

SensorBone™ Plug 'n' Monitor Net-Centric Communications System

SYSTEM APPLICATIONS:

- Land/Environmental monitoring and management
- Situational awareness
- Security and surveillance
- Infrastructure monitoring

Boost Your Sensor Network's Versatility and Function:

Argon ST's SensorBone™ Plug 'n' Monitor Net-Centric Communications System is a wireless backbone that retrieves and analyzes data from individual sensors or groups of remote sensors in real time. SensorBone™ enables environmental, event and operational monitoring scalable to thousands of heterogeneous sensors deployed over vast areas of land or facilities.

A network-centric architectural approach enables easy-to-use Plug 'n' Monitor methodology to provide multiple sensor interfaces for scalable system integration with a broad suite of sensor products, including water quality, water level, weather and webcam sensors. Long range, high speed communications (up to 150x the range and twice the speed of a commercial Zigbee system) are achieved through a combination of innovative waveform design and a high-gain/low-power antenna.

Optimum integration of power-saving hardware design and radio synchronization, coupled with a highly efficient waveform and network protocol implementation, results in a service life of up to 7 years, compared to Zigbee's average six-month product life.

FEATURES & BENEFITS:

- Plug 'n' Monitor ease of use.
- Network expandability for rapid adaptation.
- Long-range communications up to 5 km.
- Up to 7 years of battery life for true value and reliability.
- Network management GUI with geo-referenced topographic overlays of all sensor locations leveraged on a Google Earth framework.

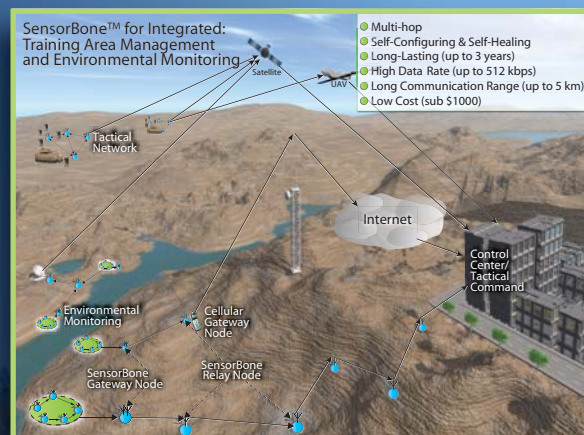
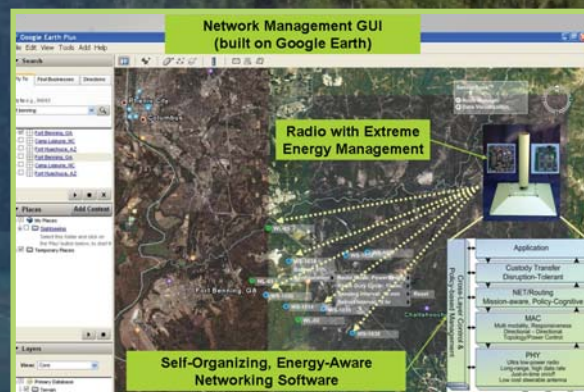


Illustration of a deployed SensorBone System™



Network Management GUI

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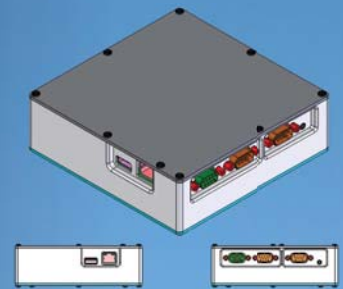


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SensorBone™ Plug 'n' Monitor Net-Centric Communications System

Characteristics:

- Frequency coverage 902-928 MHz
- Tuning step size 125 kHz
- Tuning speed 300 μ S
- Noise Figure 8 dB
- Third order intercept point 0 dBm min
- IF bandwidth 1 MHz
- Radio transmit power (peak) 0.2W (Low Power Mode)
2W (High Power Mode)
- Antenna gain (on horizontal) 0dB
- Sensor connectors 1-USB, 1-Ethernet,
3-Serial
- Raw data rate (uncoded) 500/1000 kbaud
- Modulation and Coding BPSK1/2, BPSK3/4,
QPSK1/2, QPSK3/4



Design Form Factor

Argon ST's SensorBone™ Plug 'n' Monitor provides for rapid sensor expansion of multiple sensor types, such as:

Power Consumption:

- Sleep mode (alarm clock on) 0.16 mW
- Listening for sync 156 mW
- Receiving data 486 mW
- Transmitting data 0.86 W (Low Power Mode)
6.6 W (High Power Mode)
- Wakeup-sleep transition energy 324 μ J



Solinst water level sensors
©Canada, Ltd.

Battery Life:

(estimated lifetime on 4 AA batteries)

- Single 20-Byte message per 10 min 5 - 7 years
- Single 20-Byte message per 1 min 3 - 5 years
- 50 MByte data per day up to 18 months



HOB0 weather Sensors
©Onset



Webcam Pro - ©Labtec

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