

MINFARMTECH 

SatCom for IoT



Satellite
communications
for remote
LoRaWAN[™] Infrastructure

MF 200 IoT Satellite Bridge

LoRaWAN[™] over Inmarsat satellite network

MF 200

IoT Satellite Bridge

- Global coverage with the Inmarsat satellite network
- Compatible with wide range of COTS LoRaWAN™ sensors
- Easy mechanical integration
- Cloud based interface and API for remote LoRaWAN™ configuration (No field visits required for reconfiguration)



Components

- 1 x MF-200 enclosure
- 1 x LoRa antenna
- 1 x PSU with locking barrel & interchangeable mains plugs
- 1 x Ethernet patch cable



Overview

The MF 200 IoT Satellite Bridge provides network server connectivity for 100 remote LoRaWAN™ sensors via the Inmarsat IsatDataPro satellite terminal. The MF 200 runs an optimized protocol to ensure that airtime satellite costs per sensor are kept to a minimum.

Power input

9-32V DC via screw-on 2.5mm barrel jack
Power Supply Unit (PSU): 100-240V AC producing 9V DC (1.7A)

Temperature range

Operating Temperature: -30 to 70C

Dimensions

161.3 x 107.4 x 42.8 mm

Weight

0.45 kg

Serial Interface

DB9 male RS-232 DTE

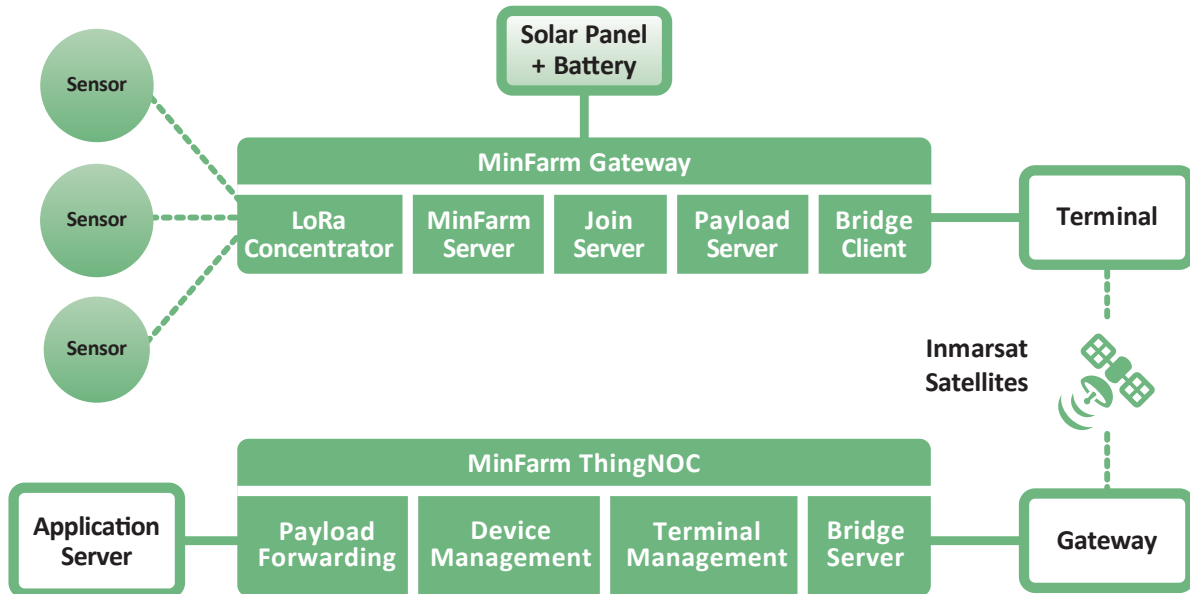
Ethernet interface

RJ-45 10/100 Mbit/s

Satellite airtime costs per sensor

The MF 200 IoT Satellite Bridge is optimized to transmit data from LoRaWAN™ IoT sensors over the Inmarsat satellite link in an extremely reliable and low cost way. It does so by a client/server bridge architecture. The MinFarm Bridge Client (see Network Architecture diagram) forwards sensor payload traffic over the very high latency non-IP packet data satellite services of Inmarsat. This makes the MF 200 IoT Satellite Bridge an extremely cost effective way to add satellite connectivity to remote LoRaWAN™ sensor installations.

Network architecture



Compatible sensors

The MF 200 IoT Satellite Bridge is compatible with a wide range of commercial off the shelf (COTS) sensors including:

Dedicated LoRaWAN™ nodes + COTS sensors: These nodes provide LoRaWAN™ communications to a wide range of non-LoRaWAN™ COTS sensors. In this configuration a dedicated LoRaWAN™ node is deployed with each sensor.

COTS native LoRaWAN™ sensors: These sensors have LoRaWAN™ communications built-in and often come with an associated cloud based application server. The MF 200 IoT Satellite Bridge comes with an easy to use dashboard and API for integrating these devices.

Programmable LoRaWAN™ sensors: The MF 200 IoT Satellite Bridge has been tested with the MultiTech mDot LoRaWAN™ sensor development platform. This allows users to design and build sensors with the exact security, communications, and ruggedization as required for their projects.

LoRa Specifications

LoRa Channel Plans: EU868, US915, AU915, AS923 (Other channel plans available on request)
Channel Capacity: 8 channels
LoRa Power Output: 27 dBm maximum output power

Contact info:

Tel: +46-70-2368501
Website: www.minfarmtech.com
Email: sales@minfarmtech.com
Postal address: MinFarm BIA
AB Box 7617 103 94 Stockholm