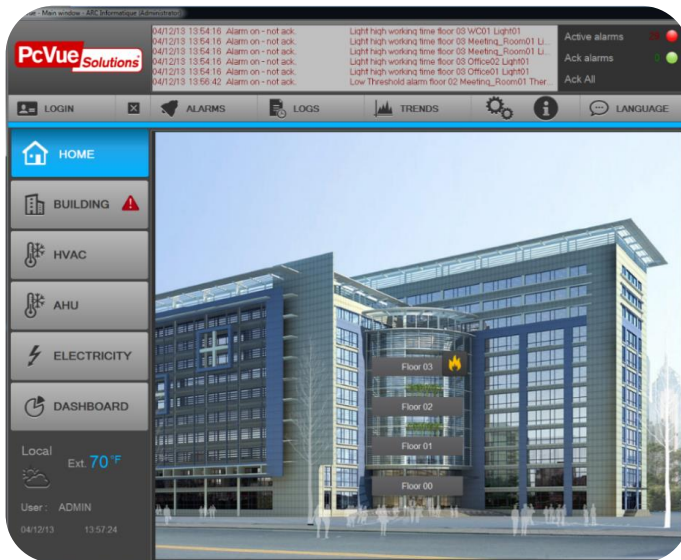


- Allows IP500 TAGs to be in secured IP500 area

IP500 TAG / Badge (IP500 Localisation / Access)



IP500 BMS Solution with mobility functions



IP500[®] Project for Interoperability Tests



IP500 Demo Room in Freiburg i.B., Germany



- IP500 performance with multiple OEM products
 - Shows the superior network performance
 - High density nodes in one building
 - Real time monitoring the results (status and performance per node over time)
- Installation with redundant gateways, repeaters
- Application combined as ECO system
- Results are shown at cloud level, as well locally at field test at the facility management



Thank You!

Questions?

IP500 Board of Directors:

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