NEXT GENNANO ELECTRONIC SYSTEMS
ELEK-TECH
ELECTRONIC SYSTEMS LTD
DEFENCE | SECURITY | SPACE

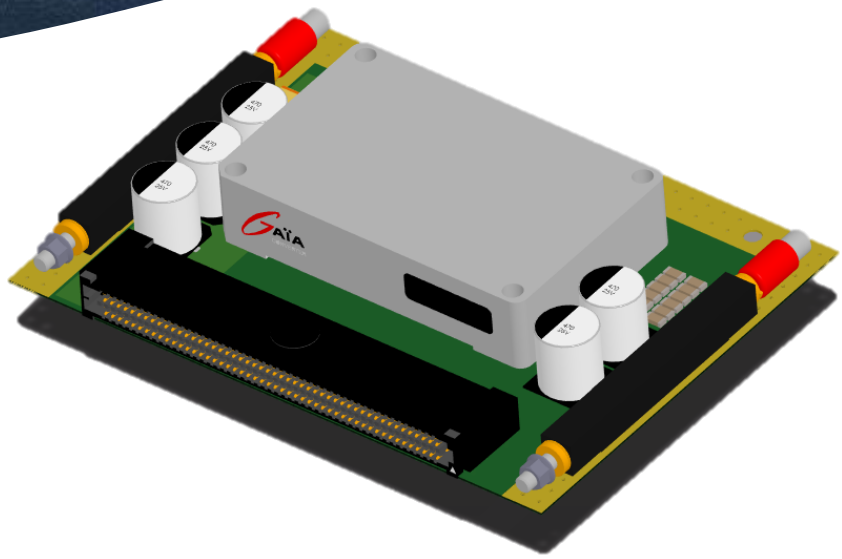
MIL-AERONano – ELECTRONIC PAYLOAD MODULE (EPM)

PRIMARY POWER MODULE - PPM155

PPM155 FEATURES

- **Ultra-Wide Input 16-80VDC**
- **28VDC Input compliant with MIL-STD-704A/D/F & MIL-STD-1275A/B/C/D**
  - **Transient Protection 80V/100ms**
  - **Transient Protection 100V/50ms**
- **High Efficiency (typ.86%-90%)**
- **Wide Temp Range: -40/+105ºC(optional -55 ºC) conduction cooled**
- **Soft Start**
- **Galvanic Isolation 1500VDC**
- **Integrated LC EMI filter**
- **Synchronisable**
- **No Optocoupler for High reliability**
- **IDPI controller for on-card Voltage Monitoring and control.**
  - **Under voltage lock-out**
  - **Overvoltage Protection**
  - **Current limitation protection**
  - **Overtemperature Protection**

Email: info@elek-tech.co.uk



The **MILAERONano-PPM155** ruggedised Small Form Factor (SFF) payload module takes in a MIL-STD-704A/D/F or MIL-STD-1275 28 VDC input voltage and provides up to 155W 12VDC at up to 90% efficiency. The **MILAERONano-PPM155** also provides on-card MIL-STD-461 EMI filtering and MIL-STD-1275 transient suppression.

The **MILAERONano-PPM155** fits in our Vita 74 NanoX AMS System compliant with our 12.5-inch slot. Up to 12.5A at 12VDC internal power to other payload modules. The **MILAERONano-PPM155** can provide a combined total output power of up to 155W at maximum operating temperature. Optionally, the **MILAERONano-PPM155** can be paired with another **MILAERONano-PPM155** payload module for load sharing.

The **MILAERONano-PPM155** when integrated with our **MILAERONano-FTM** (**Filter Transient Module**) which provides an integrated Common mode & differential input filter to meet Electromagnetic Interferences (EMI) requirements for Aerospace and Military applications. The **MILAERONano-PPM155** & **MILAERONano-FM** Payload modules provide compliance against MIL-STD-461 rev D, E and F and DO-160 rev C, D, and E.

The **MILAERONano-PPM155** features an Intelligent Diagnostics Platform Interface (IDPI) controller which monitors input and output voltages and temperatures. In addition, the IDPI controller can turn off output power and monitor nuclear event detection circuitry.

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Input Conditions

Parameter	Condition	Limit or Typical	Units	Value
Nominal IP Voltage	Full Temp Range	Nominal	VDC	28
IP Voltage Range	Full Temp Range	Min - Max	VDC	16-80
Transient IP Voltage	Full Temp Range Full Load	Max	VDC/ms	100/100

Switching Frequency

Parameter	Condition	Limit or Typical	Value
Switching Frequency	Full Temp Range	Nom	330KHz

Output Conditions

Parameter	Condition	Limit or Typical	Units	Value
Nominal OP Voltage	Full Temp Range	Nominal	VDC	12
OP Power	At 105ºC Baseplate	Max	W	150
OP Current 12V	Full Temp Range	Max	A	12.5
Ripple OP Voltage 12V	Nominal Full Load BW=20MHz	Typical	mVpp	300
OP Regulation	0% to Full Load	Max	%	+/-2
Efficiency		Typical	%	90

Environmental Conditions

Cooling Method	**Conduction Cooled**
Operating Temperature	-40 to +85°C
Storage Temperature	-55 to +105°C
Vibration	0.1g2/Hz Max, 5 to 2000Hz
Shock	40g, 11ms sawtooth
Humidity	0% to 95% non-condensing

Physical Characteristics

Dimension W100mm x 73mm
12.5mm Pitch

**Note: Contact us if you require NED or Lightning Protection