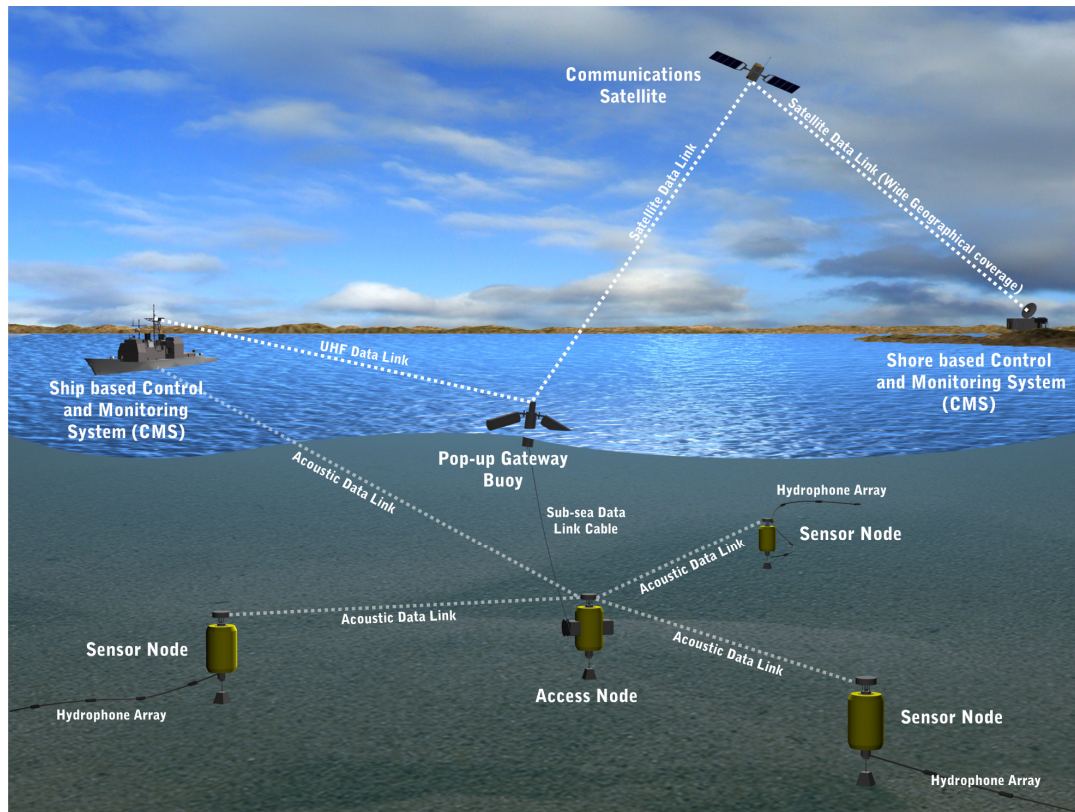


## AUSSNet

### AUTONOMOUS UNDERWATER SURVEILLANCE SENSOR NETWORK



#### PRODUCT DESCRIPTION

AUSSNet is a sub-sea sensor network designed for forward deployment in undersea areas of operational significance. AUSSNet can gather, process, store and discreetly transfer undersea surveillance data via satellite and/ or hydro-acoustic telemetry links to Land, Air, Space or Sea assets to enhance situational awareness.

AUSSNet is easily and quickly deployed to provide a persistent undersea surveillance capability for extended periods in any targeted area of operation. The self contained sensor network is recoverable, reconfigurable and reusable.

Surveillance data is acquired at low frequencies (less than 500 Hz) with the use of acoustic line arrays horizontally deployed on the seabed in the area of interest. This surveillance data is processed for the detection of bearing dependent acoustic events. All acquired surveillance data is recorded to a hard disk which is local to the array. The event data is transferred acoustically from the line arrays (Sensor Nodes) to a seabed mounted Access Node. Opportunistically, or at timed intervals, the Access Node releases a tethered Gateway Buoy to the sea surface which relays event data to the Control and Monitoring station.

#### KEY FEATURES

AUSSNet can be used in littoral operations such as:

- Forward deployed Intelligence, Surveillance and Reconnaissance (ISR)
- Surveillance in Choke Points
- Harbour Defence
- Support of Amphibious Landing Operations (ALO)
- Border Surveillance
- Support of Breakout Operations
- Littoral Anti Submarine Warfare (ASW)
- Undersea Force Protection — Home and Foreign Environments
- Critical Infrastructure Protection (CIP)



# L-3 Nautronix

## AUSSNet

### AUTONOMOUS UNDERWATER SURVEILLANCE SENSOR NETWORK

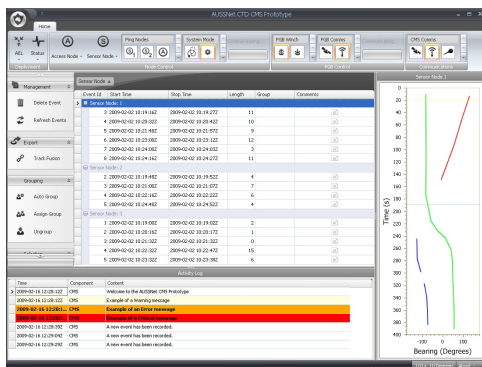
#### AUSSNet CTD Demonstrator System

The AUSSNet Capability and Technology Demonstrator System includes:

- Two to three **Sensor Nodes** for acquisition of surveillance data and preliminary processing for the detection of event data.
- One **Access Node**; a System Node configured for use with a Pop-Up Gateway Buoy. The event data that is transmitted from the Sensor Nodes is received and cached at the Access Node.
- An above water **Control and Monitoring Station (CMS)** providing remote operation of the subsea network via the Access Node. The CMS software provides a Graphical User Interface with the AUSSNet System.



AUSSNet CMS User Interface

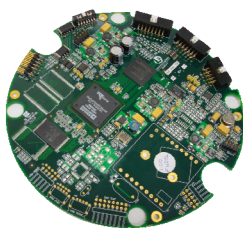


AUSSNet CMS User Interface

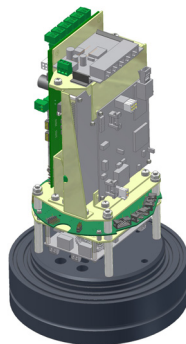
#### History

AUSSNet builds on earlier collaborative programs in the areas of through-water communications and navigation, relocatable undersea acoustic sensors and undersea acoustic data networks between L-3 Nautronix and the Australian Defence Force (ADF), in particular the Defence Science and Technology Organisation (DSTO) and the Defence Materiel Organisation (DMO).

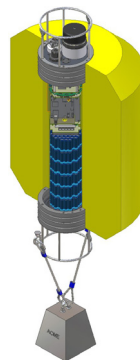
It brings together specific elements of past programs into one coherent system that will provide the ADF with a new capability that could be easily transitioned into full production systems.



Transmit Processor Card  
Blackfin DSP



Board Packaging in  
Beacon Housing



Acoustic Release  
Mechanism

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