BIM VIRTUAL 2020

IP500® Applications 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 provide a wireless platform for a **full ECO system** for commercial & industrial applications

IP500
Wireless-Network

Wireless sensors make the smart building safe and efficient

Direct connection to security services and mobile devices
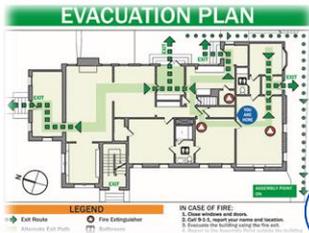
Dynamic & secure management of processes, assets and employees

Smart access control for indoor and outdoor

Smart management of energy consumption & light systems

IP500 Applications - Lighting

IP500 Lighting Application:

Target location in Smart Buildings: Assembly area, martial stock and office area

Goal: To increase quality of lighting at target areas; to safe energy consumption and to combine lighting with access control (i.e. for security people and robots)

**IP500 OEM products:** Light system, sensing devices, automated shutters

- LED lighting with IP500 sensing solutions provides smart lighting based on automated on demand and occupancy of people or robots
- Increases the security in working areas
- Reduces the energy consumption over the entire facility
- Smart Lighting during night shifts for people and robots

System diagram: see next slide

IP500 Light Application System Diagram
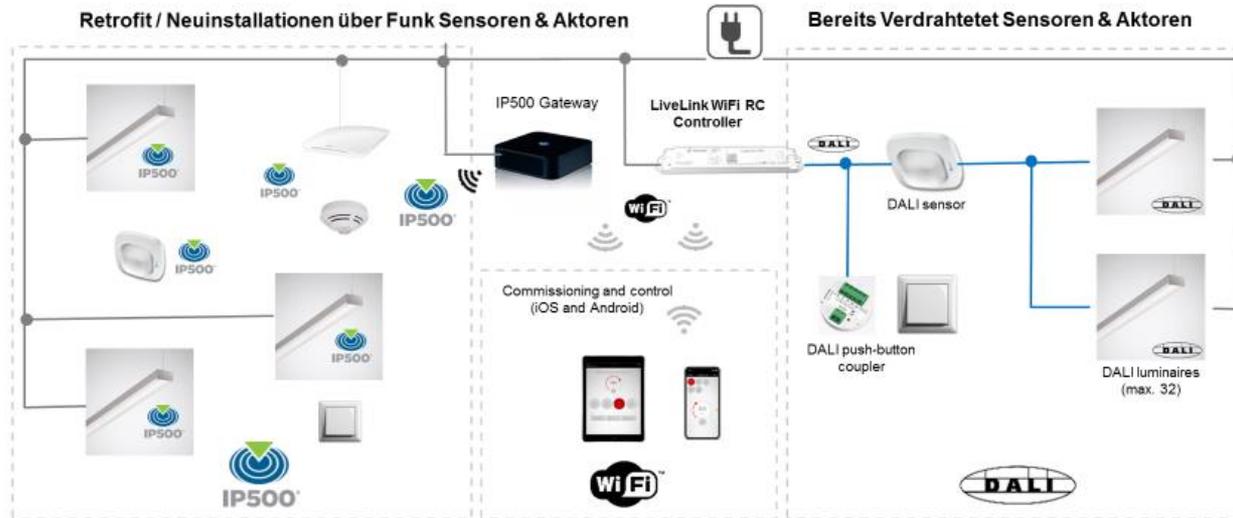
IP500 Applications – HVAC – Heating & Energy

IP500 HVAC & Climate Application:

Target location in Smart Buildings: Assembly area, martial stock and office area

Goal: To increase quality of heating and cooling at target areas; to safe energy consumption and to combine the climate with the people occupancy situation.

