iOTize™

Verbalizing IoT

Every second—127 new IoT devices are connected to the web.

IoTize is ready to be use Everywhere
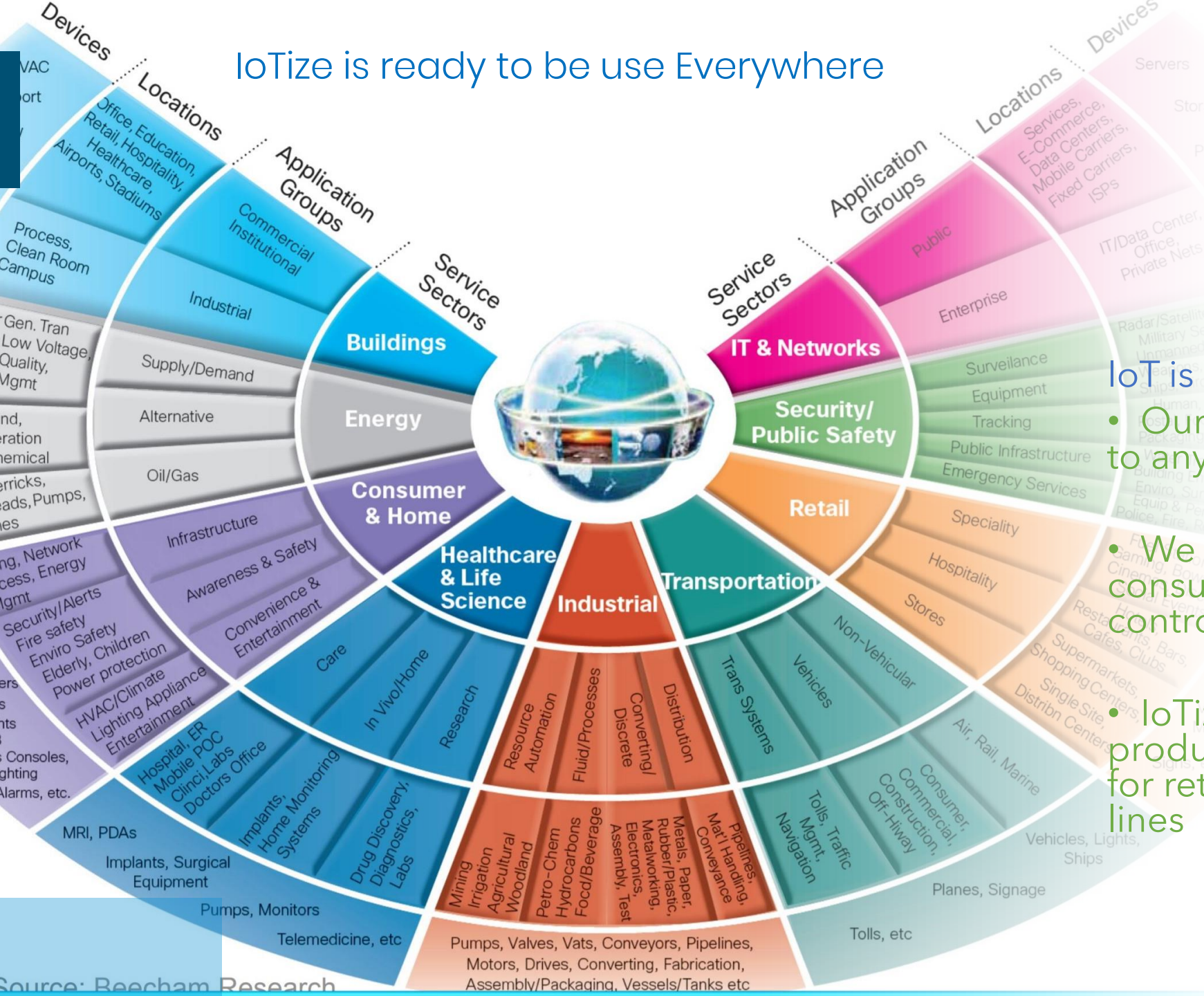
IoT is Everywhere
- Our offer is easily adaptable to any electronic device
- We can be anywhere from consumer appliances to access control
- IoTize not only works for new product developments but also for retrofitting existing product lines

Source: Beecham Research

Our lives revolve around the cell phone

iOTize™

Calls

Music

Internet

The WWW is in our Hands

Camera

GPS

Payment

TapNLink: Plug'n Play Solution for Manufacturers

We eliminate the complexity of IoTizing a product

Without TapNLink: Multi-expert team, long development & high risk.

