



VITA 62 VPX SOLUTIONS

Three Phase

DPM4701 SERIES

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AC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- VITA 62 COMPLIANT
- 6U VPX FORM FACTOR
- SOSA™ ALIGNED
- AC/DC CONVERTER
- Up to 1200W Steady State
- 1500W Peak Power
- Cyber Secure

For quotes and customization requests, please
contact us at (877) 634-0982 or sales@digipwr.com



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Ver. 1.0

Applications

Military (Airborne, ground-fix, shipboard), Ruggedized, Telecom, Industrial

Special Features

- VITA 62 6U
- SOSA™ Aligned
- High efficiency
- Input / Output isolation
- Remote sense
- EMI filters included
- Fixed switching frequency
- Parallel configuration
- 46.11 Tier 2 communication
- External Inhibit & Enable
- Indefinite short circuit protection with auto-recovery
- Over temperatureshutdown with auto recovery

Electrical Specifications

DC Input

115V_{AC} ± 10% 400Hz Three-Phase
Ride-through Mil-STD-704F normal transient

Line/Load regulation

±1% or better (no load to full load, low line to high line (-55°C to 85°C).

Ripple and Noise

Less than 50mV_{p-p}, typical (max. 1%), measured across 0.1µF and 10µF on Load

System Management Options

- 1) I2C
- 2) VITA 46.11 Tier I IPMC
- 3) VITA 46.11 Tier II IPMC

Data available:

- Output voltages and currents
- Input voltage
- Card temperature
- Card status

DC Outputs

PO1/PO2/PO3 12V/100A
3.3V_{aux} 3.3V/30A
±12V_{aux} - Optional

Total Steady state Power 1200W (-55°C to +85°C).
Peak Power 1500W¹

Hold Up

N/A

Current Share

12V Active Current share
3.3V_{aux} Passive Current Share (3.3V_{aux} ACS optional)

Load Transient

Output dynamic response up to 5% at step load of 30%-90%.
Output return to steady stated within 300-500µSec

Power Factor

≥ 0.87 (Full load)³

Isolation

500V_{dc} Input to Output
500V_{dc} Input to Case
500V_{dc} Output to Case

EMC

Designed to meet with External Filter MIL-STD-461F²
CE102, CS101, CS114, CS115 & CS116, RE102

Efficiency

Typical 87% (Nominal line, nominal load, room temperature)

Notes:

¹ Contact Factory for peak power options

² Deviation under 70KHz, See EMI Paragraph. RE102 Supported at system Level

³ P.F Leading, lagging optional with external Filter

About Digital Power

Digital Power Corporation designs and manufactures full custom, value-added, and standard comprehensive power solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets.

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Protections (Thresholds and protections can be modified / removed – please consult factory).

<p><u>Input</u></p> <ul style="list-style-type: none"> • Inrush Current Limiter: peak value of $5 \times I_{IN}$ for inrush currents lasting longer than 100μs. • Under Voltage Lock-Out Unit shuts down when input voltage is below $70V_{ac_{rms}} \pm 5V_{ac_{rms}}$. • Catastrophic Failure Protection Fuses are available to protect from catastrophic failure. The fuses are rated not to engage due to any normal type operation. 	<p><u>Outputs</u></p> <ul style="list-style-type: none"> • Over Voltage Protection: 12V Active & Passive OVP 3.3V_{Vaux} Active & Passive OVP $\pm 12V_{aux}$ Active & Passive OVP • Overload / Short Circuit Protection 12V Output-Continuous Hiccup protection (110-130%). 3.3V_{Vaux} – Typical 33A $\pm 12V_{aux}$ – Typical 3A 	<p><u>General</u></p> <ul style="list-style-type: none"> • Over temperature Protection: Shutdown at $+100^\circ C \pm 5^\circ C$ Recovery at $+90^\circ C \pm 5^\circ C$ Temperature measured at Unit edge.
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<p><u>Environmental</u> Designed to meet MIL-STD-810G and VITA 47</p>		
<p><u>Temperature</u> Operating: $-55^\circ C$ to $+85^\circ C$ (at plug-in card edge, IAW VITA 62 CC4) Storage: $-55^\circ C$ to $+125^\circ C$</p> <p><u>Humidity</u> 810G Method 507.5 & VITA 47 Para. 5.6, Up to RH 95%.</p> <p><u>Reliability</u> > 314,000 hours, calculated per MIL-STD-217F Notice 2 at $+65^\circ C$ at wedge lock edge, Ground Fixed.</p>	<p><u>Altitude</u> 810G Method 500.5, Procedure II (Operational) & VITA 47 para. 5.7 60,000 ft.</p> <p><u>Vibration</u> 810G Method 514.6 Procedure I. General minimum integrity exposure. (1 hour per axis & VITA 47 Vibration Class V3</p>	<p><u>Salt Fog</u> Method 509.5</p> <p><u>Shock</u> 810G Method 516.6 Procedure I & VITA 47 Shock Class OS2 Saw-tooth, 40g peak, 11ms</p>

