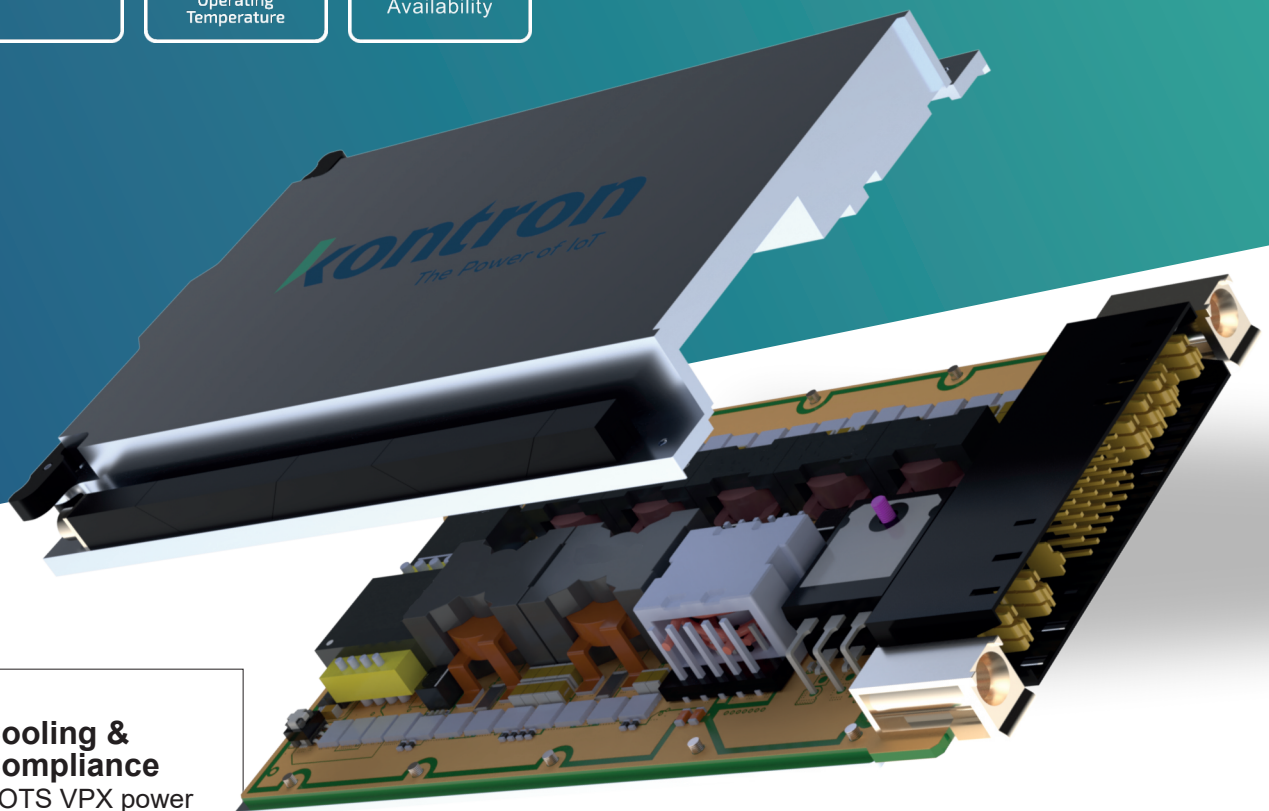


VPX 360



**-40°
85°C**
Operating
Temperature

10
Years
Availability



Cooling & Compliance

COTS VPX power supply with conduction cooling (VITA 62.0 compliant)

Compact Form

Compact 3U x 5HP form factor, fits standard VITA 46.0 envelope

Flexible Input

Supports both 28VDC and 48V DC input platforms

Power & Efficiency

High output power and efficiency through next-gen switching technology

Monitoring & Standards

I²C (IPMI optional) and USB monitoring; designed to meet MIL-STD 461,

VPX360 600 WATT

Kontron Hartmann Wiener VPX360 power supplies are conduction-cooled, commercial off-the-shelf (COTS) converters designed according to ANSI/VITA 62.0 and compatible with standard VPX chassis per VITA 46.0. Thanks to our next-generation switching power technology, the series delivers increased output power and current in a compact 3U x 5HP footprint, while maintaining high efficiency. A newly developed input filter, combined with a booster and isolation stage, enables operation with both 28V DC and 48V DC input systems. Built to meet MIL-STD-

