



DECIMUS[®]

PASSIVE ACOUSTIC MONITORING

At the forefront of technology in Passive Acoustic Monitoring systems (PAM) St Andrews Instrumentation bring you Decimus[®]

Unlike traditional monitoring solutions, Decimus[®] is an innovative wireless detection and monitoring solution, designed with system integrators in mind. We provide a flexible framework for remote and autonomous PAM that enables users to access fast, accurate and reliable data. Decimus[®] is platform agnostic.

The DAQ system is supplied with core electronics encased in robust IP51 housing, Decimus[®] is an environmentally friendly solution designed to withstand harsh environments. Low power, functionality helps users tailor their systems according to their space and power requirements.

The system is monitored, configured and updated remotely via 3/4G/GSM or 2.4GHz wireless modems thereby minimising maintenance costs. Device status and detection information can be updated more frequently and is immediately available for viewing in the secure and encrypted client-area website. This can be done via PC or smartphone from anywhere in the world (with suitable WEB access).

With on-board data compression capabilities, data can be communicated over most available data comms system wired, wireless and optical to reach your desktop in seconds.

Available configured in baseline or mitigate modes, Decimus[®] enables users to determine a threshold for baseline detection and then use the mitigate mode.

Software modularity enables the easy addition of detectors and other measuring instrumentation.



Features Include:

- Low power operation
- Easy to stack hardware reduces space
- Simultaneous deployment of units across long and short distances
- Multiple detection of marine and mammal life
- Software controllable sampling
- Accurate real-time processed data transmission
- Data collection and reporting from a single software package
- End to end user control minimises risk of data loss

The units can either be powered by:

- Local mains power source
- Rechargeable batteries
- Solar panels in support of batteries

Applications:

Decimus[®] is used in support of environmental assessments, mitigation measures and scientific research. Applications include marine renewables, oil and gas, decommissioning, marine civil engineering/ infrastructure, Government, Defence and the scientific community.



Technical Specifications

| Parameter | Description | Min | Typical | Max | Unit |
|----------------------|---|---|-------------------------------------|------|------|
| Environmental | | | | | |
| Ambient Temp | - | -25 | - | 80 | °C |
| DC Supply | - | - | 12 | - | V |
| Average Power* | (acquire state) 3G/4G GSM mode | - | 3.5 | 9 | W |
| Technical | | | | | |
| Channels | Sampling channels | 0 | 1/2 | 4 | - |
| Sampling rate | Channel sampling rate | 62.5 | 250/500 | 1000 | kHz |
| Bit depth | Channel data word width | - | 16 | - | bits |
| Anti-aliasing** | Single pole LP | - | 200 | - | kHz |
| Channel Gain | Applied per channel, SW selectable | - | 0/6/12/18/24/30 | - | dB |
| Channel filters | Channel signal filters(2 pole), SW selectable | - | Butterworth HP:10/100/2000/20000 | - | Hz |
| Memory*** | SD(SDHC)+(SDXC) | 32 | 32 | 256 | GB |
| Additional | | | | | |
| GPS | Ublox Neo 6 | Carried as well as GPS on the 3G modem - | | | |
| 3G/4G GSM | Telit UC864 | HSPDA 7.2 Mbps, UMTS/HSDPA(WCDMA/FDD) 850/1900/2100 MHz, Quad Band EGSM 850/900/1800/1900, GPRS multi-slot class 12, EDGE multi-slot class 12 | | | |
| 2 Port USB Hub | 2.0 USB | Allowing additional SDXC Memory | | | |

*1 Channel sampled at 500kHz, 32GB storage

**Note each channel is oversampled at a x16 rate allowing for a single pole anti alias filter, with additional filtering inside the ADC

***A 32GB Micro SD card is carried as standard. This is augmented with additional SDXC cards to achieve the required storage capacity. Note 256GB SDXC cards are now available but have not yet been tested; this boosts capacity to 800GB



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All specifications are correct at the time of production. We reserve the right to change our specifications without notice. © St Andrews Instrumentation Limited 2015

View live DECIMUS[®] data at:
www.sa-instrumentation.com