With TapNLink: Ready-to-use solution.

Hardware 01

01 Only 2 wires (GPIOs)

Firmware 02

02 Configure only

Radio/antennas 03

03 Embedded antennas

Security 04

04 Configure only

TapNLink: Plug'n Play Solution for Manufacturers

IoTize™

We eliminate the complexity of IoTizing a product

Certification 05

05 RED precertified FCC/IC ok

Without TapNLink: Multi-expert team, long development & high risk.

Mobile Apps 06

06 Automatic generation

With TapNLink: Ready-to-use solution.

Cloud 07

07 Configure only

Manages All Aspects: What Does this Mean?

Firmware Electronic Mechanical Radio Apps Cloud
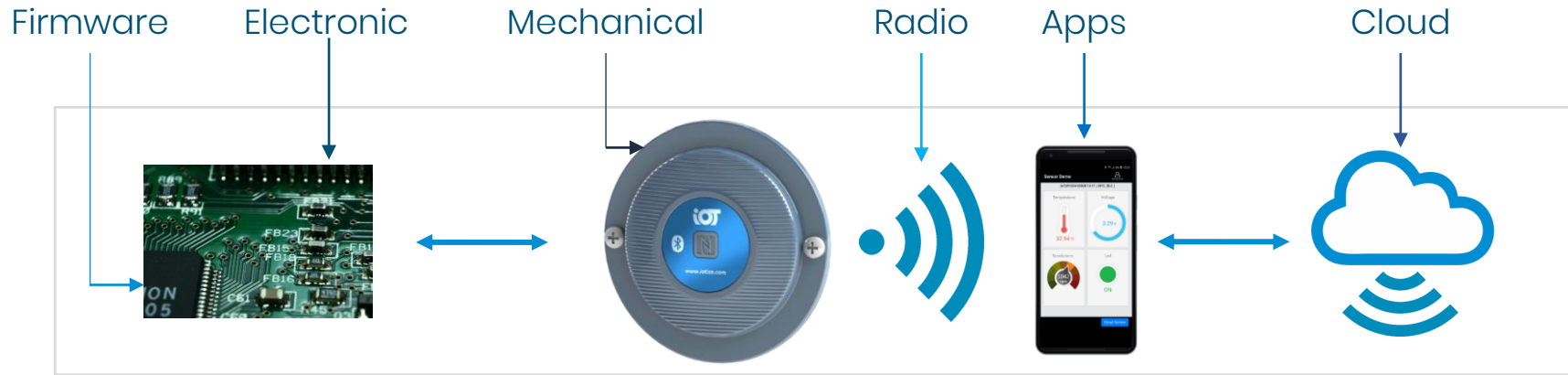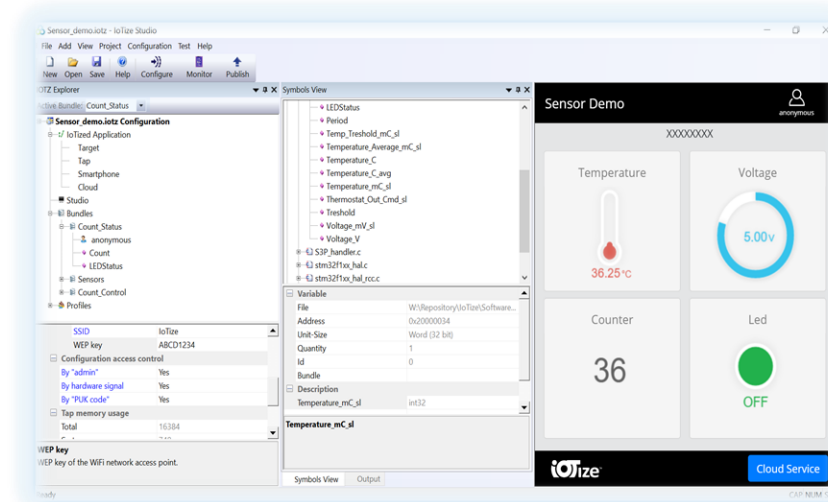
- No programming
- Fits any microcontroller
- Secure firmware updates

