

MINFARMTECH



## Satellite Power and Data Saving



# MF 800

## IoT Satellite Gateway

The MF 800 is a revolutionary new product that transforms the data and power consumption of remote IoT networks operating with satellite as a backhaul. With a unique combination of IoT **data acceleration** for MQTT and LoRaWAN sensors and **smart power scheduling** for VSAT satellite terminals, the MF 800 allows you to deploy remote sensor networks in off grid environments for continuous operations with small power and data usage.

# MF 800

## IoT Satellite Gateway



### Features

- IoT over satellite protocols for MQTT and LoRaWAN
- Programmable power board for IoT Gateway and Satellite terminals
- Smart power profiles to fit your network requirements
- Works with any MQTT or LoRaWAN Sensor
- Works with any IoT cloud platform (e.g. AWS IoT, The Things Network, Azure...)

### Benefits

- Reduce IoT data consumption over satellite up to 90%
- Reduce VSAT power consumption up to 90%
- Easy to install and use
- Small footprint solar panel and battery for off-grid applications

### List of supported satellite terminals

- Starlink
- Inmarsat IsatData Pro ST 2100
- Inmarsat BGAN M2M
- Iridium Edge
- Hughes 4500 S-band Terminal for EchoStar Mobile Network

### Keywords

Battery, Off-grid, solar, IoT protocol acceleration, LoRaWAN, MQTT, data traffic reduction, VSAT, IDP, BGAN, Inmarsat, StarLink, power saving

### Technology

In partnership with the European Space Agency (ESA), MinFarm has developed technology to reduce power consumption of satellite terminals and accelerate IoT protocols over the satellite link.

#### This has a two-fold benefit for satellite users:

- If the satellite user has a low-power, low-bandwidth satellite terminal, MinFarm's technology allows the bandwidth to go further by providing IoT protocol acceleration.
- If the satellite user has a high-power, high-bandwidth satellite terminal, MinFarm's technology leads to significant power savings which allows for off-grid applications using solar technology.

### Use Cases

**Use Case 1:** Carry-on satellite kit for LoRaWAN at sea, powered by a 14kg battery for 1 month

**Use Case 2:** Solar-powered Inmarsat IDP LoRaWAN gateway working during the winter season in the northernmost and southernmost latitudes

**Use Case 3:** Off-grid large sensor IoT network using a Starlink with an 80W solar pane

**Use Case 4:** Cost-saving LoRaWAN gateway with 3 byte overhead per uplink

**Use Case 5:** IoT gateway for low-bandwidth IP satellite terminal with 80% reduction in data traffic

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