

GENESYS



SENSOR I/O NODE

6LoWPAN SPATIAL SENSOR and I/O
NODE with CONTACTLESS CHARGING,
GPS, ACCELEROMETER and
ENVIRONMENTAL SENSING

Product Code: GEN-AM-202

GENESYS
ELECTRONICS DESIGN

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6LoWPAN SPATIAL SENSOR I/O NODE

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 IO 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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MODULAR
STACK

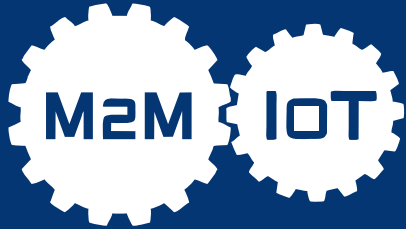


The 6LoWPAN Spatial Sensor I/O Node comes equipped with Genesys Modular Stack technology, allowing it to seamlessly integrate with all supported modules, including 3G/4G connectivity and Wi-Fi. Modules add functionality just by stacking on top of each other.



GENESYS 6LoWPAN M2M IoT SENSOR NETWORK

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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:
 - $\pm 1^{\circ}$ 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)
 - ~70 μ A (Dozing)
 - 4.9 μ A (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
- EU-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