- Standard connectors
- Only two signals
- Low energy consumption

- Size optimization
- Optional casing
- Customizable

- Integrated antennas
- End-to-end security
- Certification

- Automatic app generator
- Access control management
- APIs for iOS, Android, Win10, …

- Cyber-security
- MQTT
- Open source solution

Automatic APK/IPA generator

Configure

then click

and test!

Three versions:
- 1 APP One Device
- Static 1 App 3 Devices
- Dynamic 1 App Multiple Devices

Innovations

Mastery of NFC

Intuitive app launcher
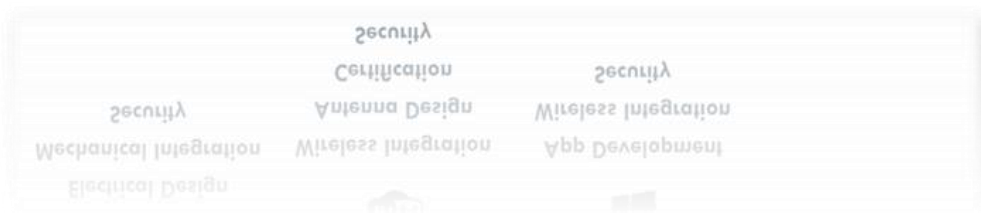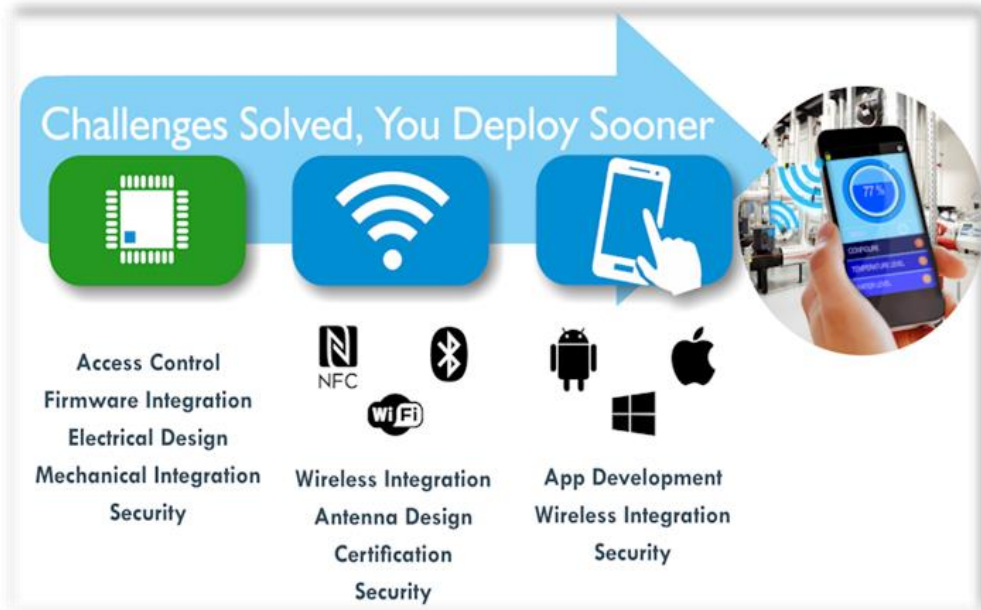
Automatic pairing for BLE / WiFi

