VPX360

High Power VITA 62 VPX Power Supply

- COTS VPX power supply with conduction cooling (VITA 62.0 compliant)
- Compact 3U x 5HP form factor, fits standard VITA 46.0 envelope
- Supports both 28V DC and 48V DC input platforms
- High output power and efficiency through next-gen switching technology
- I²C (IPMI) and USB monitoring; MIL-STD 461, 704, 1275 compliant

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Technical Details (Rev0 / Preliminary, subject to change)	**600W VITA62 VPX Power Supply**
Form Factor	3U VPX CC
Pitch	5 HP / 1.0 inch
Weight	0.8 kg / 1.8 lbs
Operating Temperature (at wedge lock)	-40 °C to 85 °C [derating to be checked for 60 °C to 85 °C operation]
Storage Temperature	-55 °C to 105 °C
Input to Output Isolation	1000 V
Input to Case Ground Isolation	500 V
Output to Case Ground Isolation	500 V
Case Ground to Safety Ground Resistance	< 10 mΩ (TBC)
Maximum Output Power	600 W
Maximum Input Power	~660W
Maximum Dissipated Power @ max. Power	~60W
Nominal Input Voltage	28 V DC / 48V DC (different keys)
Minimum Turn ON Voltage	11 V
Minimum Turn OFF Voltage	8 V
Maximum Continuous/Peak Input Voltage	70 V / ± 250 V (<1 ms spike)
Input Overvoltage Protection:	Outputs disable if input voltage exceeds 70 VDC for > 600 ms (10 second auto-restart)
Maximum Internal Working Temperatures	125 °C
Temperature Protection Sensing Point (internal)	125 °C (Outputs disable when internal PCB temperature exceeds threshold)