IP500 OEM products: HVAC system, sensing devices, automated Windows and shutters

- HVAC with IP500 sensing solutions provides smart climate control based on automated on demand and occupancy of people or robots
- Measures and increases the comfort and air quality at working level
- Reduces the energy consumption over the entire facility
- Improves climate conditions for material quality (humidity, temperature etc.)
- Improves meeting room conditions in combination with gas sensing (i.e. CO_2)

System diagram: see next slide

HVAC System Diagram
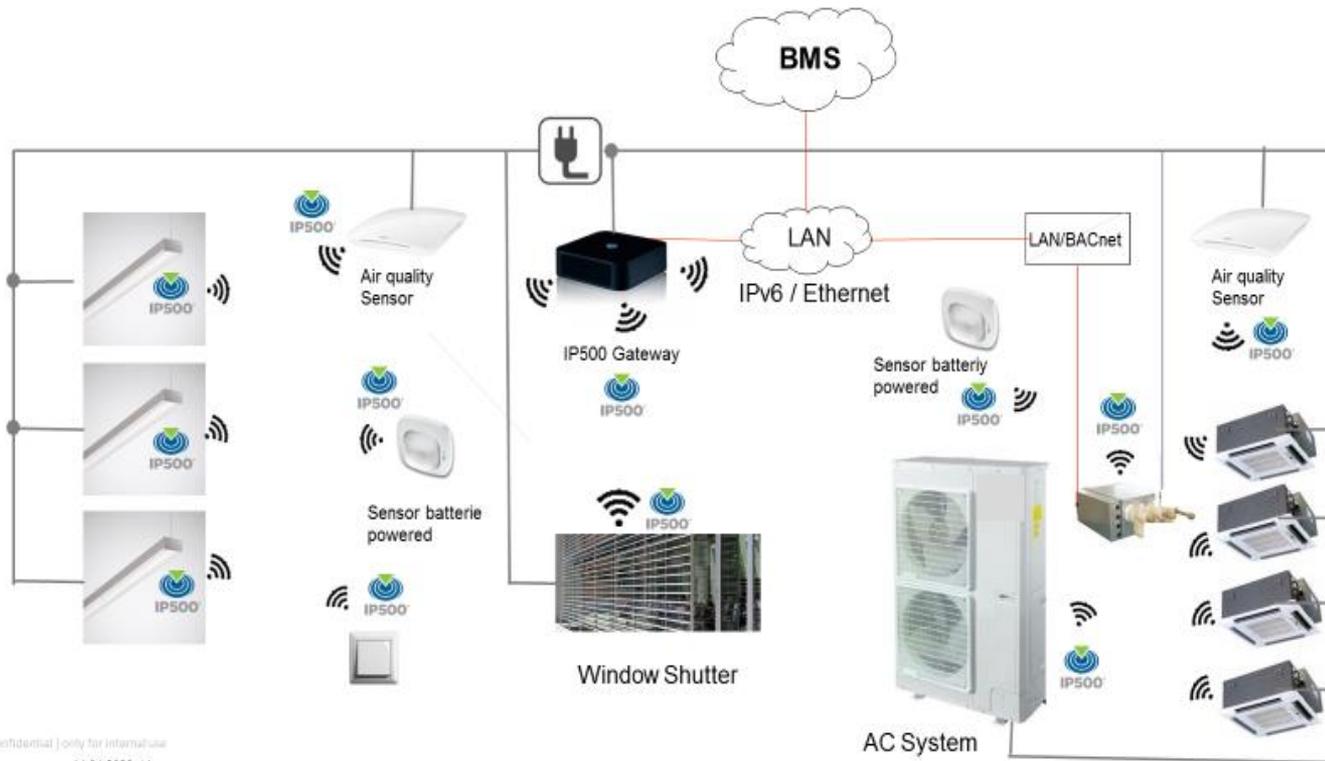
IP500 Applications - Security

IP500 Emergency & Security Applications

IP500
Wireless-Network

Building Automation

23. April 2012   21.7°C   12:47
Wohnzimmer/Beleuchtung

Decke	Aus
Wand	Aus
Sideboard	Aus
Aquarium	Ein
Terrasse	Aus

zurück	Home	Räume	Funktionen
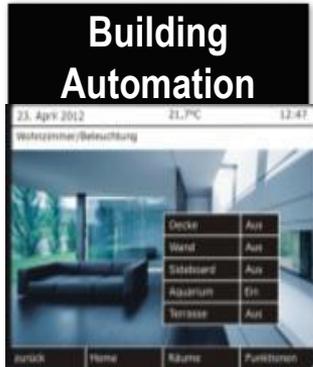
- Safety & Security
- Energy
- Comfort Service
- Mobility / Location
- Access Control
- Light Control