Secure authentication

Low energy consumption

Reduced radio emissions

Low-cost solution

NFC-only: 3-stroke mode

Innovative Characteristics

Challenges Solved, You Deploy Sooner

Access Control
Firmware Integration
Electrical Design
Mechanical Integration
Security

NFC

Wireless Integration
Antenna Design
Certification
Security

App Development
Wireless Integration
Security

END-to-END SOLUTION

Firmware Integration

Security

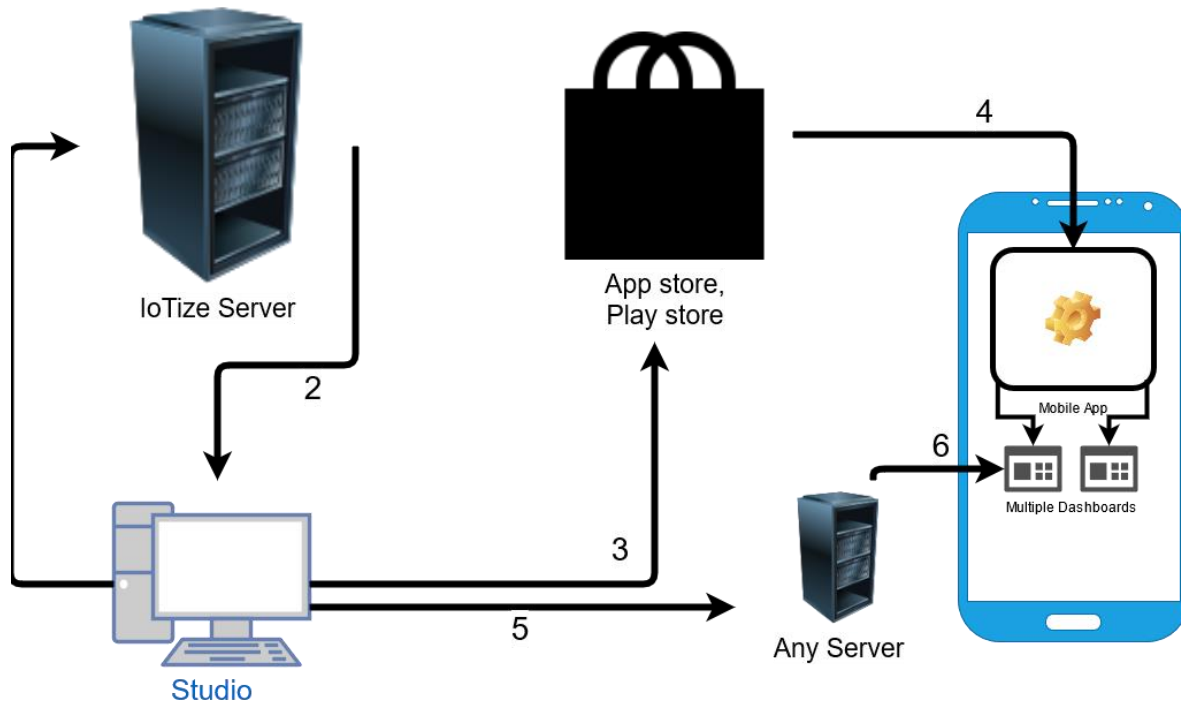Simple Mechanical Integration

Secured Multi Channel Wireless Options

International Certifications

No Code Mobile Apps

Cloud connectivity + MQTT

A single App with dynamic dashboards

Valuable Innovations

- Men-years gains for R&D

- Shortens time-to-market

- Eliminates risks linked to complexity

- Enhances user experience

- Reinforces Security

- Reduces costs & environmental impacts

Heating System Example: How TapNLink's Are Used

