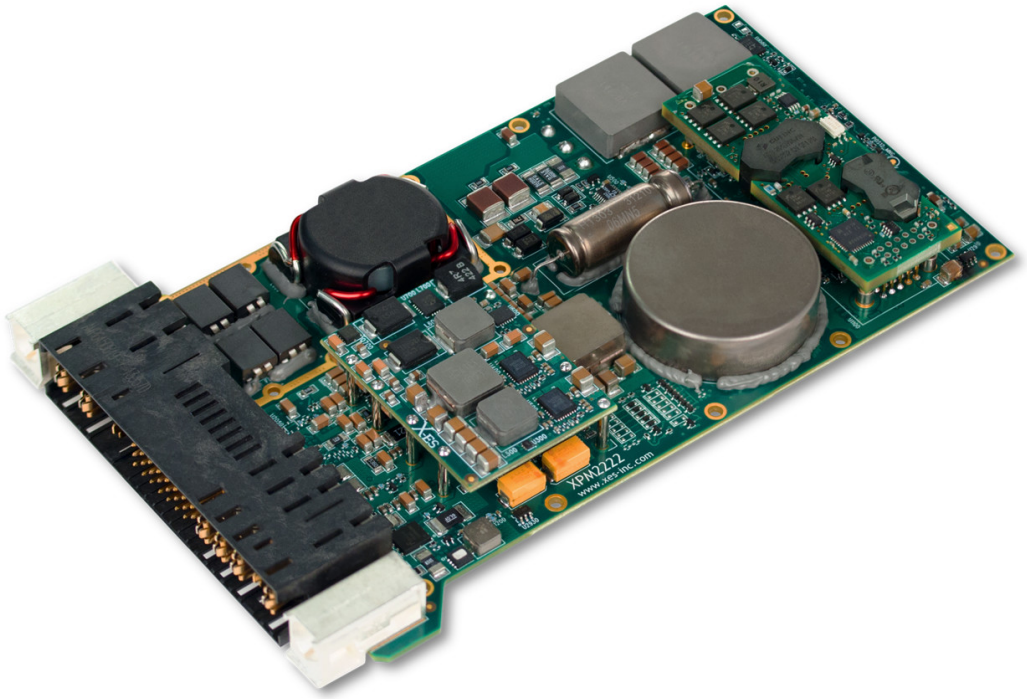
XPm2222

MIL-STD-704A/E/F and MIL-STD-1275D 28 VDC VITA 62.0 3U VPX Power Supply with MIL-STD-461F EMI Filtering

- MIL-STD-704A/E/F and MIL-STD-1275D 28 VDC input voltage
- MIL-STD-461F EMI filtering
- VITA 62.0 form factor VPX power supply
- Up to 260 W output on 3.3 V, 5 V, and ±12 V
- Isolated 3.3 V AUX supply
- Reverse-polarity protection to -52 V steady state
- Spike and surge transient suppression
- Short circuit, overcurrent, and overvoltage protection
- Output overvoltage clamping circuitry
- Up to 87% efficient
- -40°C to 85°C conduction-cooled operating temperature (at the thermal interface)
- VITA 48.2 REDI-compliant
- 1.0 in. pitch with Two-Level Maintenance (2LM) support
- VITA 46.11 Tier-1 and Tier-2 IPMI controller for on-card voltage monitoring and control



XPm2222

The XPm2222 is a VITA 62.0 form factor 3U VPX power supply. The XPm2222 takes in a MIL-STD-704A/E/F or MIL-STD-1275D 28 VDC input voltage and provides up to 260 W on 3.3 V, 5 V, and ±12 V at up to 87% efficiency. The XPm2222 also provides on-card MIL-STD-461F EMI filtering, MIL-STD-1275D transient suppression, and 10 ms of holdup time at 200 W output power.

The XPm2222 fits in a VITA 62-compliant 3U VPX 1.0 in. slot. Up to 16 A on 12 V, 0.5 A on -12 V, 15 A on 5 V, 12 A on 3.3 V, and 0.8 A on 3.3 V auxiliary can be supported on each rail, separately. The XPm2222 can provide a combined total output power of up to 260 W at maximum operating temperature.

The XPm2222 also features a VITA 46.11 Tier-1 and Tier-2 Intelligent Platform Management Interface (IPMI) controller which monitors input and output voltages and temperatures. In addition, the IPMI controller can enable/disable output power.

