

# Falcon Cellular

4G LTE CAT-M1 NB-IoT Remote Sensor in a Rugged Housing



## GPS Boss

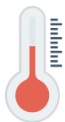
Insights | Assurance | Recovery



## APPLICATIONS



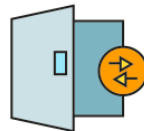
Run Hour  
Monitoring



Temperature  
/ cold-chain



Tank  
levels



Door open  
/ close



Meter pulse  
counting

The Falcon Cellular is a super smart, battery powered monitoring device in a rugged housing.

Super long battery life is possible with LTC (Lithium Thionyl Chloride) batteries, or connect to a power source for a permanent solution.

Multiple input interfaces and a digital output allow for monitoring and control for many years. Uses a combination of GPS and Wi-Fi to track assets both outdoors and inside buildings, warehouses etc

### FEATURES

- LTC, 3 x AA off-the-shelf batteries or line power
- Rugged waterproof housing
- 2 x Digital Inputs
- 1 x Analog Input
- I2C interface for a wide range of sensors including: Temperature, Humidity, Vibration, CO2 gas and many others
- 1 x Switched Ground Digital Output
- On-board GPS for location
- Wi-Fi sniffing for low power location updates and indoor localization

## MECHANICAL FEATURES

Low-profile IP67 rugged housing	The IP67 rated housing is made of sturdy ABS/Polycarbonate plastic to survive bumps and knocks and to survive many years in the sun and weather. It is low-profile and caters for a number of cable glands to allow for waterproof cable entry to the housing. The housing screws together for easy assembly, and has convenient mounting tabs.
Operating temperature	-30°C to +60°C For operation in extreme temperatures the device must be fitted with Lithium batteries
Dimensions (mm)	L 135 x W 90 x H 35

## INTERFACES

I <sup>2</sup> C Interface	I <sup>2</sup> C (inter-IC communications) is an interface commonly used in sensor modules. This allows the device to talk to a wide range of sensors including: temperature, humidity, vibration, CO <sub>2</sub> gas and many others. Contact Digital Matter about sensor support.
Digital Inputs	2 x digital inputs, 0-48V Optimised for low power pulse counting
Analogue Inputs	1 x analogue inputs, 0-30V with auto-ranging
Digital Output	1 x switched ground output to drive relays or other external devices, siren, lights etc

## SPECIFICATIONS

Network	4G LTE CAT-M1 / NB-IoT
Antenna	Internal tuned PCB antenna
Flexible Power	3 x AA Batteries – off the shelf or Lithium Thionyl Chloride (LTC) for super long life and extended temperature tolerance 5-16V Line Power option
GPS Module	High sensitivity assisted GPS receiver, 72 channel Concurrent GPS/GLONASS Low-noise amplifier (LNA) allowing for operation in “urban canyons” and container stacks
WPS	Wi-Fi Positioning System (WPS) detects nearby Wi-Fi networks to determine location. Enables lower power location updates, and <b>indoor location</b> (eg a pallet in the basement of a building)
3D Accelerometer	The 3 axis accelerometer allows the Falcon to “sleep” in an ultra-low power state yet still wake up when movement occurs, or to detect high-G events
Internal Memory	Flash memory can store 20,000 records