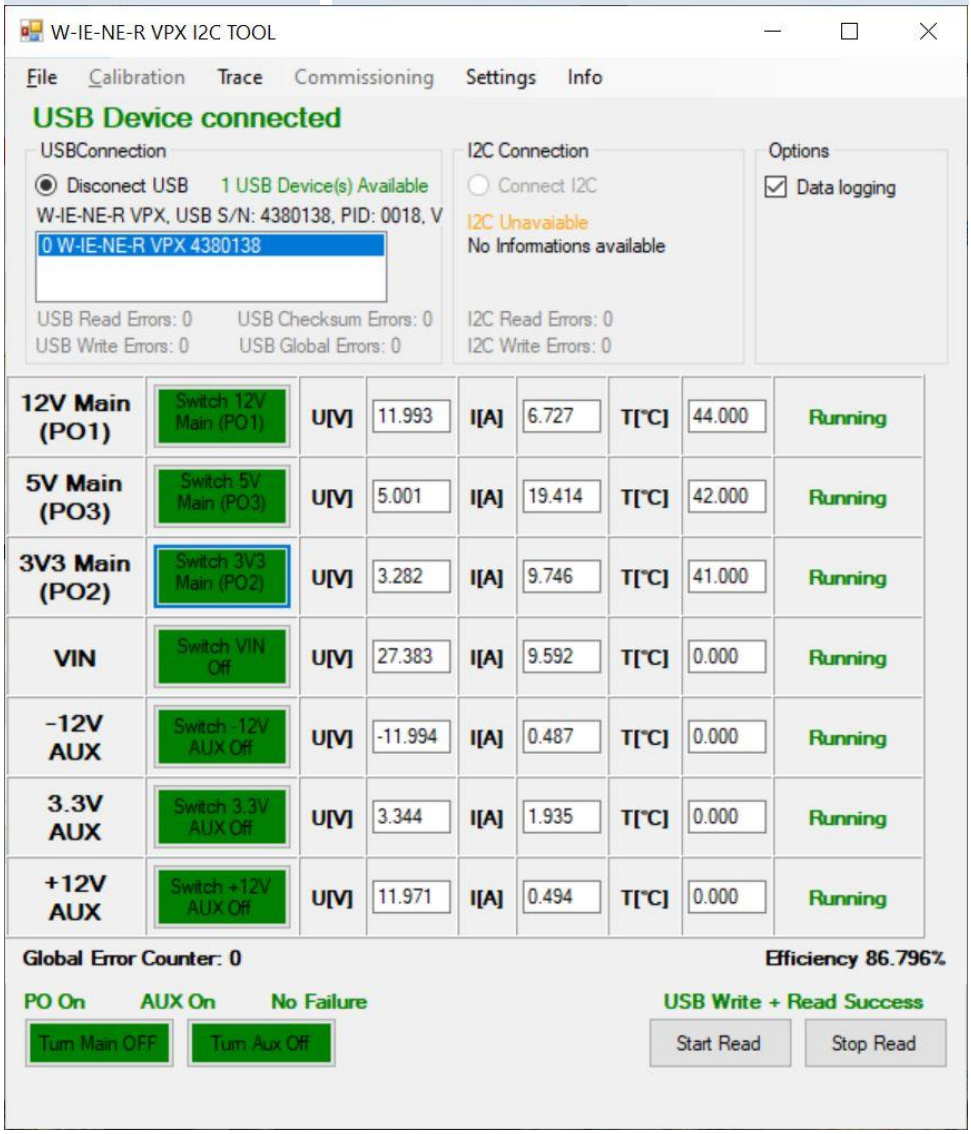
Main Power VS1 / VS2 / VS3

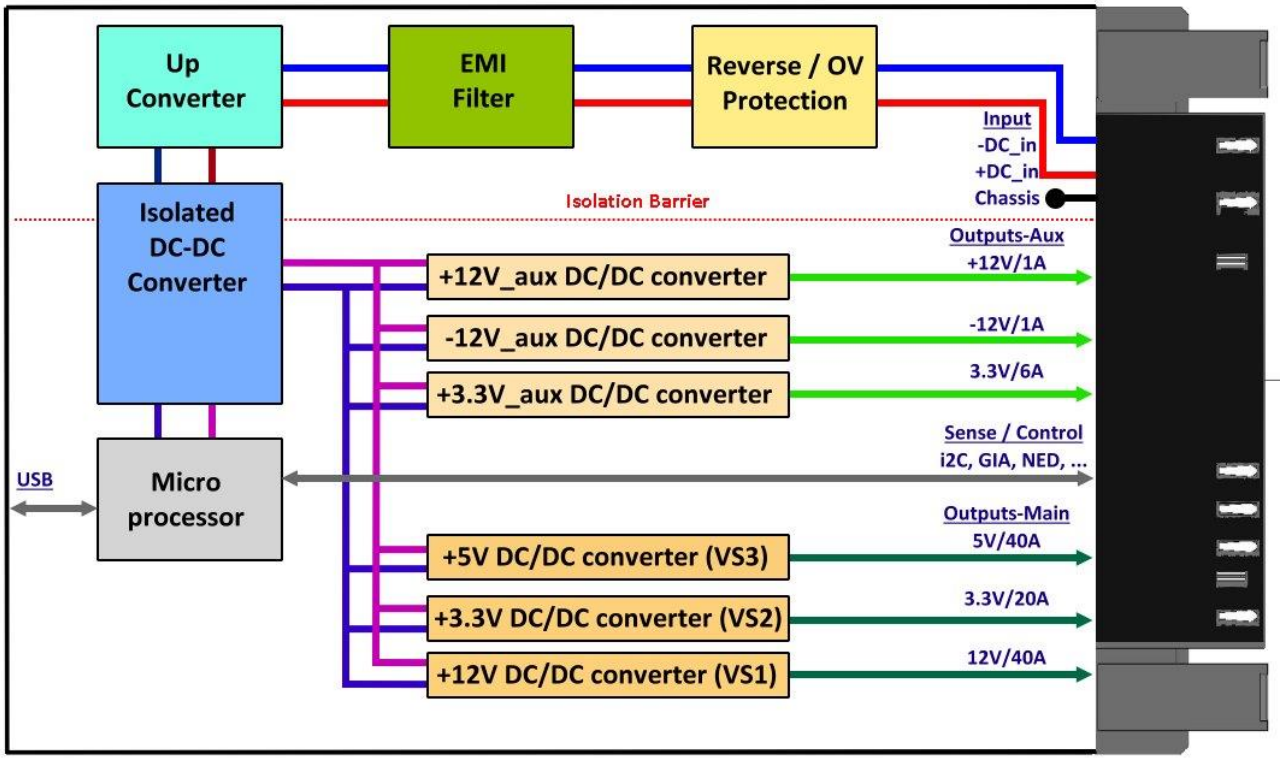
Maximum Currents 12V / 3V3 / 5V	see tables in "variants" for different power configurations
Fixed Switching Frequencies 12V / 3V3 / 5V	520 kHz / 520 kHz / 520 kHz
Peak Efficiencies 12V / 3V3 / 5V	93% / 82% / 90%
Max. Output Ripple and Noise: 12V / 3V3 / 5V	< 120 mVpp / < 50 mVpp / < 50 mVpp (worst case)
(0-20 MHz Bandwidth)	< 30 mVpp / < 25 mVpp / < 25 mVpp (typcial)
Line Regulation: 12V / 3V3 / 5V.	< 10 mV / 10 mV / 50 mV
Vin=Vin,min to Vin,max, Io and Tc fixed	< 0.1%
Load Regulation: 12V / 3V3 / 5V	60 mV / 50 mV / 10 mV
Overvoltage Protection +/- 12V / 3V3 / 5V: Maximum Output Voltage (Sense Lines Open)	12.1 V / 3.4 V / 5.2 V
Load Transient Recovery Time (no load to full load change condition)	< 1 ms