betreute Wohnanlage

Facility Control Unit

P500 Mesh NW

IP500 Network

IP500-Pager

HELP

ausserhalb
Mobile / GPRS / LTE

Technical Alarm

Mobile / GPRS / LTE

Service Alarm

Mobile / GPRS / LTE

Fire Alarm
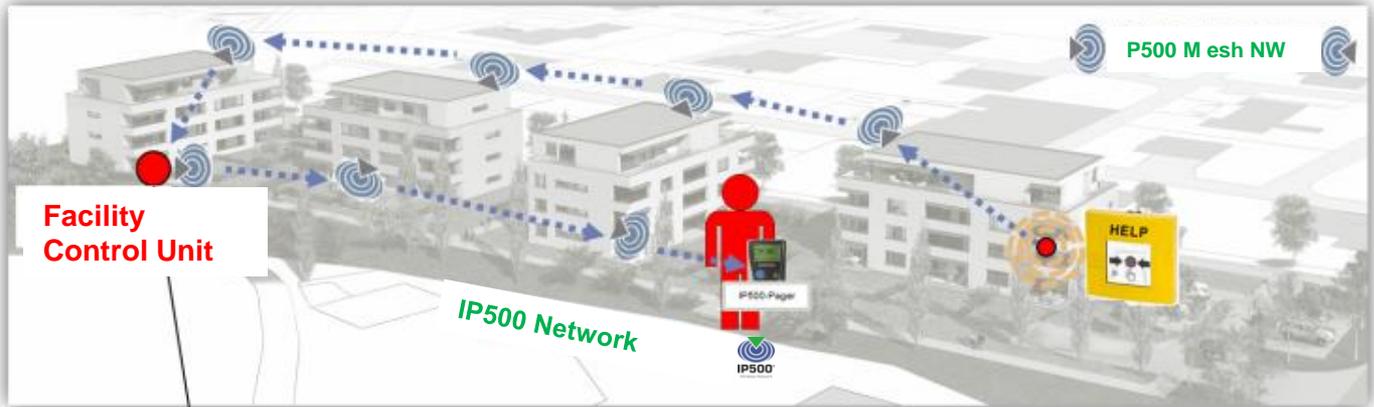
FacilityControl Unit with Touch Display and access to cloude APP.

CoreNetiX
Connecting Things

sensfix

PcVue Solutions
by ARC Informatique

Kingspan®

MICROSENS
fiber optic solutions
euromicron group

CoreNetiX
Connecting Things

GEZE

IP500 Emergency Application:

Target location in Smart Buildings: Assembly area, martial stock, office area and outdoor area

Goal: To allow people calling for help, service or attention by using emergency bottom

IP500 OEM products: Emergency push bottoms, alarm server and message distribution SW

- Location of the emergency bottom is variable
- Increases the security at working level
- In combination with access control
- In combination with gas sensing (i.e. CO_2)

IP500 Security Application:

Target location in Smart Buildings: Assembly area, martial stock, office area and outdoor area

Goal: To increase security and safety at target areas for people and the facility.

IP500 OEM products: Security system, sensing devices, automated doors & outdoor devices

- Sensing devices with IP500 provides higher and local security in defined areas
- Increases the security at working level and outdoor area
- In combination with access control and lighting to allow people and robots to move in an active security area
- Identify open doors and windows and inform / activate the facility or security people

IP500 Applications – Access & Robotic

IP500 Applications for access and asset tracking

IP500

Indusrial Applications

- Logistic delivery
- Security
- Asset Tracking
- Evacuation
- Maintenance

sensfix

Schindler

PcVue Solutions®
by ARC Informatique

ZiEMANN GRUPPE

CoreNetiX Connecting Things

GEZE

Schindler

IP Location for delivery (a)

IP Location of Logistic Robot

IP Location for delivery (b)

