

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 Filtering

- ▶ MIL-STD-704 28 VDC input voltage
- ▶ MIL-STD-461E 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 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 to 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 (optional)



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 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, 2 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 an optional VITA 46.11 Tier-1 and Tier-2 Intelligent Platform Management Interface (IPMI) controller which monitors board voltages and temperatures.

X-ES

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3225 Deming Way, Suite 120 • Middleton, WI 53562
 Phone: 608.833.1155 • Fax: 608.827.6171
 sales@xes-inc.com • <http://www.xes-inc.com>

Input Power

- MIL-STD-704 28 VDC
- MIL-STD-461E 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 2 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
- 1.45 pounds (with on-card holdup capacitor)
- 1.1 pounds (without on-card holdup capacitor)

IPMI Controller (Optional)

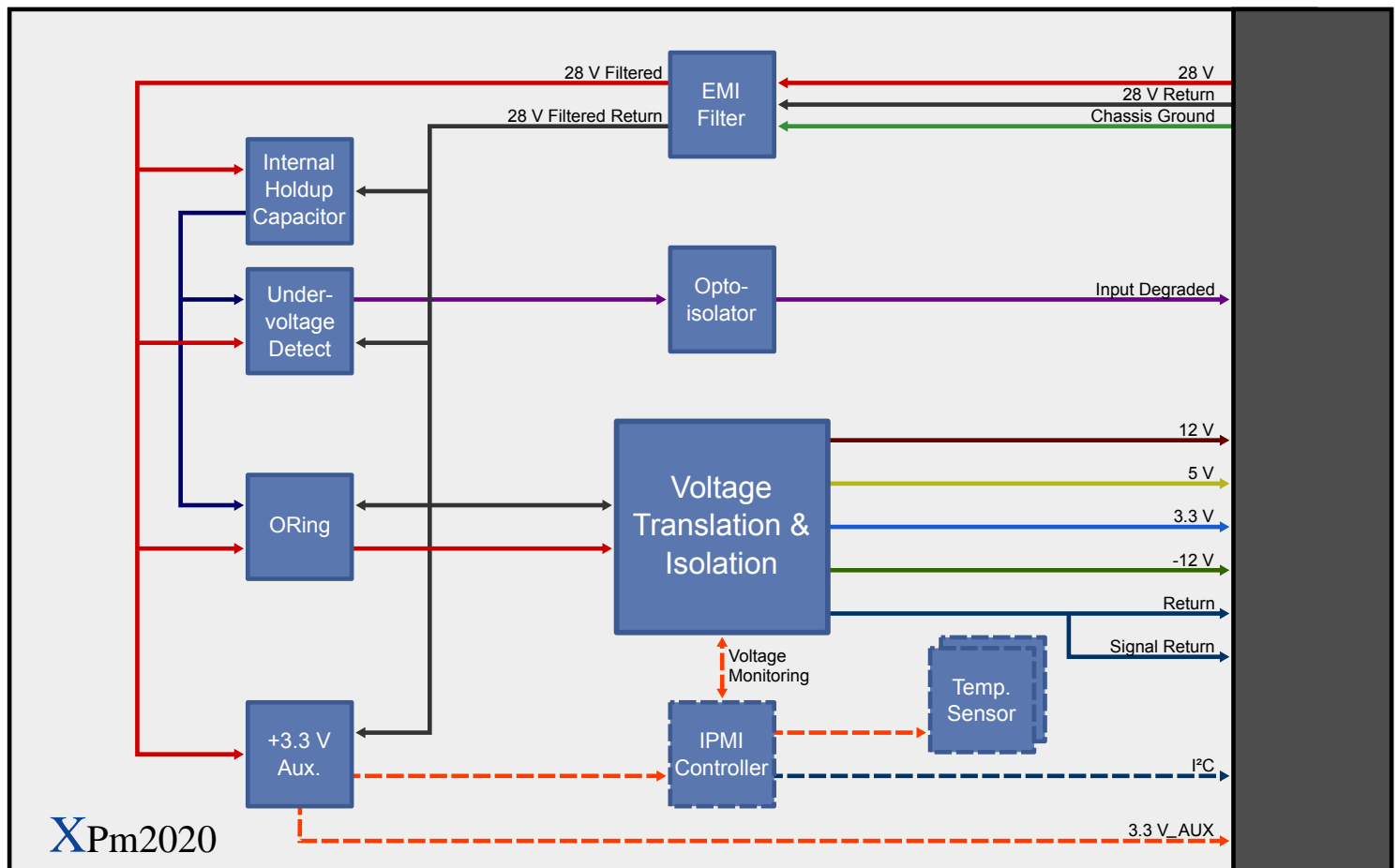
- VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- Monitors voltages
- Monitors temperature sensors
- Connects to backplane via system management bus (I²C)

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 (300 LFM) | -40 to +70°C (600 LFM) | -40 to +85°C (board rail surface) |
| Storage Temperature | -40 to +85°C ambient | -55 to +105°C ambient | -55 to +105°C ambient |
| Vibration | 0.002 g ² /Hz, 5 to 2000 Hz | 0.04 g ² /Hz (maximum), 5 to 2000 Hz | 0.1 g ² /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 |



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