461, 704, and 1275 requirements, the VPX360 also features onboard monitoring and control via I²C (IPMI) and USB. All mechanical and electrical interfaces follow the VITA 62 standard. Rugged design for operation in harshest environments. MIL-STD 810G compliance tested. Manufactured with conformal coating to withstand sand, dust and salt atmosphere. The electronic components are fully conformal coated to ensure long-term protection against moisture, dust, and environmental stress

VX3060DMA – Output Table

Output	Voltage	Max. Current
VS1	+12 V	40 A
VS2	+3.3 V	20 A
VS3	+5 V	40 A
Vaux1	+12 V	1 A
Vaux2	-12 V	1 A
Vaux3	+3.3 V	6 A
Input Voltage: 28 V DC		
Total Power: 600 W		
Compliance: VITA 62, MIL-STD-461 / -704 / -1275		
Conformal Coating: Standard acrylic		

VPX360EMA – Output Table

Output	Voltage	Max. Current
VS1	+12 V	40 A
VS2	+3.3 V	20 A
VS3	+5 V	40 A
Vaux1	+12 V	1 A
Vaux2	-12 V	1 A
Vaux3	+3.3 V	6 A
Input Voltage: 48 V DC		
Total Power: 600 W		
Compliance: VITA 62, MIL-STD-461 / -704 / -1275		
Conformal Coating: Standard acrylic		

Design & Components

- › No liquid / wet / aluminum electrolytic capacitors

Mechanical Dimensions

- › 100.0 mm x 168.5 mm x 19.56 mm (3.94 in x 6.63 in x 0.97 in)

Power & Efficiency

- › Next generation power conversion technology
- › Output power up to 600W with high efficiency
- › Dual / wide input voltage range: 12 V DC ... 68 V DC (nominal 28V and 48V)
- › Reverse polarity and input overvoltage protection.

Software Features

- › Programmable Enable/Inhibit behaviour
- › Programmable power on delay per channel
- › Event log
- › Customizable failure handling on request

Protection Features

- › Voltage sense controlled
- › Overvoltage, Undervoltage, Overcurrent, Over Temperature protection, hardware current limit

