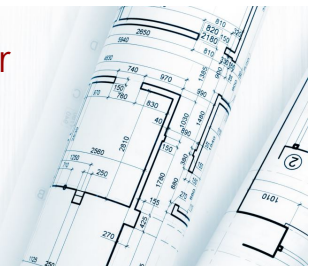


StarNett Multi-sensor NB – IoT Smart Sensing Platform

STN-NB-MS-101

Cloud and on-premises solution for agile and scalable building and work process control & monitoring



StarNett STN-NB-MS-01 is a versatile Internet-of-Thing device that is useful for agile and scalable building and work process control and monitoring. It can be easily deployed, configured and managed from HKC's StarNett IoT cloud service.

The NB-MS-101 is an IoT sensing platform based on 5G NBIOT technology. It consists of a programmable MCU for custom programming, NBIOT communication module and a suite of common sensors. The functional block diagram is shown in Figure 1.

The NB-MS-101 have different model variants for use with different power sources. Frequency of telemetry reporting and battery capacity can be matched to provide the service life and accuracy required for the project.

You can use one of our standard enclosure for the sensor or design your own. We can provide industrial design service for the custom enclosure for the sensor. There is IP-67 graded enclosure for use with this sensor for outdoor applications.

We offer end-to-end solution making up of smart IoT edge devices, such as NB-MS-101, bespoke application software based on our StarNett modules and cloud-based hosting services specially for IoT applications to give you scalability, rapid time-to-market, performance, and budget control.

Platform includes:

1

- Programmable MCU for custom applications
- 5G NBIOT module with PCB antenna and internal chip antenna
- Bluetooth Low Energy mesh network for sharing NB uplink to cloud
- Power management and custom size battery and reporting frequency
- Enclosure with IP resistance IP rating

2

- Sensor suite, including accelerometer, temperature and humidity sensor, magnetic reed switch, IR distance sensor
- 2 x dry contact inputs
- 2 external buttons
- 2 x LEDs
- Optional GPS module



Specification

Specification	Particulars
Model	STN-NB-MS-101 (Sensor only for external power) STN-NB-MS-1014AA (Sensor and 4xAAA battery holder) STN-NB-MS-1014B (Sensor and custom power supply)
Dimension	160 x 120 x 80 mm
Connectivity	5G NB IoT, BLE (for config and OTA firmware upgrade)
SIM Holder	Standard SIM
Communication Protocol	MQTT and HKC MQTT Server
Downlink Message Support	Yes
Level / IR Distance Sensor	Distance in mm
Tilt and Motion Detection	Tilt Angle (Horizontal and vertical angle) and motion detection trigger
Button Events	Programmable button events
Dry Contact Input Events	Change of state reporting (high-to-low time and low-to-high time configurable)
Temperature and Humidity	Max and min threshold, change threshold, rate of change, period reporting motion detection
GPS Event	Period reporting, motion detection
Heartbeat and Request Downlink	Period reporting interval and request the downlink reply from server within a predefined time

Designed for custom cloud and on-premises applications

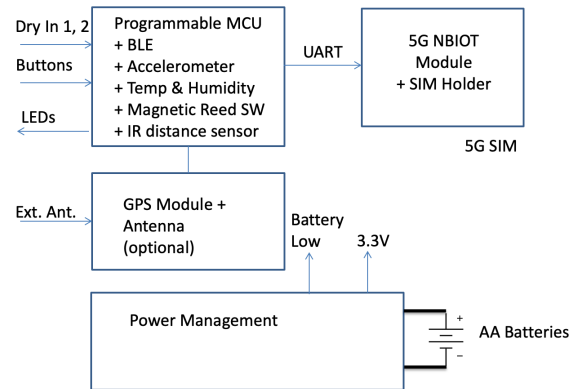


Figure 1



We reserve the rights to change any of the specifications without further notice.

Cat. No. MS-101