3-stroke configuration

We offer unique solutions in the Market

Options

With NFC-only
With NFC+WiFi or NFC+BLE

Adios LCDs

STEP 01

Read settings
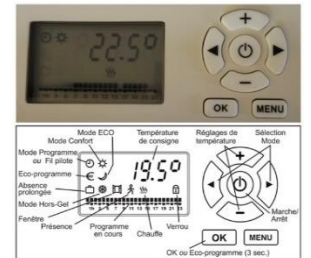Tap-to-launch & pair

STEP 02

Edit settings
Edit settings

STEP 03

Save settings
Update remotely

Heating System Example: Enhanced User Experience!
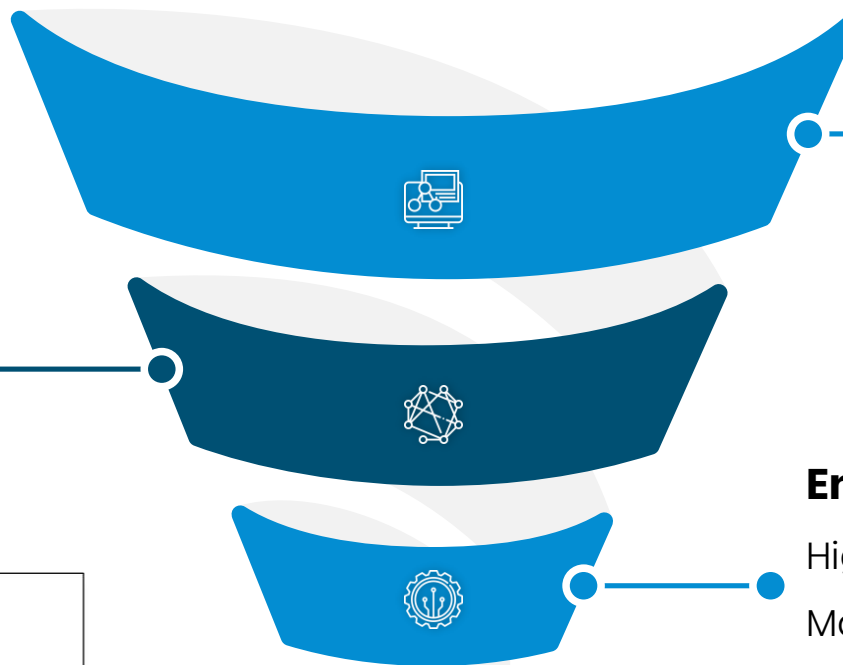
We Improved UX

Efficiency
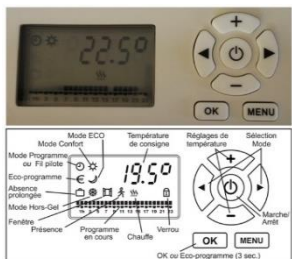
Only 20% of users configure their electric radiators.

Vs

Fast & easy to update.

Vs.

Ease/Comfort

Kneeling position & Complex sequences that require user's manual

Vs

User friendly mobile app

Environment & cost

High design cost.
Many LCD/keypads rarely used.

Vs

Cost effective solution, easy to implement, dynamic data gathering Apps

Products that match market requirements
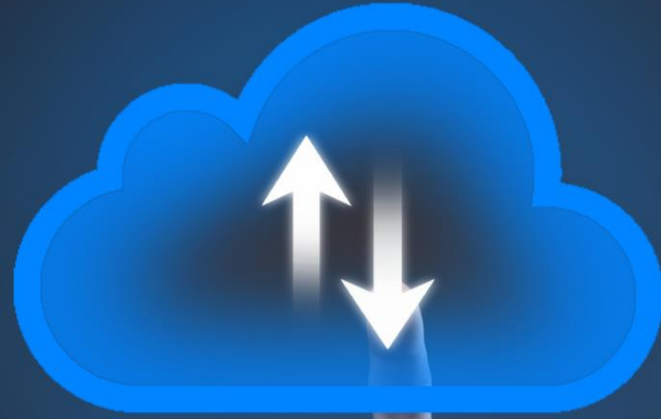
Complementary Product Lines