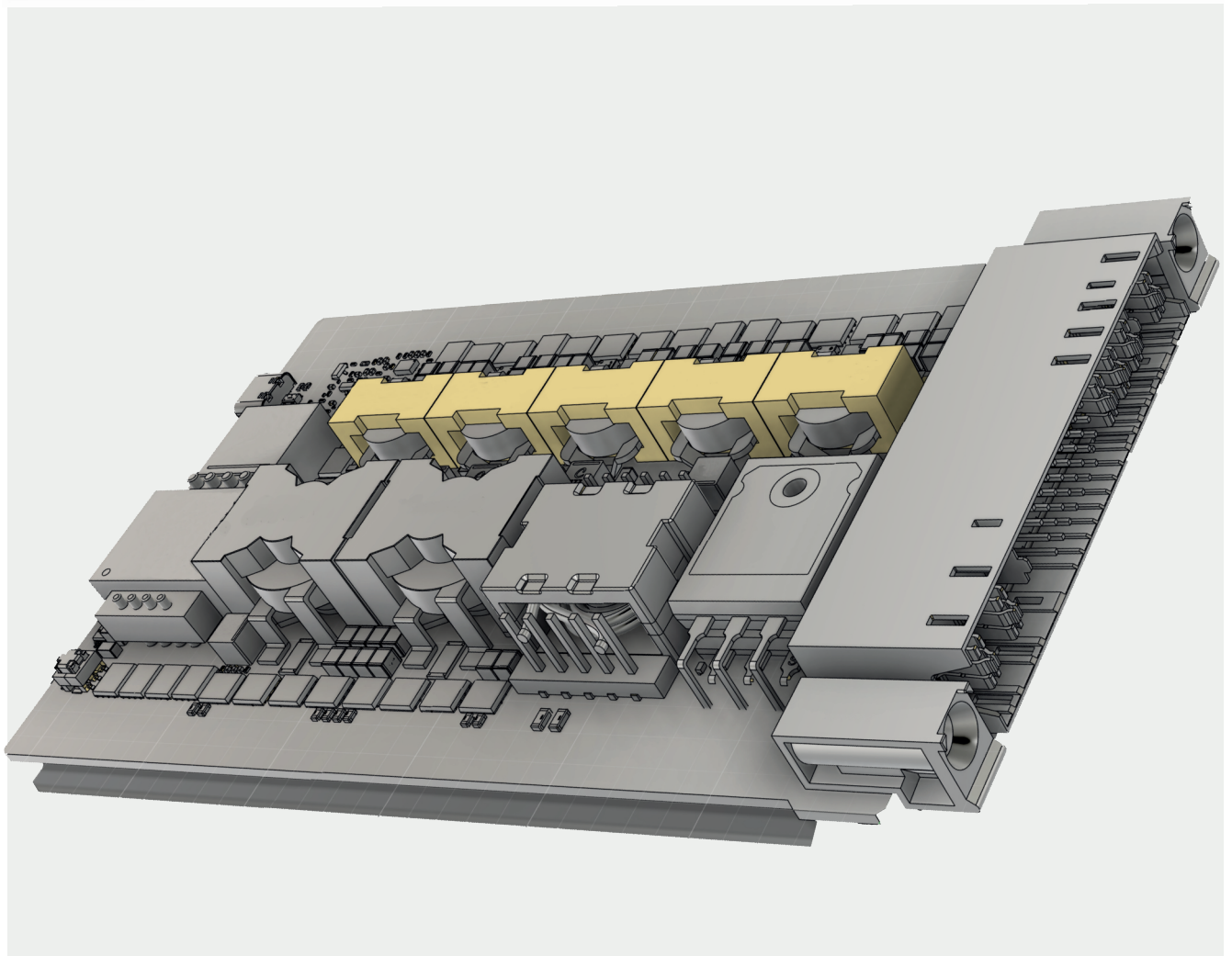
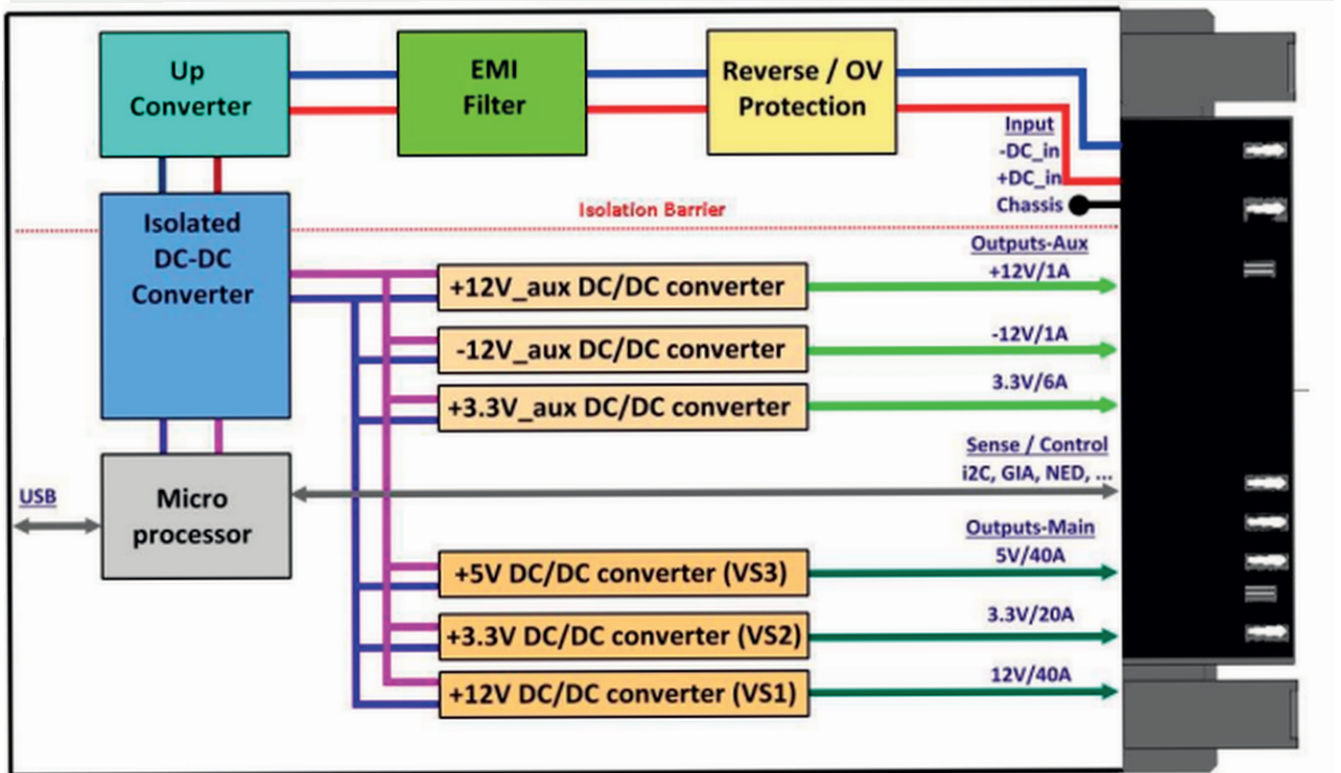
Management & Control

