Start-up, products and solutions

Ver. 23 - 2503

Sebyone is an Italian start-up founded in 2021

by partners with more than two decades of experience in the ICT sector. Its core mission is to develop DaaS, a technology designed to enable the interconnection of machines and objects

www.sebyone.com

A dual soul: Electronics and Computer science

The company brings strong multidisciplinary expertise in **software engineering**, **networking**, and **cybersecurity**, supporting the development of complete, interconnected solutions

Core competencies:

- Artificial Intelligence and Machine Learning
- Cybersecurity
- Software Development
- Internet of Things and Embedded Systems
- Robotics and Automation

Daas Technology

DaaS simplifies and accelerates the development of **digital infrastructures** and **communication services.**

DaaS-IoT is a framework designed to enable low-code IoT solutions

Team

- Electronic engineers
- Computer Engineers
- Specialized Support Staff

R. 0.11

Sebyone's technical expertise spans multiple innovation domains, enabling the development of integrated and high-performance solutions

60%
Artificial Intelligence and Machine Learning

- Neural Symbolic AI
- Large Language Models (LLM)
- Machine Learning
- AI for Cybersecurity
- Answer Set Programming for declarative AI
- Generative AI for simulation of attacks and defenses
- Deep Neural Networks

85%
Cybersecurity

- Penetration Testing
- Reverse Engineering
- Exploit Development
- Cryptography
- Network Security
- Threat Detection using Machine Learning
- Capture The Flag (CTF) activities)

100%
Sviluppo Software

- Frontend: React, Next.js, TypeScript, Angular, Svelte
- Backend: Node.js, Express, Spring, Django, Java
- Database & Data: Sequelize, Qlik Replicate, Qlik EM, PostgreSQL
- Low-Level Programming: Firmware development, ARM, MIPS III
- Mobile: Flutter, Firebase

95%
Internet of Things & Embedded Systems

- Embedded firmware design
- Wrapper development for IoT devices
- MQTT-based IoT systems
- DaaS-IoT platform development
- Remote control and monitoring of energy devices

50%
Robotica e Automazione

- Advanced sensing (Tilt and Position)
- Robotic Navigation Systems for guided biopsies
- Hybrid Parallel/Serial robotic structures
- Microcontroller programming for robotic systems

The company relies on a solid team of highly specialized STEM graduates and professionals, integrated into TSx - the main engineering group supporting project execution.

DaaS-IoT

Technology and Products

DaaS is a high-performance, cross-platform networking software layer

Parametric Overlay-Mesh networks generated by nodes using different technologies and protocols

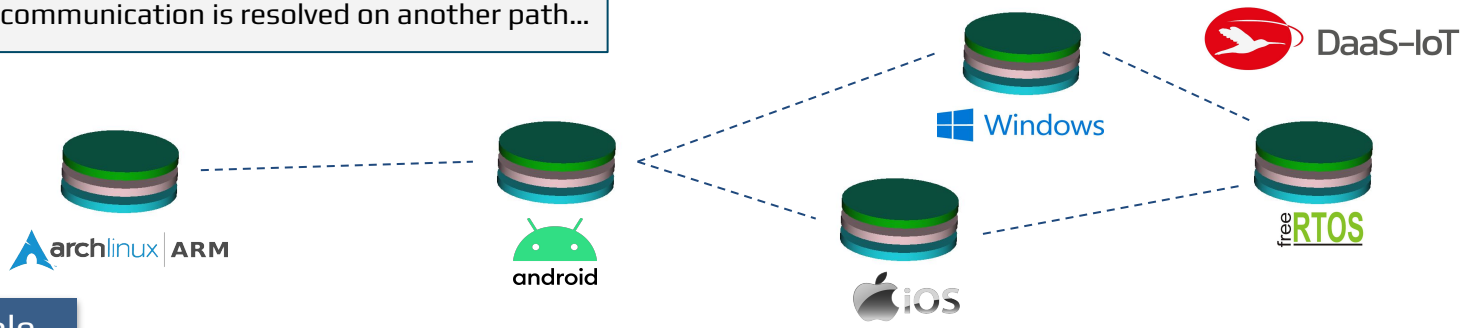
The network is made up of electronic devices that incorporate the “DaaS layer” designed to enhance networking services...

Low Traffic - 80% !

Data types can be globally encoded to achieve significant traffic reductions...

Resilient

if a channel or node becomes unavailable, communication is resolved on another path...



Extendable

The layer was developed in ANSI C language with modular architecture based on channel drivers...

