Purple Blob METIS

METIS 0002

METIS is a completely anonymous and wireless flow monitoring device that identifies passersby and vehicles and transmit this data via LoRaWAN. It's wide range, plug-and-play installation and reliability makes this solution suitable for both urban and industrial environments.

Product Details

- High precision radiofrequential monitoring
- Automatic RF adaptability
- Operation on 802.11 b/g/n protocols
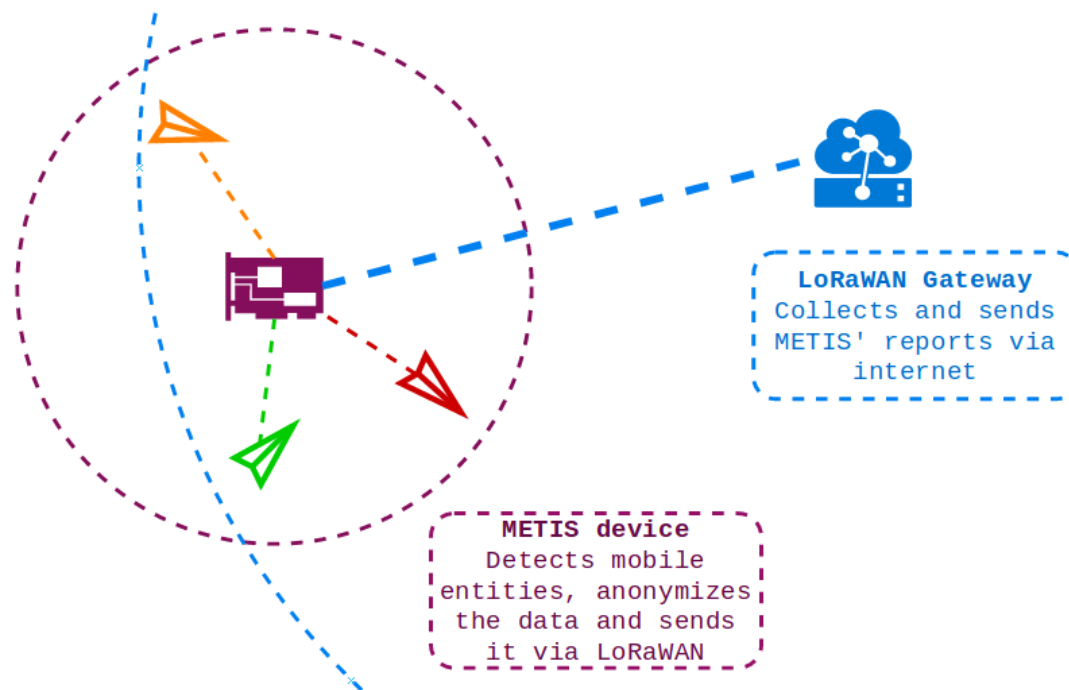- LoRaWAN 1.0.2 compatibility
- Bluetooth v4.2

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Technical specifications

Hardware	
Specification	**Value**
Model	Waterproof box included with power plug connector
CPU	240 MHz Dual Core
Sensitivity	-139dBm @ LoRa & 62,5 kHz & SF = 12 y 146bps -136dBm @ LoRa & 125 Khz & SF = 12 y 293bps -118dBm @ LoRa & 125 Khz & SF = 6 y 9380bps -123dBm @ FSK y 5 kHz y 1,2 Kbps WiFi -80dBm
RF Power	14 dBm
WiFi	b/g/n (2.4 GHz)
Bluetooth	4.2 BR / EDR / BLE
Flash memory	4MB
RAM memory	520KB
Consumption (Typ.)	3 Watt
Cryptographic acelerator	AES, SHA, RSA
Power Supply	220 V power plug
Temperature Range	-20°C to +70°C
Aprox. measurements	82 mm (L) x 57 mm (W) x 33 mm (H)
Installation	Preconfigured plug-and-play, wall or floor mounting

Methodology

Monitoring:

METIS is a plug-and-play IoT device. As it comes preconfigured, it only needs a power connection in a location with LoRaWAN coverage.

The device will automatically join the network via **OTAA** and will start **monitoring** mobile entities in its proximity (from 35 to 50 meters depending on obstacles and terrain). It reads parcial MAC addresses and anonimizes them on a criptographic process that cannot be reverted. The result is an **anonymous** but **unique** identifier that is stored on the device.

When the device has enough identifiers stored it sends a LoRaWAN frame with all of them. The device keeps the identifiers stored so it doesn't repeat them, but cleans the memory every 6 minutes, enabling a **traceability** of the passer-by or vehicle.

Since each node follows the same process, deploying a network formed by several devices allows **flow monitoring**, for the same mobile phone will result in the same identifier on different devices.

METIS offers a **high precision** (>70%) while maintaining **privacy**, is **non-intrusive**, has an easy installation and a **wide area range**, it's easily integrated in external LoRaWAN **networks** and **IT systems** and offers a great IoT **flow monitoring** solution overall.

Legal Disclaimer

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