Environmental Stress Screening (ESS)

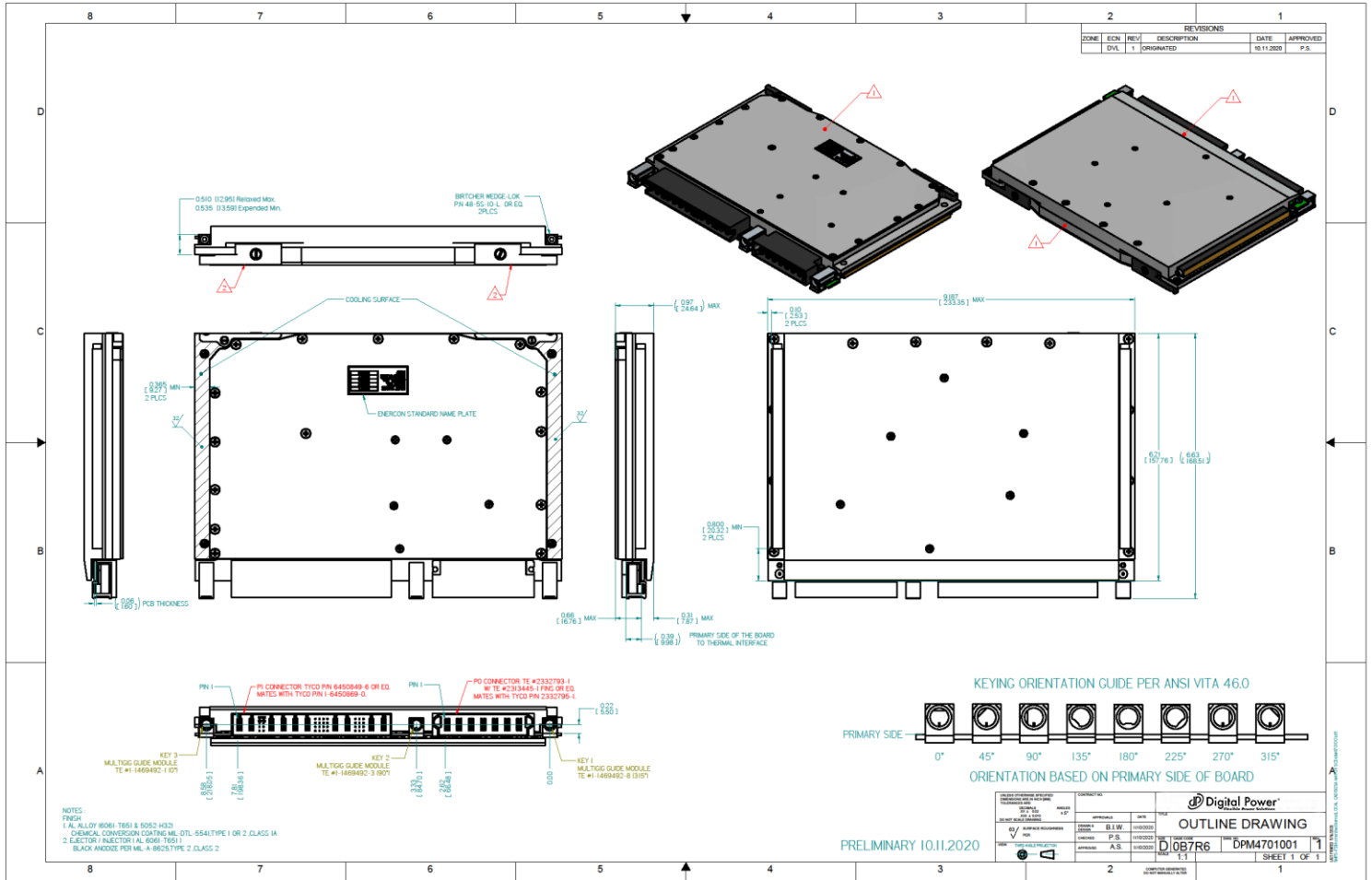
Including random vibration and thermal cycles is also available. **Please consult factory for details.**

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Outline Drawing



* Specifications are subject to change without prior notice by the manufacturer.

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