Performing

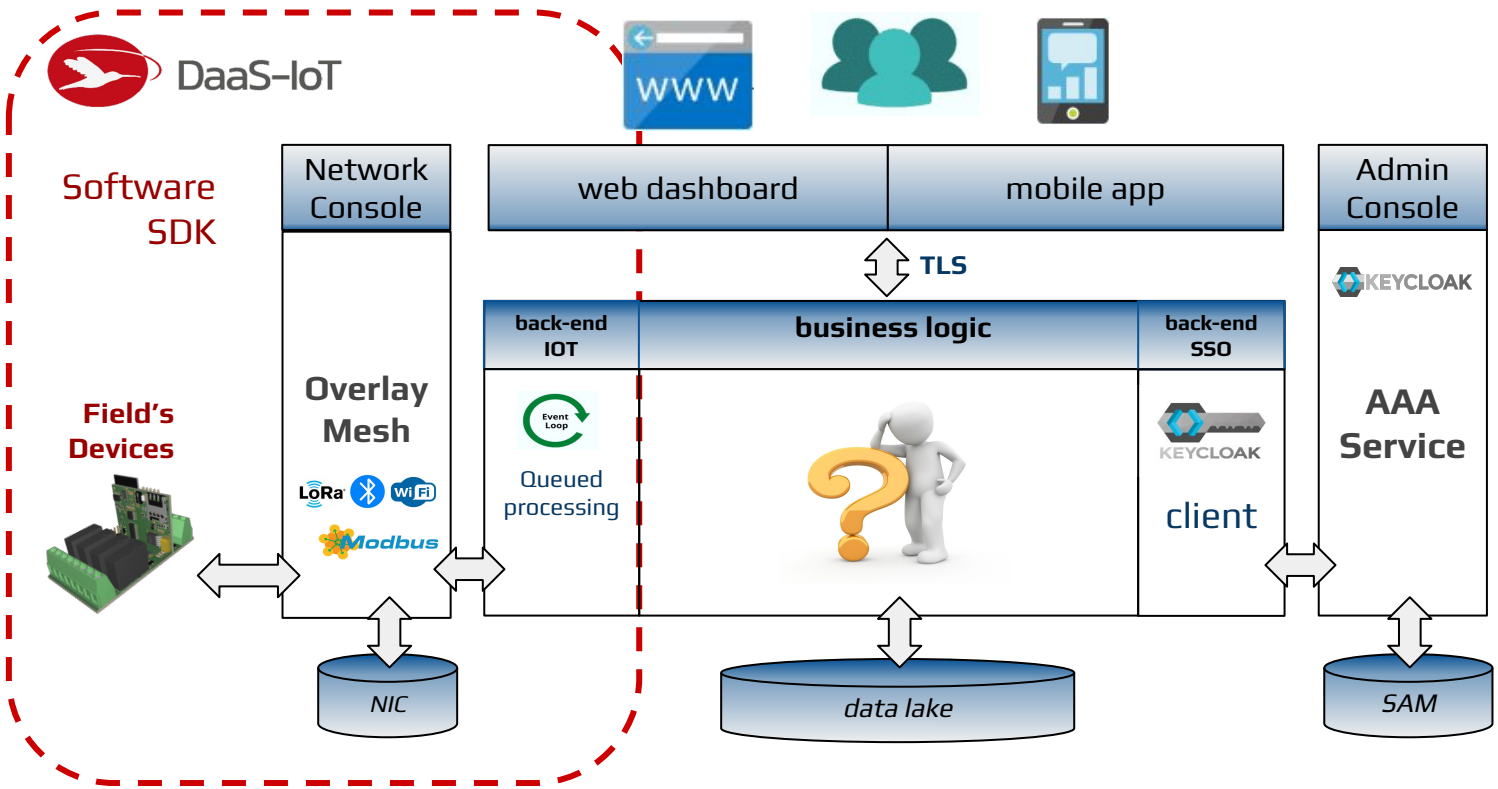
The nodes use an optimized protocol to reduce overhead. Latency time converges to physical network time...

Portable

The code for the node is a few Kbytes and can be run in the cloud and on low-power embedded devices...

DaaS Technology

DaaS-IoT adds features to applications to develop solutions with minimum effort. No need to deal with transmission stuffs or security issues, DaaS provides self-provisioning infrastructure, full networks compatibility, multi platform devices and firmware, cloud instances, and much more.



Services

Specialist Advice

We follow a structured design processo, from preliminary requirements to prototype delivery...