Auxiliary Power Vaux-12V / Vaux+12V, Vaux+3.3V

Maximum Current	1 A / 1 A / 4 A
Load Dependent Switching Frequency	300 Hz ... 600 kHz
Efficiency	60% ... 80%
Max. Output Ripple and Noise (0-20 MHz Bandwidth)	< 120 mVpp / < 50 mVpp / < 50 mVpp
Load Transient Recovery Time (no load to full load change condition)	1 ms
MIL Standard Compliance	as per VITA 62 specification
MIL-STD-461F (EMI) Compliance	Designed (to be tested) in compliance with sections CE102, CS101, CS114, CS115, CS116. See user manual for more details.
MIL-STD-704F Compliance	Designed (to be tested) in compliance for normal transients (LDC105), abnormal transients (LDC302) and distortion spectrum (LDC103). External hold-up circuit optional. See user manual for more details.
MIL-STD-1275D Compliance	Designed (to be tested) in compliance for MIL-STD-1275D 5.3.2.2 Exported Voltage Spikes, MIL-STD-1275D 5.3.2.3 Imported Voltage Spikes (Normal Mode & Generator Mode), MIL-STD-1275D 5.3.2.4 Imported Voltage Surges (Normal Mode & Generator Mode) and MIL-STD-1275D 5.3.2.5 Imported Ripple Voltage. See user manual for more details.
Compatibility / Environmental	

Compatibility	VDE 0805, IEC 950
Designed to meet MIL-STD-810G (Environmental)	With standard acrylic conformal coating to withstand sand, dust and salt atmosphere.
Communication / Firmware Features	
Communication interface	I2C communication interface USB port (Micro B USB 2.0 connector)
Communication Features (as per FW revision 3.0.6843.0 and higher)	Remote On / Off DC-IN status and measured voltage and current Global status, Temperatures Voltage, current and status of individual output power modules Programmable Limits and trip conditions / actions Optional Battle Short Mode (trip disabled)





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