

# XPm2020

MIL-STD-704 28 V Input to  $\pm 12$  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  $\pm 12$  V
- ▶ On-card holdup capacitor for up to 75 ms (at 120 W) 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
- ▶ Load sharing support with another XPm2020
- ▶ 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  $\pm 12$  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 75 ms of holdup time (at 120 W output).

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, 1.5 A on -12 V, 22 A on 5 V, 20 A on 3.3 V (limited by the connector), and 4 A on 3.3 V auxiliary can be supported on each rail. The XPm2020 can provide a combined total output power of up to 300 W at maximum operating temperature. The XPm2020 can also be paired with another XPm2020 for load sharing.

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



Extreme Engineering Solutions

*...Always Fast*

### Extreme Engineering Solutions

9901 Silicon Prairie Parkway • Verona, WI 53593

Phone: 608.833.1155 • Fax: 608.827.6171

sales@xes-inc.com • <https://www.xes-inc.com>

**Input Power**

- MIL-STD-704 28 VDC
- 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
- -12 V at up to 1.5 A
- 3.3 V Auxiliary at up to 4 A
- Can be paired with another XPm2020 for load sharing

**Holdup**

- On-card holdup capacitor for up to 75 ms (at 120 W) 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 1                                          | Level 3                                         | Level 5                                        |
|-----------------------|--------------------------------------------------|-------------------------------------------------|------------------------------------------------|
| Cooling Method        | Standard Air-Cooled                              | Rugged Air-Cooled                               | Conduction-Cooled                              |
| Operating Temperature | 0 to +55°C ambient †                             | -40 to +70°C ambient †                          | -40 to +85°C (board rail surface)              |
| Storage Temperature   | -40 to +85°C ambient                             | -55 to +105°C ambient                           | -55 to +105°C (maximum)                        |
| Vibration             | 0.002 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz | 0.04 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz | 0.1 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz |
| Shock                 | 20 g, 11 ms sawtooth                             | 30 g, 11 ms sawtooth                            | 40 g, 11 ms sawtooth                           |
| Humidity              | 0% to 95% non-condensing                         | 0% to 95% non-condensing                        | 0% to 95% non-condensing                       |

† Contact factory for air flow rate details.