Requirement analysis

Formalization of the project requirements provided by the client


SEBYONE

Proposta
Requisiti Tecnici

Committente:

Progetto:

Responsabile

Referente per il Committente

Ing. Salvatore Modica

Circuit Design with Altium Designer Software

ALTIUM DESIGNER

Design

The activities carried out are reported periodically with useful details to evaluate the productivity of the team employed

Professional Services:

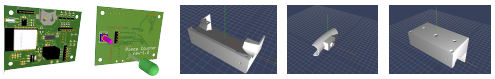
- Circuit Design
- PCB Routing
- 3d Modeling
- Validation and Characterization

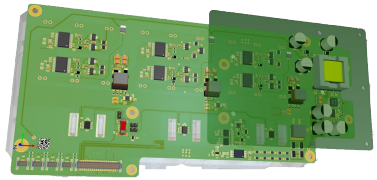
The activities necessary to carry out the design and implementation are performed systematically on intermediate milestone defined with the commercial proposal

Circuit Simulation with PSpice

PSpice Systems

Prototyping





- Documenti di Specifica
- Files Modellazione 3D
- Files CAD
- Distinta Componenti (BOM)
- Files di produzione (GERBER)

To create prototypes we use suppliers specialized in the production of electronic boards to ensure rapid and compliant creations.

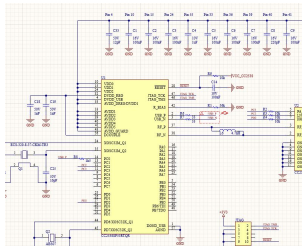
Rendering 3d models for 360° design, fully functional prototypes, production files

** The definition of the design requirements is done in two phases: "preliminary" to be able to estimate the necessary activities, and "formal" with which all the details useful for producing the "technical specification" are acquired.*

We use tools and methodologies that allow us to collaborate with specialized suppliers and production centers

Circuit Design

Rif.Profilo A



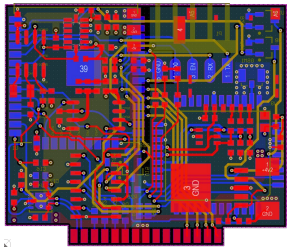
Specification evaluation to meet all requirements.
Drawing up block diagrams to divide the circuit portions.
Schema design and related simulation to validate the choices made.
Evaluation of the degree of scalability of the system to be created considering energy aspects

ALTIUM DESIGNER

PSpice Systems

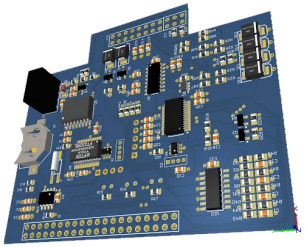
PCB Develop

Rif.Profilo B



Board creation and test

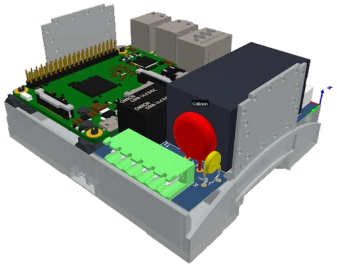
Rif.Profilo C



First draft definition of the circuit in dimensional terms.
3D Unraveling and Production.
Mechanical integration.

Assemblaggio prototipi

Rif.Profilo D



Assemblaggio del prototipo e boxing.
Prove di laboratorio ed eventuali revisioni.
Prove sul campo.

Professional skills at the service of customers

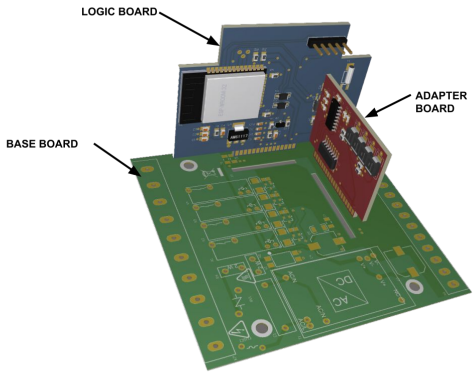
Rif.Profilo	web & cloud NodeJS - ReactJS / AngularJS Java/Spring Boot - PHP	mobile C++ Java	embedded C/C++, RTOS, Cortex™ , Microchip™
Analisi	✓	✓	✓
Design	✓	✓	✓
Codifica	✓	✓	✓
UI/UX	✓	✓	✓
Testing	✓	✓	✓
Documenti	✓	✓	✓
Sicurezza	✓	✓	✓

References

Works carried out

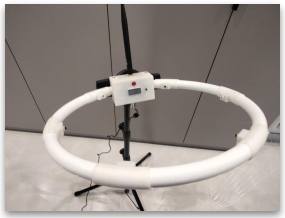
Modular Hardware and Firmware “IEP”

Modules designed to speed up the creation of industrial devices for home automation



The modules can be assembled to solve machine interfacing problems, data acquisition and to manage electrical signals in the field.

Devices built



Ring IR workpiece counter

Made with different diameters, it allows you to count the number of objects that pass through the ring.

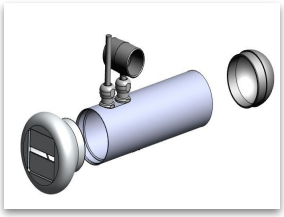
The piece counter is equipped with dedicated firmware that allows it to be configured as a DaaS-IoT node and also as an independent device. Useful for counting waste on production lines with manual quality control.

