

about Sparkle

Sparkle is a leading global service provider offering a full range of IP, Data, Cloud, Data Center, Mobile Data and Voice solutions designed to meet the everchanging needs of Internet Service Providers, OTTs, Media & Content Players, Application Service Providers, Fixed and Mobile Operators as well as Multinational Corporations. Thanks to a state-of-the-art global backbone of around 530,000 km of fiber and through an extensive worldwide commercial presence distributed over 33 countries, Sparkle ranks #10 for voice traffic and #7 for IP globally. Through a rich portfolio of

services, a cutting-edge network based on the latest technologies, a globally distributed sales force and advanced customer care capabilities, Sparkle is able to fulfill its mission of providing customers with top-performing and tailored solutions worldwide. With a truly global dimension and a local outlook, Sparkle stays close to its customers to understand their needs and ensure they receive the very best care.

Sparkle. The world's communication platform.Find out more about Sparkle at tisparkle.com





SPARKLE | IoT Solutions

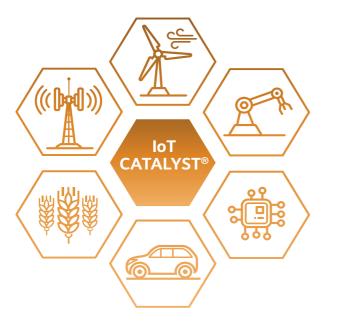
Value Proposition

In the IoT landscape, the Industrial Internet of Things (IIoT) segment is expected to face a huge growth due to its ability to transform industries and open new markets. Nowadays, however, one of the biggest challenges in IoT adoption is to simplify the complexities related to interconnecting things and connecting them to new or existing applications. The current lack of standard in interfaces, protocols and architectures is slowing down the implementation time of IoT applications in the market.

Sparkle's solution IoT Catalyst® tackles the IoT complexity challenge directly by simplifying, streamlining and accelerating the communication flow between things an other platforms, legacy applications and third party systems, thus allowing entities like manufacturing and utility companies to become part of the new Industry 4.0 paradigm, as well as large telecommunication companies, service providers and system integrators to lead the fourth industrial revolution.

A New Innovative Solution

Sparkle IoT integrator allows to design, implement, protect, and manage the IoT integration logic, guaranteeing **fast and secure integration of any sensor, device, and/or PLC to any application or IoT platform**. It makes it possible to design new IoT Edge Applications, securely store them in a central repository and then select and dispatch them on demand to computation devices installed at the edges of the network.



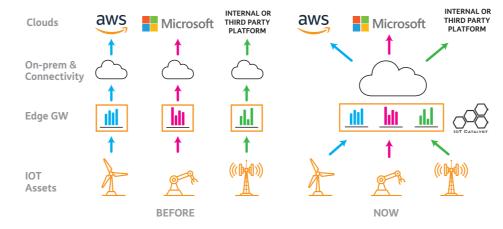


Customer Benefits

Through our **edge computing platform IoT Catalyst**® and thanks to our expertise as an E2E solution provider, we support our customers in the design, roll-out and operation of their IoT systems, with the final objective of achieving additional control, efficiency and savings in the management of complex networks, infrastructures and industrial plants.

Sparkle's solution can guarantee to customers:

- a state-of-the-art editor that allows fast and secure integration of any sensor, device and PLC to any application or IoT Platform
- unlimited scalability, machine learning and predictive analytics
- IoT platform independence: it is possible to associate any device with one click to any IoT Platform (AWS, MS Azure, ...). Customers are free to change their IoT Platform saving investment at any time
- new revenue stream: it is possible to use the same IoT infrastructure to both serve internal needs and provide IoT hosting services to partners or customers in a secure way, allowing users to deploy a more effective IoT architecture (Silos-free), as shown in the following figure:



The Advantages of IoT CATALYST®



A unique solution for different needs

From Industry 4.0 to smart buildings, from connected telco towers to IoT-based energy metering, our solutions can be applied in any case a set of fragmented IoT data requires high-level advisory, architectural design, integration with enterprise systems, project governance and fast application development and delivery.



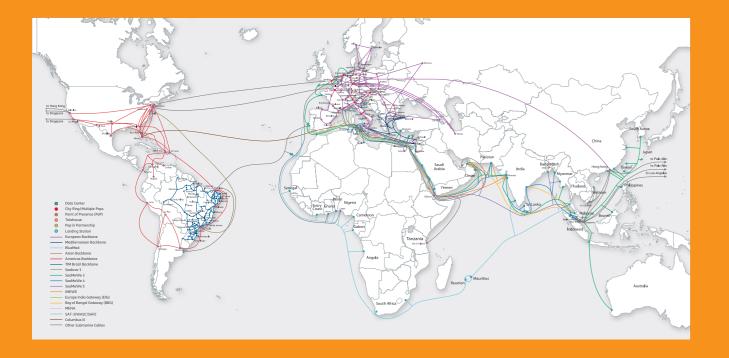
Open Ecosystem Platform Independent

Sparkle IoT integrator helps to standardize the communication between "things" and any IoT Platform, thus allowing to create a fast-growing public/private/cooperative ecosystem of supported devices. IoT Catalyst® manages the IoT avoiding the risk of over-dependence on IoT solution providers, since it decouples the concept of IoT Domain from that of IoT Platform.

