The 6LoWPAN Spatial Sensor I/O Node is a full featured, portable M2M node with an integrated Lithium-Ion Polymer (LiPo) battery. It gives you the flexibility to both control your device and monitor its surroundings including physical location, with "no strings attached".

**FREEDOM TO ROAM**

The Spatial Sensor I/O Node includes a contactless charging interface for the integrated battery. It is pre-fitted with a Genesys Modular Stack module (GBI-BS-200P) that manages the battery, GNSS (GPS, GLONASS, Galileo and others) location fixing, and a 9-axis accelerometer. It also features temperature and humidity sensing capability, unlocking new possibilities such as controlling connected devices based on current weather conditions.

**LARGE RANGE OF I/O POSSIBILITIES**

The Spatial Sensor I/O node is based on the capability of Genesys Modular Stack module GBI-BS-200P. As a result, a broad range of applications is possible, from purely sensing (e.g. environmental or process monitoring) through to active control points and everything in between (e.g. localised stand-alone control loops). The device enclosure can be customised to support any required cabling and all I/O is configurable with the Genesys M2M common data abstraction model.

**BATTERY POWERING**

The generous capacity LiPo is charged without physical connection of wires which allows the enclosure to be sealed for mobile applications that "get down and dirty". With a generic Qi charger [e.g. LG Electronics WCP-300] the Spatial Sensor I/O Node recharges within hours.

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Product Code: GEN-AM-202

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**GENESYS 6LoWPAN M2M IoT SENSOR NETWORK**

6LoWPAN Meshing Node Pro as Repeater
M2M/iot Network Server
CHARACTERISTICS

WIRELESS NETWORK
- IEEE 802.15.4 full mesh network
- 6LoWPAN IPv6 enabled stack
- Supports drop-in, drop-out PnP

GNSS SPECIFICATIONS
- u.Blox MAX-7W GNSS module
- Backup battery 3V 3.4mAH
- LNA front-end amplifier & SAW filter
- On-board chip antenna with UFL connector options

ACCELEROMETER SPECIFICATIONS
- 9-axis Accelerometer, Gyrometer & Magnetometer
- 3-axis Accelerometer options available

CLIMATE SENSORS SPECIFICATIONS
- Temperature:
  - ±1° C Accuracy Temperature Sensor
- Humidity:
  - 0.4% RH Accuracy Humidity Sensor

I/O
- Internal IO breakout header options:
  - 4 GPIO
  - 2 open-drain outputs
  - 4 un-buffered ADC inputs with protection

USER INTERFACE
- 1 Reset button
- 1 System pushbutton with RGB LED
- 1 Alert LED

BATTERY POWERING
- Type & chemistry: LiPo 3.7V 1500mAh
- Current consumption:
  - 52mA (GPS acquisition)
  - 33mA (Typical)
  - <1mA (Idle)
  - ~70μA (Dozing)
  - 4.9μA (Hibernating)
- Discharge time dependent on sensor configuration and duty cycling; typically ranges from 48 to 1500 hours
- 1 to 3 hour charge time (charger dependent)
- “Qi” contactless charging technology; utilises any standard Qi charger device (eg LG Electronics WCP-300)

STORAGE
- Dual on-board data backup EEPROMs
- EUI-48 48-bit Extended Unique Identifier

PHYSICAL
- Dimensions: 50 (W) by 90 (H) by 35 (D) mm
- Weight: 150g

ENVIRONMENTAL
- Temperature (operating): -15°C to +55°C
- Temperature (survival): -55°C to +85°C
- Humidity (operating): 95% RH at 50°C