Hospitality and Hotels
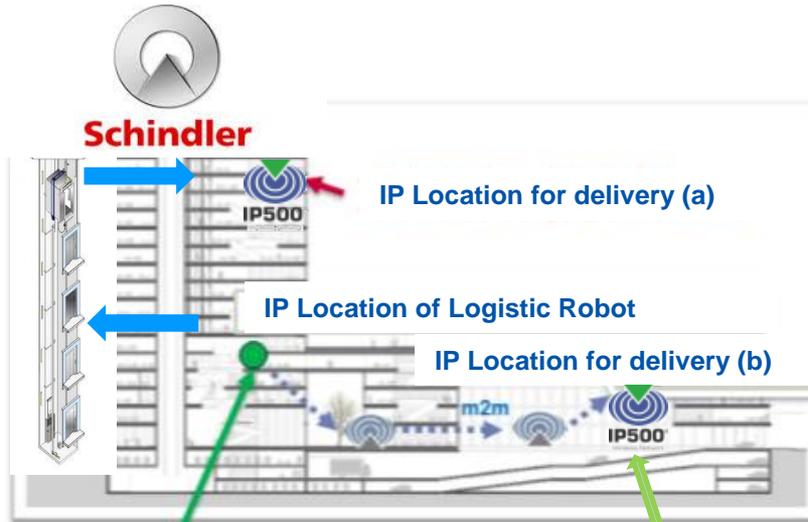
Goal: Secured Access:

Key Issues:

- **Efficient guidance handicapps**
- **Access for people & robots**
- **Hands free asset access**
- **Secured access**
- **Inventory tracking**
- **Reaction time reduction**
- **....**

IP500 Solution:

- **IP500 infrastructure**
- **IP500 security sensors**
- **IP500 access to elevators**
- **IP500 TAG (mobility)**
  * Active in-door localization
  * Positioning
  * x year battery life time

IP500® - Project Opportunity in elevators

Communication in lifts based on IP500
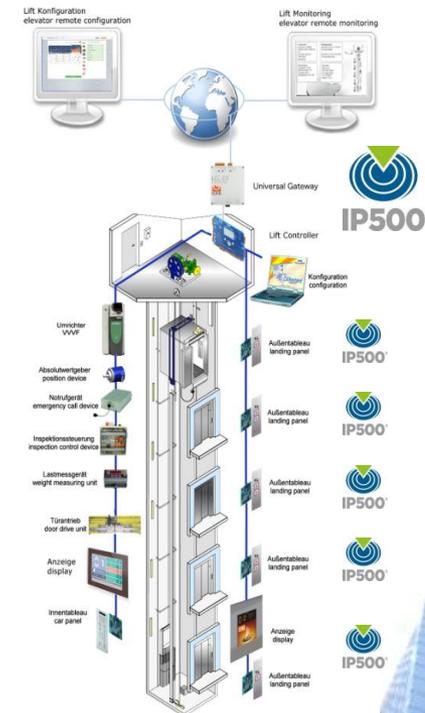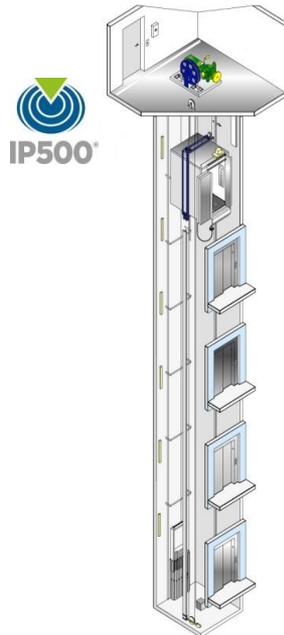
IP500 Access Control Application:

Target location in Smart Buildings: Assembly area, martial stock, office area and outdoor area

Goal: To enable automated and secured access control at target areas for people and robots.

IP500 OEM products: Access system, sensing devices, automated doors & gates, robots

- Sensing devices with IP500 provides automated access of people or robots in defined areas in combination with the building situation, i.e. in fire or emergency situations
- Barrier free access for robots through doors, gates and elevators
- In combination with lighting
- In combination with the security system

IP500 Asset Tracking Application:

Target location in Smart Buildings: Assembly area, martial stock, office area and outdoor area

Goal: To track and control asset tracking of assets and people in target areas

IP500 OEM products: IP500 Infrastructure system, sensing devices, IP500 TAGs / company badge

- Can provide location and status of assets on the fly
- Provides location and status information of asset
- Improves logistical efficiency
- In combination with access control (access authorization)
- In combination with track loads and products tracking
- Provides status of the products during assembly

IP500 Alliance OEM Products 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

IP500® Alliance Members

IP500® - Founders & Members

IP500® - Partners & Standards

Thank You!
Questions?

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Tadashi Yamato   IP500 Japan

office@IP500alliance.org