TAP (Test Access Port) interface for serial line to intercept control flows between PLC and IPC units.

The device is equipped with a control logic that makes it configurable as a node on DaaS-IoT networks.

The TAP operates in two modes: “learning” during which it records intercepted commands, and “control” to send learned commands.

The installation of the device does not compromise the integrity of the machinery on which it is installed as it operates in a transparent and independent manner.



Induced Vibration Analysis on Suspended Power Lines

Device equipped with high precision displacement sensor (micro-meters) and ducted anemometer. Made to measure induced oscillations on reinforced structures, suspended conductors and load-bearing spans.

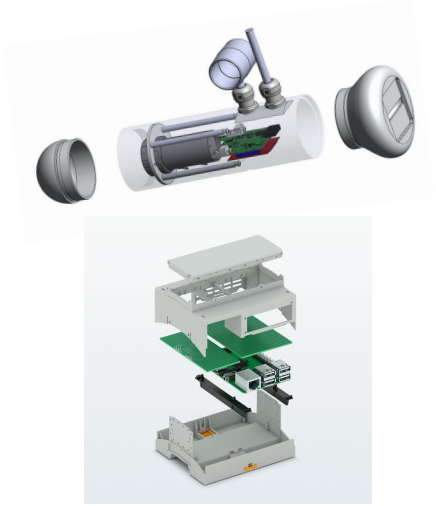
The device incorporates a power management system that involves micro-harvesting on electromagnetic and solar sources.

Wi Fi CERTIFIED

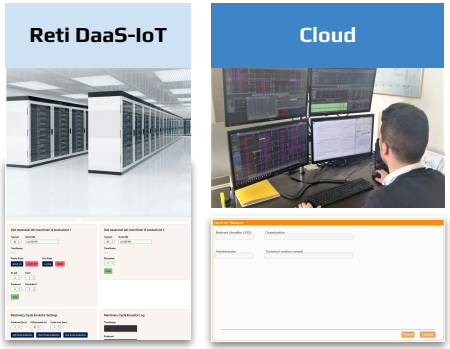
https://www.espressif.com/en/products/modules/esp32
Potenti moduli Wi-Fi+Bluetooth/Bluetooth LE che si rivolgono a un'ampia varietà di applicazioni AIoT, che vanno dalle reti di sensori a bassa potenza ai compiti più impegnativi.

Solutions designed and developed to order

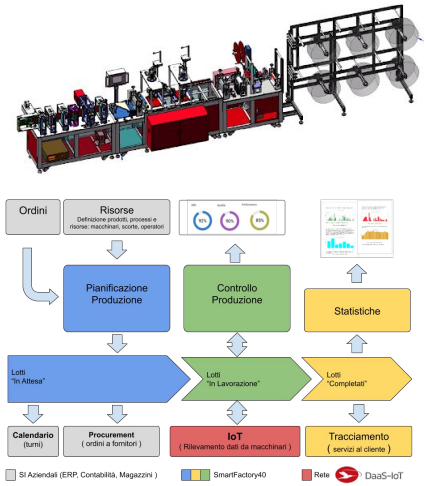
Electronic Devices



Remote Control Platforms



Automation and Home



DaaS-IoT

nearcare.eu

SMARTFACTORY4.0

TrackAlive

Technology for IoT solutions	Healthcare devices	Industrial automation	Home automation vertical

Software platforms and electronic devices dedicated to multiple sectors

Energia	Sanità	Industria	Ambiente
Energy efficiency	Wearable e machine learning	Interconnection and Automation	Monitoring and Tracing
Termotel	Nearcare	Smartfactory	Dustroute
Dimelux	Steribot	Vibramet	Trackalive
Energyslot			Apisicure

What can we do for you ?

With DaaS it's easy to develop new ideas...

Technology

DaaS-Iot

DaaS-Net

Www.Daasiot.net

Partnership

Development Agree

Commercial Agree

Solutions catalogue

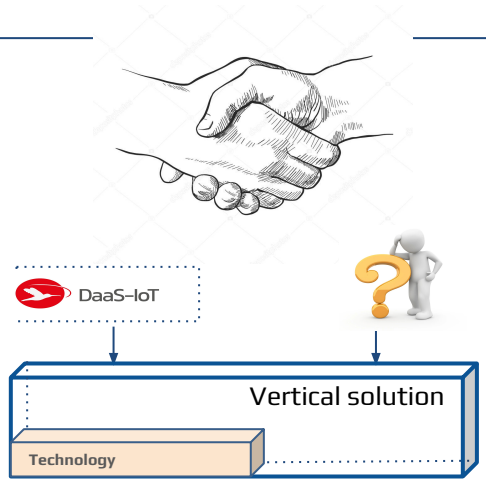
New solutions

Networking

Monitoring

Automation

Control



Benvenuti

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