TapNLink

- Connects to any microcontroller

- Radio variants: BLE / WiFi / LoRa

- Target connections: S3P / UART / SWD

- For new designs or retrofit

TapNPass

- Retrofit for wire fieldbus systems

- Interface RS-232, RS-485, USB serial

- Embeds TapNLink

- Fix or Nomad casing

Complete, Adaptable Offer

PLUG

- **SWD**
  - For Cortex-M MCUs
  - 5-minute PoC
  - Retrofit without modification
- S3P
  - Universal
  - Secure
  - Two GPIOs only
- UART
  - With or without Modbus
  - Legacy solution for industry
  - Requires a UART

+

GENERATE APP

- HTML
  - Automatic generation
  - Enabled by 'Tap Manager'
  - 5-minute solution
- Ionic
  - Automatic generation
  - Ready to publish
  - IOS / Android / Windows 10
- APIs
  - For existing apps
  - iOS, Android, Cordova
  - Connections & security communication

+

CONNECT

- NFC-only (N)
  - Ideal for configuration
  - Low-cost solution
  - 3-stroke configuration
  - Zero power consumption
- NFC + BLE (B)
  - Ideal for local sessions
  - Efficient combination with NFC
  - Low power solution
- NFC + Wi-Fi (W)
  - Access point or station modes
  - Alarm generation
  - Remote control via MQTT

Module Types

NFC-only

Ideal for configuration only

- Low-cost heaters
- Muted equipment: fridge,...
- Sensors
- Configured-once' devices

- Low cost
- Zero power

NFC + BLE

Ideal for local sessions with monitoring

- Replacement of PC by mobiles (protection relays)
- Possible remote control via a relaying mobile (gas boiler)

- App launch, pairing
- Cybersecurity
- Wakeup by NFC

NFC + Wi-Fi

Local + remote access (+alarms)

- High-end heaters,
- Existing Wi-Fi network (appliances)

- Network settings (SSID, ...)
- Launch, pairing
- Cybersecurity
- Wakeup by NFC

NFC + LoRa (+BLE)

Local + remote access (+alarms)

- Industrial plants
- Low Power
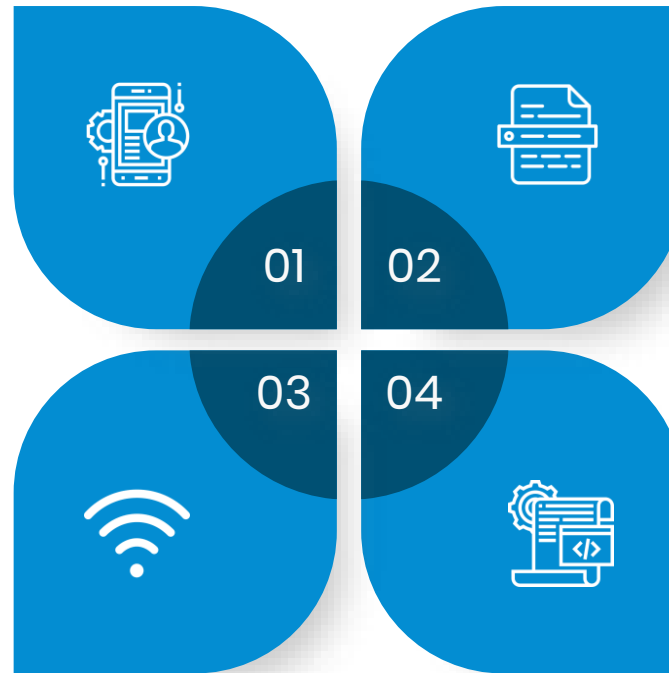
- Local HMI
- LoRa configuration

Advanced features

Automated mobile app generation

- Generates apps for iOS/Android/Windows.
- Local or on-line versions

TapNLink NFC/Wi-Fi with **MQTT**

- Remote sessions or single packets through MQTT
- Support the popular IoT platforms

01 02
03 04

Firmware update and remote debugging

- FW update for TapNLink.
- Target FW updates and debug capabilities (for STM32s),
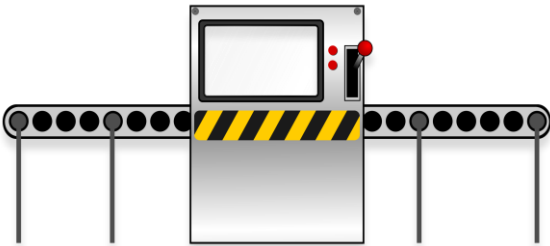- SVD files support.

