IoT Connectivity with POST Telecom

POST LUXEMBOURG

In recent years, the Internet of Things (IoT) has proved to be one of the most crucial technologies of the 21st century, making it possible to connect people and things seamlessly and automate processes. With continued technological advances, IoT has become more important now than ever before, reducing human effort for several activities and providing tons of data, for later on be processed and give place to meaningful information.

The benefits of IoT are endless: from providing users with a better life quality (through automation and automatic decision making) and automating menial processes, like turning the lights on automatically, to helping organizations make successful data-driven decisions. But all this would not be possible without excellent and seamless connectivity. That is a reliable and continuous connection between a host network and an IoT platform via a special SIM: the IoT SIM.

What is IoT

IoT (Internet of Things) refers to a product, hardware, or device embedded with sensors, electronics, firmware, and software. These elements within the device can gather, store, and send data via the Internet to other platforms and devices. An example of an IoT device is a smartwatch that can collect specific information like the wearer's oxygen level, blood pressure, and even stress levels, thanks to its embedded sensors, firmware, and electronics. The information the watch collects is then transferred to the wearer's phone via the Internet. That's where the IoT SIM comes into play.

What is an IoT SIM, and how is it different from a regular SIM?

An IoT SIM card, like a traditional SIM card, is designed to keep all internet-enabled devices connected to the Internet. But that's just as far as their similarities go. Traditional SIMs do not meet the requirements of today's IoT solutions. For that reason, today, a variety of IoT SIM cards are available in the market, each with a wide range of features designed especially for IoT devices. A good example of a special feature is the robust level of such SIM cards, absent from the consumer SIM card. Those robust SIMs are designed to resist adverse conditions such as temperature amplitude, dust and electromagnetic fields.

IoT SIMs are hardy, durable, and resistant to corrosion because the IoT devices they sit in are often exposed to harsh conditions. That includes extremely low or high temperatures, strong winds, extreme weather conditions like humidity, rain, heat, and even fast or violent movements. These SIMs also come with a longer lifespan (approximately ten years) than regular SIMs (approximately three years).

Unlike traditional SIMs that are activated individually by a consumer, IoT SIMs are often activated in bulk and, therefore, must be easily managed remotely. They also need to keep devices connected constantly.

Regular SIM cards outsize common tariff zones and have a fixed volume of included data. All this has several implications for businesses – tedious sourcing and management of various connectivity providers on a per-country basis, complex inventory logistics, high roaming charges, and rigid terms set by network operators. That's where IoT SIM cards can save businesses time and money. IoT SIMs are accessible by multiple networks for increased coverage and offer global tariffs with competitive pricing applicable per zone. Those tariffs are available in different flavors of the product, depending on the customer's needs.

Types of IoT SIMs forms and their use

2FF (Mini-SIM) – as big as a standard SIM card and often used in vending machines, vehicles, and payment points.

3FF (Micro-SIM) – the same size as a mini SIM and used in portable devices like GPS, tablets, mobile IoT devices, and smart health devices.

4FF (Nano-SIM) – almost half the size of a mini SIM, these SIMs are excellent for small IoT devices. Since they are not well protected, they won't do well in devices exposed to harsh conditions.

MFF2 (Embedded or eSIM) - one of the most popular options for all IoT devices. They are soldered to the circuit boards of IoT devices directly, so installation is unnecessary. MFF SIMs are also one of the most durable IoT SIMs.

Choosing an IoT connectivity partner

There are several IoT providers in the market. Your business needs an IoT partner which guarantees seamless connectivity between a host network and the rest of the IoT ecosystem and ultimate flexibility, durability, and security. Your IoT partner choice will impact the following:

- Connectivity costs
- Where you can deploy your devices
- The cellular networks you will have access to
- The security of your data transmissions
- The variety of SIM factors you can choose

