

Nugget – Wireless Sensor Network Node

COFDM – Video, Audio Telemetry and IP Products

COBHAM

October 2011 Data Sheet

The most important thing we build is trust



Cobham's Wireless Sensor Network Node is a fully portable surveillance sensor system capable of detecting the presence of an intruder via internal and/or external sensors and sending an alarm to a central receiving node.

Featuring Cobham technology at its core, the complete system consists of one (or more) nodes configured as detector nodes and one node configured as a destination node, which connects to a monitoring station. Each node is equipped with a number of internal sensors:

- Short range PIR for detecting the presence of personnel up to 5m range
- GPS location receiver
- Ambient light sensor for detecting changes in illumination
- Tamper detect to send an alarm if the node is moved
- Trip wire/break detector to send an alarm if a trip wire is activated.

External sensors can be added to the external sensor bus connectors. This increases the detection capabilities of the device and allows external sensors to be used alongside internal ones to aid in the classification and confirmation of detected targets.

The product is supplied with an external rechargeable battery pack for rapid interchange, providing up to 30 days' continuous use battery life (dependent on operating mode). It can also run from an external DC supply using the interface lead.

The Wireless Sensor Network Node is ideal for covert surveillance, providing indication of activity within range of any of its deployed sensors. The nodes can be configured for operational requirements before deployment and configuration of individual units can then be changed over the wireless network to cater for changes in detection circumstances, such as varying the sensitivity of sensors. Each unit is able to periodically send 'confidence' signals to the central receiving node.

Features:

- Multi-hop mesh capability
- Re-configurable transceiver frequency within the band
- Internal PIR sensor
- GPS included for position and timestamp of alarm
- Internal tamper/seismic sensor
- Ambient light sensor
- Break (trip) sensor
- External sensor interface capable of adding further sensors as required
- Removable battery pack
- External charger circuit
- Compact weatherproof housing compliant to IP67
- Up to 16 nodes in a Network/Mesh

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Specification:

Inputs

RF antenna SMA Female 50 Ohm

Outputs

External sensor bus 7 way connector x2

RF

Frequency bands

1	868.059-869.621 MHz	41 channels
2	433.05-434.79 MHz	
3	140.0-180.0 MHz	25 KHz channel spacing

Physical

Dimensions (inc rechargeable battery) 113 x 88 x 80mm
Rugged aluminium enclosure
Weight base unit 750g

Power

DC input 2.5-4.5V reverse polarity protected
Power consumption (TBA) depending on mode
Endurance 30 days

Environment

Temperature range -20 to +50°C (operating)
Sealing IP67

Product Code:

NUGBK-458	(458MHz ISM band unit)*
NUGBK-868	(868MHz ISM band unit)
NUGBK-160	(160 for low VHF band unit)
NUGBKK4-868	Nugget Kit 4 off
NUGCDI	Config/Destinator plate

Product Code includes:

Primary 'C' cell battery pack	NUGBATBKC
1 x antenna	AP001453 (868MHz)
1 x DC power cable (with power adapter to support 3-18v supply)	
1 x trip wire	
1 x handbook	
1 x quick reference guide	

Accessory Options

1 x rechargeable battery pack	NUGBATBKLI
External sensor extension cable	NUGSENEX2
External sensor hub	NUGSENHUB
External long range PIR sensor	NUGSENPIRLR
External seismic/geophone sensor	NUGSENGEO
External magnetic sensor	NUGSENMAG
External output switch unit	NUGSENSW
Dual charger	NUGDCHRGR
Switch Box	NUGSENSW
RGS Interface Box	NUGRGSIF
Switch – Drop/cam cable	NUGSWDC

Charger Kits:

<u>NUGBATBKLIK8</u>	WSN Nugget Battery Pack x 8, Black, Rechargeable Li-Ion Including x 2 Charger Kit
<u>NUGBATBKLIK4</u>	WSN Nugget Battery Pack x 4, Black, Rechargeable Li-Ion Including x 1 Charger Kit

* Future planned option

* Starred items also available from Cobham Tactical Communications and Surveillance, Waterloooville

Products are available to security users only, in licensed frequency bands. These products are not approved for use by unlicensed users.

Commercial products are available to unlicensed users - contact Cobham Tactical Communications and Surveillance direct for details.

All product specifications are subject to change without notice. Cobham Tactical Communications and Surveillance will not be liable for technical or editorial errors or omissions.

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