Embedded **Java Virtual Machine**

- Allow complex conditions for alarms
- Adapt variables formats to any MQTT platform
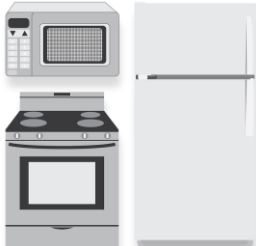
A Mass Market Solution

Generic Offer for Multiple Markets

Industry

machine tools,
process control, ...

Home

white goods,
entertainment,...

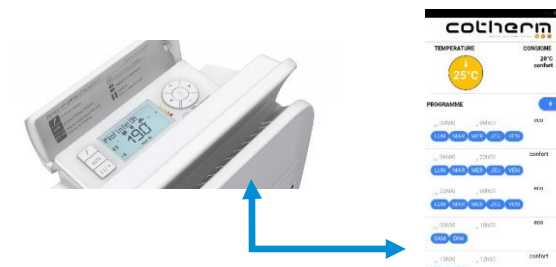
Smart building

HVAC, access
control,...

Air Liquide

Remote LoRa Interface

AL proprietary protocol

Local NFC/BLE control

Schneider Electric

TapNPass adaptation

Versions 'Blutooth/WiFi'

Cotherm

Replace LCD/keyboard

NFC-only

3-stroke configuration

International Recognition

Embedded World
Nuremberg
Hardware innovation of the year
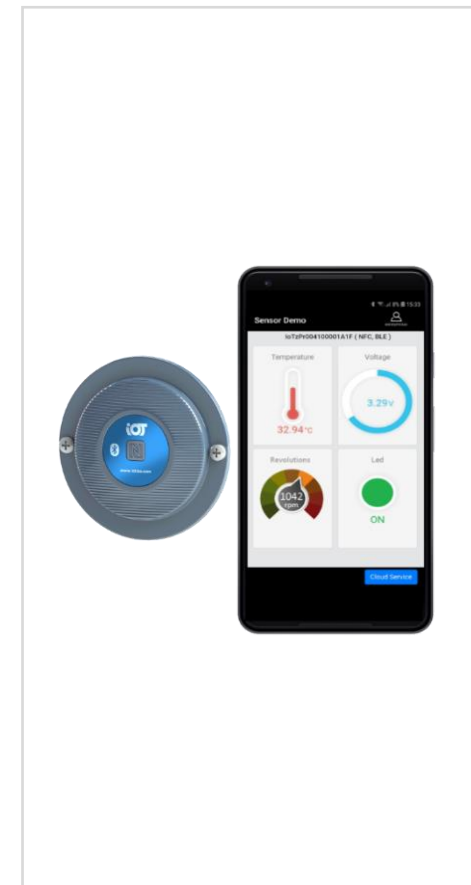

Salon Cartes
Cannes
IoT Solution of the year

NFC Forum
2018 and 2020
Best Emerging Concept
Best NFC application

If your products look still as if they were manufactured last Century….

Perhaps we can help….

Today: NFC boom

- New apps for payment and transportation make NFC familiar
- Most Android devices now support NFC
- **September 2019 :**
  - 19/09: iOS13: IoTize products now on iPhone!
  - 24/09: Paris metro adopts NFC ticketing

Would you rather go through a long exhausting project with less than 15% chance of being successful, on time and on budget.....

.....Or would you rather use or End-to-End IoT solution and save money, time and resources ?

Integration

1 Hardware

2 Embedded Software

3 Mobile Applications

4 Certification

5 Cyber Security

6 Antennas