POST Telecom's value proposition

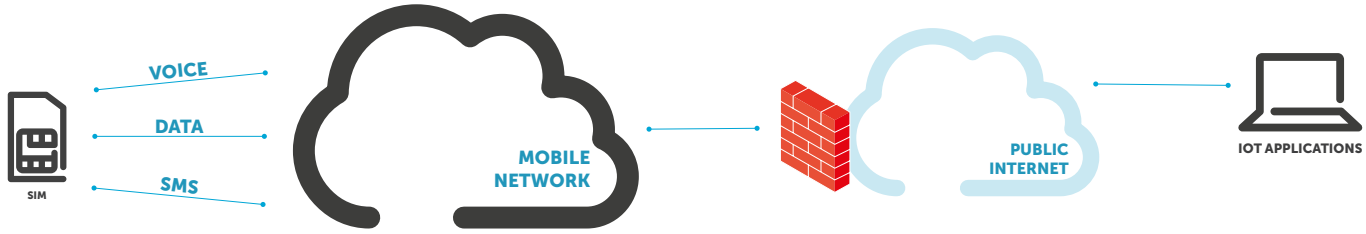
We also understand that connectivity can be a challenge. Steered SIMs prefer a chosen provider and stick to that provider even if there is a better network available. At POST Telecom, we realize that it could be detrimental to your business, which relies on a continuous and uninterrupted connection. Our proposition is designed for multiple networks – and non-steered. That means you are reassured that the SIM will automatically connect to the strongest network available—no matter where you are. POST Telecom offers to its customers reliable connectivity worldwide through :

- Extensive Roaming agreements footprint with all European Mobile Network Operators and 500+ agreements worldwide ensure optimized coverage and the best network quality.
- Proprietary of an international backbone (100GB).
- Cellular connectivity: 2G, 3G, 4G, 5G, LTE-M.
- Multiple custom levels of secure transmission technologies (Remote Connectivity Services).

POST Telecom's IoT connectivity security approach: RCS

One of the major concerns nowadays is security. With the exponential growth of devices attached to networks, security takes an increased importance. The nature of some IoT projects can place these devices within public reach, making them vulnerable or a gateway to security breaches, making private APNs (as opposed to public APNs) necessary.

POST Telecom addresses this need with its flexible and efficient service: Remote Connectivity Services (RCS). The combination of the different pillars of this solution (shared/dedicated APN, IP network solutions and shared/dedicated firewall instances) combined with POST Telecom's flexibility, makes this solution the ideal to reassure businesses that your information is securely transmitted to the final destination (on-premises or cloud service).



POST Telecom's connectivity interface

The POST IoT ControlCenter gives you complete control of your devices from a single dashboard that provides a real-time view of all your IoT SIM cards. A multilevel filtering option allows you to manage your inventory easily. Real-time diagnostics allow you to identify issues, monitor, diagnose and correct common problems.

The POST IoT ControlCenter allows you to seamlessly automate and manage multiple tasks from your IT ecosystem rather than the portal web interface. A graphical and intuitive tool allows rule automation so that your connected devices comply with your established business process and goals. Thanks to this rule-driven automation, costs can be predicted and controlled.

Concerning reporting and transparency, the POST IoT ControlCenter allows you to gather various reports such as rate plans, volume consumption, total costs (and trend), and more.

POST Telecom's offerings

POST Telecom has four products lines: Lite, Essential, Advantage, and Advantage+, each offering the right answer to your needs

	LITE	ESSENTIAL	ADVANTAGE	ADVANTAGE +
Bandwidth	100KPS	Up to 50MBS	Up to 50MBS	Up to 50MBS
Number of zones covered	1	3	Unlimited	Unlimited
Access to ControlCenter	✔	✔	✔	✔
IMEI Whitelisting	✔	✔	✔	✔
Location Based Service		✔	✔	✔
300 Call Detail Records / SIM		✔	✔	✔
SMS	Only receiving	✔	✔	✔
VOICE		✔	✔	✔
Automation (alerts & rules)		✔	✔	✔
Cisco Analytics			✔	✔
IoTA Analytics Tool			✔	✔
Pricing Automation			Option	✔
Advanced Automation			Option	✔

POST Telecom has a solution for your business regardless of your IoT project requirements. If you want to know more about our offerings, visit our website or contact our experts at **M2MSales@post.lu**.