

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.

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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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