

INTEGRATED DESIGN & DEVELOPMENT

ELEK-TECH ELECTRONIC SYSTEMS LIMITED Newsletter

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Integrated design for customers who want a product fast

We do Sub-system level design and integration so we design the chassis, the electronic payload modules that go in into the chassis like the I/O boards, Processor cards and the backplanes that the boards plug into as well as the Power supplies all under one roof

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

Adaptation of our chassis designs

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.

The four characteristics of our designs

Rugged systems capable of withstanding extremes of shock, vibration, temperature and moisture/contaminant ingress. No other company has more extensive expertise or experience in designing solutions for the most challenging environments.

High Reliability Electronics EES continues to expand its line of Enhanced Products (EP) with additional value-added qualifications and processing. Including areas such as product and quality engineering, Production Planning and Delivery

Open Standards Which deliver to our customers uncompromising price/performance, flexibility, interoperability and cost of ownership.

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

Flight Node Nano (FNN) Sub-system

Our FNN Small Form Factor subsystem provides a mixture of configurable High Speed digital and Analogue interfaces, meeting the latest SWaP-C requirements together with an open fabric and modular design approach. Multiple FNN's can be placed on the platform data bus for a distributed architecture for sensor processing & control including electronic actuation for modern and a older platforms where space is constrained and enhanced platform mobility is required.

Small Form Factor Electronics

- Electronic Payload Modules (EPMs') 100mm x 75mm

Filter Transient Module - FTM

- MIL-STD-461 Rev D, E, and REV F
- DO-160 Rev C, D, E, F & G
- MIL-STD-704A/D/E/F with up to 80V/100ms
- MIL-STD-1275A/B/C/D with up to 100V/50ms

Primary Power Module - PPM155

- Ultra-Wide Input 16-80VDC
- 28VDC Input compliant with MIL-STD-704A/D/F & MIL-STD-1275A/B/C/D
- High Efficiency (typ. 86%-90%)
- Soft Start
- Galvanic Isolation 1500VDC
- Integrated LC EMI filter
- No Optocoupler for High reliability

BPMini400

- Our Back-Plane Mini 4 slot comprises of our unique open standard Fabric based on Vita 74.
- Can be increased to 8 slot or reduced dependant on EPM's

Integrated System Controller (ISC)

- The system controller is responsible for the power control and monitoring of all modules fitted within the chassis
- Intelligent Diagnostics Platform Interface (IDPI)

Small Processor Module - SPM100

- Artix 100T FPGA - 100K logic - 240 DSP
- 64bit configurable GPIO
- On-board system controller
- On-board configuration memory
- USB test and configuration interface
- 802.11 1000BASE-T Ethernet
- PCIe Gen II x4 backplane data-bus
- 256MB DDR3 ECC
- <15W power consumption

Flight Node Nano (FNN)