



VITA 62 VPX SOLUTIONS DC/DC POWER SUPPLY

DPM4703 SERIES

DPM4703 SERIES *DC/DC POWER SUPPLY*



PRODUCT HIGHLIGHTS

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

Description

DPM4703 is a military grade 6U VPX, SOSA™-aligned power supply that provides 12V and 3.3VAUX per VITA 62 that is rated at 1200W output power. Features include: conduction cooling, 1" pitch, current-sharing, internal EMI filters, VITA 46.11 system management. DC input is 270V per MIL-STD-704. Designed to meet MIL-STD-810 and MIL-STD-461.

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 temperature shutdown with auto recovery

Electrical Specifications

DC Input

270 V_{DC}

- Works Through MIL-STD-704 (B-F) Normal and Abnormal Steady State.
- Works Through MIL-STD-704(E-F) Normal transients
- Protected MIL-STD-704(B-D) Normal/Abnormal Transients
- Protected MIL-STD-704(E-F) Abnormal Transients
- Optional: Works Through MIL-STD-704(E-D) Abnormal Transients

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 II IPMC

Data available:

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

DC Outputs

PO1/PO2/PO3 12V/90A

3.3V_{Vaux} 3.3V/20A

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

Hold Up

N/A

Current Share

12V Active Current share
3.3V_{Vaux} Passive Current Share (3.3V_{Vaux} 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

N/A

Isolation

500V_{DC} Input to Output

500V_{DC} Input to Case

500V_{DC} Output to Case

EMC

Designed to meet MIL-STD-461F²
CE102, CS101, CS114, CS115 & CS116, CS117
RE102

Efficiency

Typical 89% (Nominal line, nominal load, room temperature)

Notes:

¹ Contact Factory for peak power options

² RE102 Supported at system Level

About Digital Power

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5. Pin Assignment

Connector P1: Connector type: 6450849-6 or eq

Pin Number	Pin Name
P10	12V/35A (VS1, VS2)
P9	12V/35A (VS1, VS2)
A9	12V_SENSE
B9	12V_SENSE
C9	12V_SENSE
D9	Sync in
A8	12V_SENSE_RTN
B8	12V_SENSE_RTN
C8	12V_SENSE_RTN
D8	Sync Out
A7	12V_CS
B7	12V_ACS
C7	3.3Vaux_CS
D7	SIGNAL_RETURN
P8	POWER_RETURN
P7	POWER_RETURN
A6	SCL_B
B6	SDA_B
C6	-12V_AUX / N.C
D6	SYSRESET*
A5	GAP*
B5	GA4*
C5	SCL
D5	SDA
A4	GA3*
B4	GA2*
C4	GA1*
D4	GA0*
A3	N.C
B3	+12V_AUX/N.C
C3	N.C
D3	N.C
P6	12V/35A (VS1, VS2)
P5	12V/35A (VS1, VS2)
P4	POWER_RETURN
P3	POWER_RETURN
A2	N.C
B2	FAIL*
C2	INHIBIT*
D2	ENABLE*
A1	N.C
B1	3.3Vaux ACS
C1	3.3Vaux Sense
D1	3.3Vaux Sense return
P2	3.3V/15A
P1	POWER_RETURN

Connector P0

Connector type: 2348886-1 or eq.

Pin Number	Signal Name
P7	+DC
P6	+DC
P5	-DC
P4	-DC
P3	
P2	
P1	CHASSIS_GND

Notes:

- P ,P6 are shorted internally.
- P 0,P9 are not shorted internally.
- P 0 or P9 are not shorted internally to P5,P6.

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