

XPm2020

MIL-STD-704 28 V Input to ± 12 V, 5 V, and 3.3 V Output VITA 62.0 3U VPX Power Supply with Integrated MIL-STD-461E/F Filtering

- ▶ MIL-STD-704 28 VDC input voltage
- ▶ MIL-STD-461E/F EMI filtering
- ▶ VITA 62.0-compliant power supply
- ▶ Up to 300 W output on 3.3 V, 5 V, and ± 12 V
- ▶ On-card holdup capacitor for up to 40 ms (120 W symmetrical load distribution) of holdup time (optional)
- ▶ Up to 90% efficient
- ▶ -40°C to 85°C conduction-cooled operating temperature (at the thermal interface)
- ▶ Compliant with the VITA 48.2 Type 1, Two-Level Maintenance (2LM) standard
- ▶ VITA 46.11 Tier 1 and Tier 2 IPMI controller for on-card voltage monitoring



XPm2020

The XPm2020 is a VITA 62-compliant 3U VPX power supply that takes in a MIL-STD-704 28 VDC input voltage and provides up to 300 W on 3.3 V, 5 V, and ± 12 V at up to 90% efficiency. The XPm2020 also provides on-card MIL-STD-461E/F EMI filtering and optional on-card holdup capacitance, which provides 40 ms (120 W symmetrical load distribution) of holdup time.

The XPm2020 fits in a VITA 62-compliant 3U VPX 0.8 in. or 1.0 in. slot. Up to 8.3 A on 12 V, 22 A on 5 V, 20 A on 3.3 V (limited by the connector) can be supported on each rail, with 1 A on 3.3 V auxiliary and 1.5 A on ± 12 V auxiliary. The XPm2020 can provide a combined total output power of up to 300 W at maximum operating temperature.

The XPm2020 features a VITA 46.11 Tier 1 and Tier 2 Intelligent Platform Management Interface (IPMI) controller, which monitors board voltages and temperatures.



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Input Power

- MIL-STD-704 28 VDC (22 to 29 V)
- MIL-STD-461E/F EMI filtering

Output Power

- Up to 90% efficient
- Supports up to 300 W in total combined power output
- 3.3 V at up to 20 A (limited by the connector)
- 5 V at up to 22 A
- 12 V at up to 8.3 A
- 3.3 V auxiliary at up to 1 A
- ± 12 V auxiliary at up to 1.5 A

Holdup

- On-card holdup capacitor for up to 40 ms (120 W symmetrical load distribution) of holdup time (optional)

Physical Characteristics

Contact X-ES for CAD model if desired

- 3U VPX form factor
- 0.8 in. or 1.0 in pitch
- 1.46 pounds (with on-card holdup capacitor)
- 1.27 pounds (without on-card holdup capacitor)

IPMI Controller

- VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- Monitors voltages
- Monitors temperature sensors
- Connects to backplane via Intelligent Platform Management Bus (IPMB)

Environmental Requirements

Contact X-ES for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 5
- Conformal coating available as an ordering option

Ruggedization Level	Level 5
Cooling Method	Conduction-Cooled
Operating Temperature	-40 to +85°C (board rail surface)
Storage Temperature	-55 to +105°C (maximum)
Vibration	0.1 g ² /Hz (maximum), 5 to 2000 Hz
Shock	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing

