As the market for Internet of Things (IoT) and intelligent connected objects takes off, applications that exchange data with remote devices are increasingly part of our daily lives. Their uses range from traditional industrial Machine-to-Machine applications, such as remote monitoring for power plants and oil & gas pipelines, to new IoT applications for the environment and Smart Cities, such as monitoring public lighting and air pollution alerts.

Network operators need a reliable solution to connect widely dispersed sites and backhaul critical data rapidly and cost-effectively. Whether data is gathered locally with wired or wireless technology, via local gateways or store-and-forward mechanisms, information from remote sites must be backhauled to data centres, private/public cloud, etc. for centralisation.

Eutelsat has developed the Smart IoT Service, an innovative managed connectivity service, dedicated to IoT communication. Leveraging satellite technology, it is ideally suited for connected applications which exchange data with remote assets or infrastructure.

Smart IoT enables seamless connectivity in rural and sparsely-populated areas. Enterprises can connect remote assets and deliver highly reliable IoT communications beyond terrestrial network coverage. Network operators can extend their IoT coverage independently of local borders, achieve 100% coverage profitably for low-power wide-area networks, and relieve IoT traffic from congested cells currently backhauled via LTE.

In addition to satellite’s traditional advantages of ubiquitous, secure and resilient communications, Eutelsat now offers a very cost-effective managed connectivity service, which runs on inexpensive satellite terminals. The robust solution is not disrupted by congestion or jamming, using dedicated satellite bandwidth with guaranteed QoS and a network fully dedicated to the service.

Enterprises can also deliver large amounts of data (e.g. firmware/software upgrades) to many remote sites, both simultaneously and economically, through satellite broadcasting.
HOW IT WORKS
The Smart IoT Service is based on the SmartLNB technology, developed by Eutelsat. This consists of an IP network composed of a SmartLNB hub, satellite segment, and remote interactive satellite terminals.

A typical remote installation requires a SmartLNB terminal, with an external or integrated antenna. Providing a bi-directional IP link over satellite, it is optimised for IoT traffic on the return link.

The Smart IoT Service uses standard protocols for straightforward integration with the enterprise’s remote assets/infrastructure and IoT applications.

Communication between the hub and interactive terminals is controlled at the physical and link layer by the F-SIM protocol. Based on an asynchronous access scheme, all terminals in the network spread the traffic on the same channel bandwidth, resulting in very high spectrum efficiency.

The Smart IoT Service proposes a wide range of terminals with cost-effective satellite bandwidth on Eutelsat’s worldwide satellite footprints. These low-cost satellite terminals have a minimal power consumption, even in transmission mode. Installation, pointing and activation are simplified by a series of user-friendly support tools.

Eutelsat’s Smart IoT Service is already available in Europe, the Middle East, Africa and the Americas, and under deployment in other regions.

CONNECTIVITY FOR:

→ M2M
→ IoT backhauling
→ Smart Building and Security
→ Smart Grid
→ Smart Agriculture
→ SCADA
→ Remote diagnostics and telemetry
→ Firmware and software updates
→ Environmental monitoring
→ Wireless Sensor Networks
→ Data gathering
→ e-Health