

SPACE SYSTEMS DESIGN & DEVELOPMENT

ELEK-TECH ELECTRONIC SYSTEMS LIMITED Newsletter

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Space Systems Design & Development

We design and develop electronic payloads for cubesats and microsattellites our payloads are based on our designs developed for defence and security sectors. The Electronic payloads are developed using COTS OpenVPX fabric with high speed digital interfaces.

“UK sovereign Space Innovation delivering better price and real energy, start-up culture, customer Centric”

Rapid Design and Development for Space science studies

We utilise existing circuitry thus keeping NRE cost low. Same Board stack is used providing a solution in rapid timescales. We aim to provide our customers with flexibility for making changes during development, quickly providing early visualisation of the product.

Electronic Payloads for Space

Our customers continually need to do more with less: more performance capability, but in smaller, lighter weight packages that consume less power. We've responded with our innovative Electronic Payload Modules (EPMs') and solutions including our Vita 74 (VNX) OpenVPX range.

We can supply a range of different payload electronics designed on cube and micro sat chassis size of 100 x 73 mm max and also offer turnkey solutions. Our range of electronic payloads can provide a complete system or parts of the system leaving the flexibility for open source.

Our EPM's for Space Systems include:

DC..DC conversion, EMC filtering, Transient Suppression, Dense point of load (POL) regulation, sensor conditioning, High performance processing, Embedded SoC and FPGA, Mass Memory, High Speed interfaces, Data links (up and Down), OpenVPX, SpaceWire, Image and Processing.

Space Magnetometer Systems

We also have the capability to develop low cost light weight magnetometers for geomagnetic field mapping and for use in seismic exploration. Our magnetometers offer low noise high accuracy triaxial detection. With Tuned drive techniques and advanced mu-metal laminate cores.

These instruments can also be used for attitude control systems for long term missions in both high or low orbits.

SpaceMag Nano 5000 in Development

Our SpaceMag Nano 5000 is a three axis fluxgate sensor designed specifically for use in Cube and Micro Sats, designed using COTS components keeping costs low. The sensor is suited for a variety of missions for attitude and geomagnetic field measurements.

SpaceMag Nano 5000 is designed for cube and micro sat chassis' 100 x 73 mm Max. It also allows the flexibility of being mounted onto a boom approx. 1.5m in length. Being modular in design the configuration can be adapted to suit different types of space systems and missions.

The sensor provides high precision measurements of the strength and direction of magnetic fields in three axes with selectable measurement ranges from $\pm 100\mu\text{T}$ with a noise level of less than 10pT

SPACE SYSTEMS—ELECTRONIC PAYLOADS FOR CUBE & MICRO SATS

Contact us at www.elek-tech.co.uk