- › Microprocessor controlled
- › I²C bus communication for monitoring (status input and 6 output voltages and currents, temperatures) optional control features
- › USB-C connector for communication and firmware
- › IPMI support as per VITA 46.11

Compliance

- › Compliant to VITA 62 specification
- › MIL-STD-461, MIL-STD-704, MIL-STD-1275 compliance (to be tested as per VITA 62, par. 3.2.1)
- › Ruggedized to MIL-STD-810, with standard conformal coating (other on request)

Block Diagram



Article	Ordering Code	Description	Variant
VPX360DMA	VPX360DMA	600W 3U VITA 62 VPX power supply Standard Version, 28V key, MIL-STD-461, -704,-1275 compliant, with standard acrylic conformal coat- ing	
VPX360DMA	VPX360DMA1	600W 3U VITA 62 VPX power supply Standard Version, 28V key, MIL-STD-461, -704,-1275 compliant, with standard acrylic conformal coat- ing	RoHS
VPX360EMA	VPX360EMA	600W 3U VITA 62 VPX power supply Standard Version, 48V key, MIL-STD-461, -704,-1275 compliant, with standard acrylic conformal coating	
VPX360EMA	VPX360EMA1	600W 3U VITA 62 VPX power supply Standard Version, 48V key, MIL-STD-461, -704,-1275 compliant, with standard acrylic conformal coating	RoHS

Technical Data

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 (relative humidity 95 %)	
Storage Temperature	-55 °C to 105 °C	
Isolation	Input to Output Isolation	500 V
	Input to Case Ground Isolation	500 V
	Output to Case Ground Isolation	500 V
Case Ground to Safety Ground Resistance	< 10 mΩ (TBC)	
Power	Maximum Output Power	600 W
	Maximum Input Power	~680W
	Maximum Dissipated Power @ max. Power	~80W
Nominal Input Voltage	28 V DC / 48V DC (different keys)	
Minimum Turn ON Voltage	12 V	
Minimum Turn OFF Voltage	8 V	
Maximum Continuous/Peak Input Voltage	68 V / ± 250 V (<1 ms spike)	
Input Overvoltage Protection:	Outputs disable if input voltage exceeds 68 VDC for > 600 ms (10 second auto-restart)	
Maximum Internal Working Temperatures	125 °C	

Technical Information

Temperature Protection Sensing Point (internal)	125 °C
Temperature Protection Sensing Point (internal)	125 °C (Outputs disable when internal PCB temperature exceeds threshold)
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	92% / 82% / 87%
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 (typical)
Line Regulation: 12V / 3V3 / 5V.	< 10 mV / 10 mV / 50 mV
Vin=Vin, min to Vin, max, load and Temperature fixed	< 0.1%
Load Regulation: 12V / 3V3 / 5V	60 mV / 50 mV / 10 mV
12V / 3V3 / 5V: Maximum Output Voltage (Sense Lines Operation)	12.3 V / 3.45 V / 5.15 V
Load Transient Recovery Time (50 % load change condition)	1 ms
AUX Channels	
Maximum Current	1 A / 1 A / 6 A
Load Dependent Switching Frequency	300 Hz ... 600 kHz
Efficiency	60% ... 70%
Max. Output Ripple and Noise (0-20 MHz Bandwidth)	< 120 mVpp / < 50 mVpp / < 50 mVpp
Load Transient Recovery Time (50 % 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.

kontron

The Power of IoT

Kontron Hartmann-Wiener GmbH

Linde 18, D-51399 Burscheid Germany

E: sales.khw@kontron.com

P: +49(2174)6780 F:+49 (2174)678555

Kontron Hartmann-Wiener GmbH

Motorstraße 43, D-70499 Stuttgart Germany

E: sales.khw@kontron.com

P: +49 (711) 139890 F:+49 (711) 8661191

Manual VPX360



More VPX