X-ES Extreme Engineering Solutions

...Always Fast

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Input Conditions

- MIL-STD-704A/E/F or MIL-STD-1275D 28 VDC
- MIL-STD-461F EMI filtering
- 20 V to 32 V steady state at full output
- 14 V to 32 V steady state at 200 W output
- Reverse-polarity protection to -52 V steady state
- Spikes and surge protection

Output Power

- Supports up to 260 W in total combined power output
- 3.3 V at up to 12 A
- 5 V at up to 15 A
- 12 V at up to 16 A (with other rails unloaded)
- 12 V at up to 14.5 A (all other rails loaded)
- -12 V at up to 0.5 A
- 3.3 V auxiliary at up to 0.8 A

IPMI Controller

- VITA 46.11 Tier 1 and Tier 2 IPMI Controller (IPMC)
- Enable/disable output power
- Monitors voltages and currents
- Monitors eight temperature sensors
- Connects to backplane via system management bus (I²C)

Additional Features

- Up to 87% efficient
- Short circuit protection
- Overvoltage protection
- 10 ms holdup at 200 W output power
- Output rail clamping

Physical Characteristics

Contact X-ES for CAD model if desired

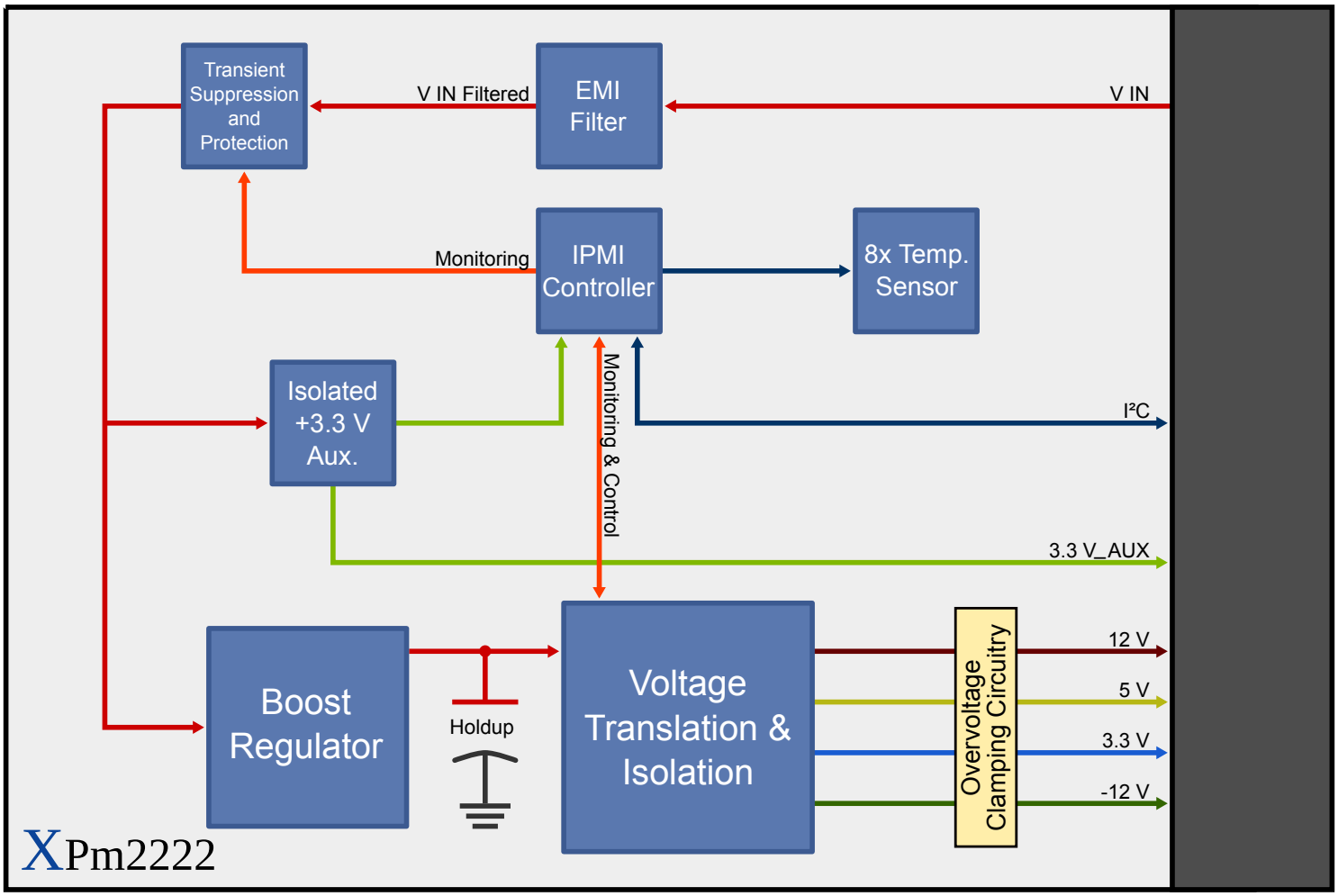
- 3U VPX-REDI conduction-cooled form factor
- Dimensions: 100 mm x 160 mm
- 1.0 in. pitch Two-Level Maintenance (2LM)

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 g²/Hz, 5 to 2000 Hz	0.04 g²/Hz (maximum), 5 to 2000 Hz	0.1 g²/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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