



# SMART PASSIVE INFRASTRUCTURE CONTROL (SPIC)



**TKF** CONNECTIVITY SOLUTIONS

# INTRODUCTION

The massive deployment of Fibre to the Home (FTTH), as well as the rising use of fibre optic in infrastructure networks, is leading to an unprecedented increase of unsupervised critical technical sites: street & field cabinets.

Interventions on these sites can be numerous, both during the initial deployment phase and for the full life of the network. The control and traceability of interventions and participants is extremely difficult in practice. Possible consequences are: difficulties to match SLA commitments, breaches in security policies and limited quality of service.

At the same time, existing and future applications require higher security levels, like: FTTO, FTTA, autonomous cars and telemedicine. Street and field cabinets will be used for these applications provided that their vulnerability is reduced.

To meet these security challenges, TKF has developed a surveillance and access management solution for street and field cabinets: SPIC.

The SMART Passive Infrastructure solution (SPIC) has been designed with security as a founding principle characterized by:

- Real-time knowledge of the physical state of the cabinet (closing of doors, locking, position, humidity, etc.)
- Traceability of technicians accessing to the cabinet
- Administration system security achieving Infrastructure operator standards

Ease of use and simple operational deployment are also core features of our solution:

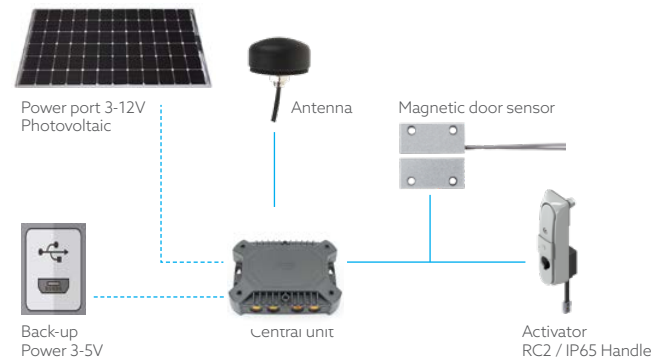
- Intuitive mobile app available for all smartphones
- Quick and easy hardware installation and reduced maintenance

## How it works?

This lightweight solution offers supervision and access management for cabinets. The lock and the important sensors like tilt and temperature can remotely be checked, managed, and automated, offering operators and service employees improved reliability, efficiency, and safety. The system is easy to integrate in existing network management systems.

We offer the first 3-in-1 solution:

- An access control system, which manages and controls the users' rights
- A supervision system for unsupervised infrastructure
- A system that allows you to get rid of physical keys



## Communication channels

- The solution is designed to communicate using technologies such as LoRa, NB-IoT and LTE-M for communication purposes.
- To have access to the cabinet only a smartphone is required with a mobile internet connection.

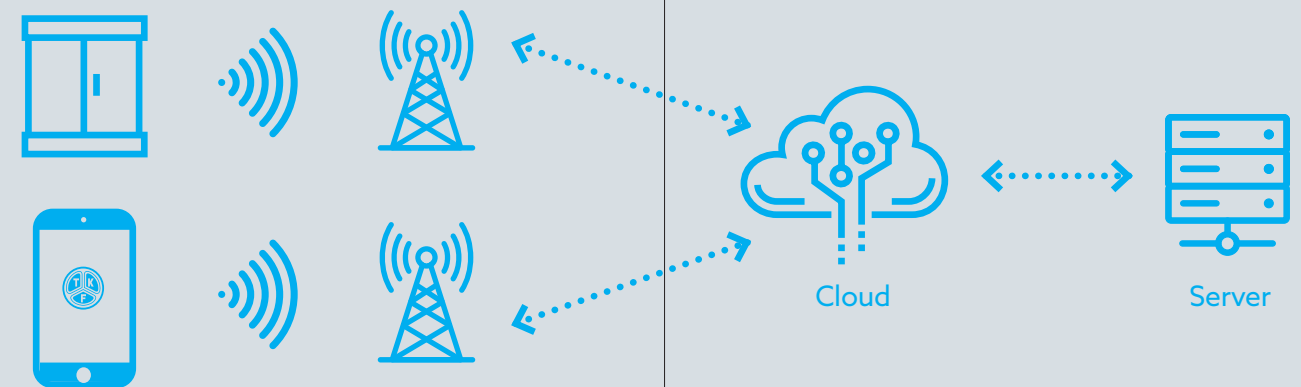
## Software architecture

The software architecture has been designed for security by separating the communication of the SPIC and the SPIC mobile app and communicate through a secured authentication server.

## SPIC mobile app

The SPIC mobile app is used as a universal, but unique key for accessing cabinets by making use of either a QR code, name or address of the cabinet. An easy and safe solution to open the cabinet, which has received a 92/100 level in user satisfaction survey.

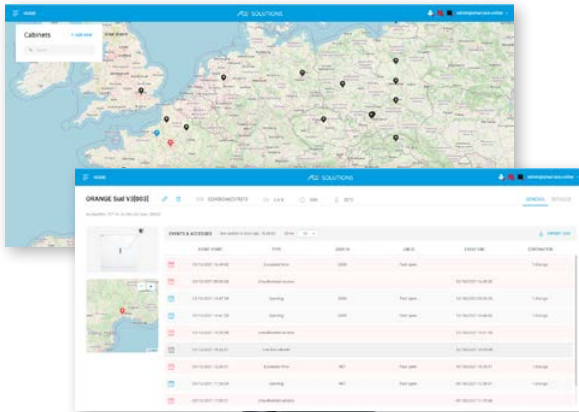
## Communication Channels



## Admin panel

The administration panel offers a quick and intuitive overview of the current state of the cabinet(s) as well as detailed information and history for each cabinet. Access control rights per user or user groups are also managed in the administration panel.

- The web-based admin panel allows the customer to have a 24/7 track of the events of the cabinets, manage the user rights and to know in real time the status of the cabinet.
- The cabinets can quickly be geographically located in the map. Through a colour system you can easily and fast identify the status of the cabinet (idle, critical alarm, opened, etc).
- Easy to manage and control the user rights.
- It has an alarm notification system which can be standalone or connected to a NOC.



## Key points

- Converts any regular street cabinet into a smart remotely managed and controlled cabinet. The lock and the important sensors like temperature, tilt, unauthorized access, among others, can remotely be monitored and managed.
- Easy and fast installation, "plug-and-play method". Once the system is installed, the customer can control the access and monitor the status of the cabinet.
- The SPIC solution is compatible with newly installed infrastructure as well as retrofit of existing infrastructure.
- To access to the cabinet, it is only needed to download the SPIC mobile app which has been developed to be used in the most common operating systems like Android, iOS, and Huawei.
- It is a cloud-based and fully integrated solution.

## SPIC benefits

- Cost Efficiency
- Low management cost
- Low energy consumption with a battery life of up to 10 years on passive installation
- No Management of physical key
- Reduction of maintenance cost

## Simplicity & Hardiness

- Easy installation and maintenance
- Plug & play components
- Intuitive interfaces for users and administrators
- Rugged solution to withstand vandalism

## Security

- All activity and status tracking
- User's identity control
- Personal Digital Key with use of SPIC mobile app
- GDPR compliant

## MEET THE **TKH GROUP** AND ITS **CORE TECHNOLOGIES**

TKH Group NV (TKH) is an internationally operating group of companies specialized in creating and supplying innovative Telecom, Building and Industrial Solutions. All TKH technologies are interlinked into total solutions for these three business segments.

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