



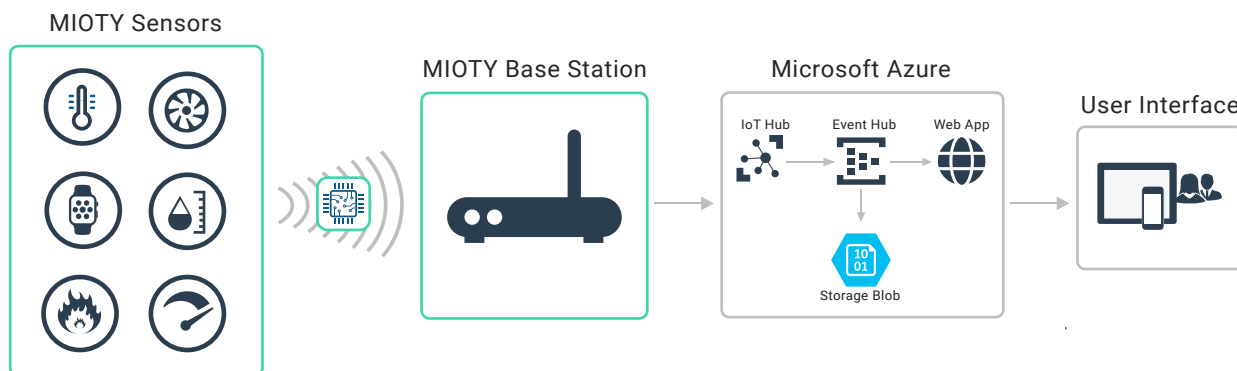
MIOTY™ by BTI Starter Kit 1.0 with Microsoft Azure

MIOTY is the newly defined ETSI standard for Low-Power Wide Area Networks, offering unparalleled robustness and scalability alongside energy-efficiency and cost-effectiveness for large-scale IoT deployments.

This Starter Kit features MIOTY's fully ETSI-compliant specifications and is available in both European and North American modes. It consists of four multi-function sensors, one base station, the accessory kit and user documentation.

The base station provides seamless connection with Microsoft Azure through a BTI wireless framework, it even deploys the whole Azure backend structure to Azure to collect, store and visualize the data coming from the sensors. This delivers an integrated end-to-end IoT architecture for the industrial and commercial marketplace.

MIOTY & Microsoft Azure Integration



Technical Specifications

MIOTY System Parameters

Parameter	Description
Range	5 km (urban areas) – 15 km (flat terrains)
Technology	Telegram Splitting – Ultra Narrow Band
Frequency	License-free ISM spectrum – 915 MHz (North America), 868 MHz (Europe)
Link Budget	154 dB (-140 dBm receiver sensitivity)
Data Rate	512 bit/s
Telegram Size	Flexible 10 – 192 Byte (user data)
Interference immunity	No system degradation at high in-band interference (i.e. up to 40% channel load)
Mobile operation	Support data transmission from moving objects with up to 120 km/h speed
Network capacity	>1.5 million messages/day or 65,000 messages/hour per MIOTY RF frontend module
Security	AES-128 (network encryption)
Communication standard	ETSI TS 103357

MIOTY Base Station Parameters

Parameter	Description
Waveform	MIOTY ETSI TS 103357
Gateway	Advantech ARK-2250L
Receiver	SDR Play RSP1A, Procom Filter US/EU
Network Management	Service Center with Web Frontend to manage network
Interface	MQTT, preconfigured, build-in Azure IoT Hub connection
Supported OS	Ubuntu

MIOTY Sensor Parameters

Parameter	Description
Sensor model	Synaptics STI-MM06
Temperature	-40o C to 85oC, +/- 1oC
Humidity	0% to 90% RH, +/- 3% RH
Pressure	300 hPa to 1100 hPa, +/- 1.0 hPa
Vibration	3-axis, +/- 2.0 g Interrupts-on-shock
Digital	Two discrete (contact closure) inputs
Analog	16-bit analog input, 0-2vDC