Users can easily create, populate and manage their IoT Domain in an independent way in respect of any IoT Platform.



IoT architectures — the way things, sensors, servers or cloud infrastructures, data, networks, software and people interact — are the beating heart of smart applications and the point where data become insights, smart decisions and value. Designing IoT architectures will be simple with our solution, thanks to our unique competences as an E2E solution provider.



about Sparkle

Sparkle is a leading global service provider offering full range of IP, Data, Cloud, Data Center, Mobile Data and Voice solutions designed to meet the ever changing needs of Internet Service Providers, OTTs, Media & Content Players, Application Service Providers, Fixed and Mobile Operators as well as Multinational Corporations. Thanks to a state-of-the-art global backbone of around 530.000 kms of fiber and through an extensive worldwide commercial presence distributed over 33 countries, Sparkle ranks #10 for voice traffic and #7 for IP globally. Through a

rich portfolio of services, a cutting edge network based on the latest technologies, a globally distributed sales force and advanced customer care capabilities, Sparkle is able to fulfil its mission of providing customers with top performing and tailored solutions worldwide. With a truly global dimension and a local outlook, Sparkle stays close to its customers to understand their needs and ensure they receive the very best care.

Sparkle. The world's communication platform.Find out more about Sparkle at tisparkle.com





SPARKLE eHealth Solutions

Value Proposition

In the health sector, the main goal is to provide patients with the assistance they need. In many cases, it is convenient to monitor their health by communicating with a doctor also remotely, especially in the case of patients living in isolated areas.

Sparkle Digital Health solutions are designed to support entities like Insurance Companies, Hospitals, Chemistry Chains and Public Administrations to meet the needs of doctors and patients, in order to make the management of assistance activities easier, cheaper, more effective and innovative, in full compliance with patient privacy protection standards and current medical regulations.

Solutions are provided for remote monitoring of the main vital parameters, teleconsultation, teleassistance, telediagnosis, remote reporting and remote assistance of patients.

A New Innovative Solution

The Sparkle Home Doctor solution is a "PaaS" (Platform as a Service) service in Cloud ISO 20000, ISO 20017 certified and Class certified CE medical device (IIa). The certification is valid all over the European Community. The main Home Doctor platform is installed in Italy and provides full disaster recovery capabilities.





Customer Benefits

The platform allows customers to execute certified remote monitoring of the patient's main vital parameters, thus making it possible to manage them remotely, with the consequent enhancement of health response and minimisation of economic investment.

The physiological parameter, detected by medical device, is forwarded via a tablet or smartphone to the central platform, to which healthcare professionals can access from any location and assess the adequacy of the measures received. The Home Doctor service provides for the centralised management of the patient's registry and guarantees the security and protection against possible manipulation of personal health data through blockchain technologies.

The Sparkle infrastructural services are aimed at improving ehealth services by offering the possibility of carrying out numerous remote activities for doctors, nurses and patients.

The main ehealth applications that can be **integrated into the**Sparkle Home Doctor platform are:

- high value products and services, aimed at general medicine, that enable new primary care models and offer proactive medical services (e.g. population screening campaigns managed by general practitioners)
- teleconsultation with assisted videoconference services
- secure storage of digital diagnostic images
- support in the management of healthcare, administrative and logistic processes
- support in the management of the operational centres dedicated to ambulance health emergency and assistance continuity

The Advantages of Home Doctor



A unique platform in line with regulations and open to the future

Home Doctor is a "PaaS" service in Cloud that provides Disaster Recovery and Business Continuity in the event of failures or anomalies in the operation of the customer's IT network. The solution is **CE certified as a class IIa medical device and**

as a multiparametric telemetry system; with respect to data protection, it complies with European regulations on the GDPR, ensuring the total privacy of patient's data according to the rules on the processing of sensitive information.



Flexibility to address several targets

The Home Doctor solution meets the various requirements in the field of telemedicine. It can be both offered to the **Public Administration in hospitals** as well as to **Private Clinics**, **Pharmacies**, **Medical Clinics and Insurance Companies**.



Possibility to localise patient data

The solution can be architecturally structured for usability in specific countries through the remotisation of patient data (export) in a local DB. Specific APIs will also provide guarantees of immutability of data through blockchain technologies.

For more information contact us at: ehealth@tisparkle.com