



Smart Power for Off Grid Communications

MF 20

Smart Power IoT Cellular Gateway

The MF 20 is a revolutionary new Smart Power IoT Cellular Gateway product designed to operate in remote locations with limited solar power and unreliable cellular connectivity. Traditional cellular gateways cannot operate during the winter months in locations where there is little sunlight because they consume too much power. Powered from a single solar panel the MF 20 utilizes a unique combination of IoT data acceleration and power scheduling. Poor and unreliable cellular coverage is mitigated by the MF 20's IoT data acceleration technology because it stores the IoT packets until the connection becomes available. Designed with open standards in mind, the MF 20 works with any LoRaWAN or MQTT sensor and will connect to standard cloud resources. With its IP-67 enclosure the MF 20 is ready to deploy to harsh environments, for year-round installations.



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Components

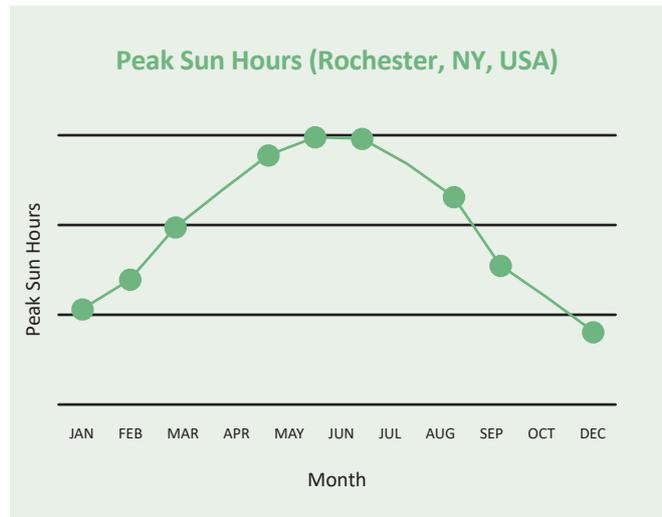
- MinFarm LoRaWAN / MQTT / IO Gateway
- 4G Cellular modem
- MinFarm Programmable power board
- IP-67 Enclosure (400 x 405 x 160mm)
- 12V 26Ah Battery
- 80W 12V Solar Panel (670 x 770 x 30mm)
- Enclosure Pole Mount
- Solar Panel Pole Mount
- Solar Panel to Enclosure Cable (5m)

Technical Features

- IoT over cellular data acceleration for MQTT, LoRaWAN and I/O sensors
- Programmable power board
- Power scheduling synchronized with significant IoT protocol events (Join requests, confirmed uplink acknowledgement)
- IP-67 enclosure

Benefits

- Operates with a single solar panel through winter months in remote locations
- 3 day battery backup
- Stores IoT data during cellular outages so no data is lost
- Easy to install and use
- Water and rain proof for year round installations
- Works with any MQTT or LoRaWAN Sensor
- Works with any IoT cloud platform (e.g. AWS IoT, The Things Network, Azure...)



The MF 20 can work through the winter months' declining solar hours (Above Rochester NY 2021)

About MinFarm smart power and IoT data acceleration technology

In partnership with the European Space Agency (ESA), MinFarm has developed a unique software technology to reduce power consumption of remote communications hardware running open standards internet protocols using a sophisticated combination of data protocol acceleration and power scheduling techniques.

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