

Universal AC Input VITA 62 400W 3U Power Supply for OpenVPX Systems



Features

- ◆ True 6 Channel supply provides full Open VPX support
- ◆ Optional configuration provides up to 400W on single Rail
- ◆ Available in air cooled, bulkhead conduction cooled, and Reverse Side wedge lock conduction cooled models
- ◆ Up to 400 Watts power output with 1 inch pitch form factor
- ◆ Onboard embedded **RuSH™** technology actively monitors voltage, current, temperature and provides protective control
- ◆ Factory programmable power sequencing of all voltage rails
- ◆ Shutdown control for each power rail
- ◆ Over Voltage, Over Current, and Over Temp protection
- ◆ Current/Load share compatible with up to 4 PSC-6236 units
- ◆ I²C interface for Status & Control
- ◆ Standard INHIBIT# and ENABLE# power control signals
- ◆ VBAT for support of VPX memory backup power bus
- ◆ Front I/O panel includes LED status indicator, USB port for firmware upgrade and VBAT battery access



Overview

Dawn's VITA 62 Compliant PSC-6236 is designed to operate in a military environment over a wide range of temperatures at high power levels. Can be special ordered to produce a single voltage (3.3V, 5V, 12V, or Custom V) output up to 400W.

Dawn's embedded RuSH™ (Rugged System Health Monitor) technology provides the "smarts" for monitoring and control of critical system performance parameters including Voltage, Current, Temperature, control of power sequencing and shutdown of all voltage rails.

Custom firmware enables additional features such as monitoring shock /vibration events or customer specified monitoring windows, power sequencing, alerts, alarms, status and control, etc.

The RuSH™ monitor is interfaced into the OpenVPX (I²C) management plane, providing an I²C communication link with system cards. FAIL# and DEGRADE# status output for direct system alert. Optional LED / Status / Power Good output.

Custom power capacity and voltage input range configurations available. Contact factory for additional information.

Specifications

Mechanical

Extended Shock and Vibration Per VITA 47 and MIL-STD-810F Card Guide style and Mounting: PCB or Reverse Side Wedge Locks
Connector: VITA 62 Compliant (Tyco 6450849-7) power connector
Dimensions: Standard 1" Conduction cooled form factor
Weight: A/C: 1.69 Lbs/0.765 Kg, C/C: 1.67 Lbs/ 0.7582 Kg.
Inject & Eject: VITA 48.2 compliant
Covers: ESD covers on both sides of the board, accommodate military two-level maintenance

Electrical

MIL-STD-461: CE-102, passed with external filter, other tests inprocess
MIL-STD-704F: 50 mSec holdup provided on separate module
Input Voltage: Single Phase, 85-264VAC, 47- 440Hz
Voltage Rails: +12V (VS1), +3.3V (VS2), +5V (VS3), Aux_+12V, Aux_-12V, Aux_+3.3V, VBAT (+3.0V typical)
Power Factor Load: .98 at 60Hz.

Output Current for Each Voltage Rail:

Input	Max Output Current (Amps) for each channel					
Voltage	12V(VS1)	3.3V(VS2)	5V(VS3)	AUX_3.3	AUX_+12	AUX_-12
85-264VAC	16.7	30	40	4	4	3

Wattage Max +3.3V rail: 200W
Wattage Max +5V rail: 200W
Wattage Max +12V rail: 200W
Total Maximum Power All Rails: 400W
Ripple: <50mVp-p on +3.3V and +5V, <120mVp-p on +12V and -12V
Isolation Voltage: Input to Output (1500V)
Efficiency: About 75.2% at 350 Watts

Environmental

Storage Temperature: -40°C to +100°C
Operating Temperature: -40°C to +85°C (at the Wedge lock edge)
Power supply output dependant on chassis cooling capability

Ordering Information

P/N 06-1016236-WXYZ

W = Power Input

- 1 = N/A
- 2 = N/A
- 3 = N/A
- 4 = N/A
- 5 = N/A
- 6 = 85-264VAC, 47-440Hz

X = Cooling/Coating Option

- A = N/A
- B = N/A
- W = N/A
- 1 = Air Cooled, Conformal Coated
- 2 = Conduction to Bulkhead, Conformal Coated
- 3 = Conduction to Wedge Lock, Conformal Coated

Y = Firmware Options

- 1 = Standard Firmware
- 2-Z = Custom Firmware

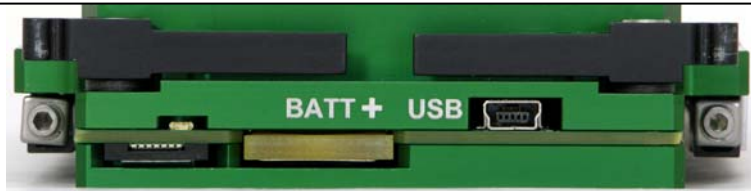
Z = Special Options

- 0 = None
- 1 = Single Output 3.3V/90A
- 2 = Single Output 5V/80A
- 3 = Single Output 12V/33.3A



“W” Cooling/Coating Option Shown

Side View

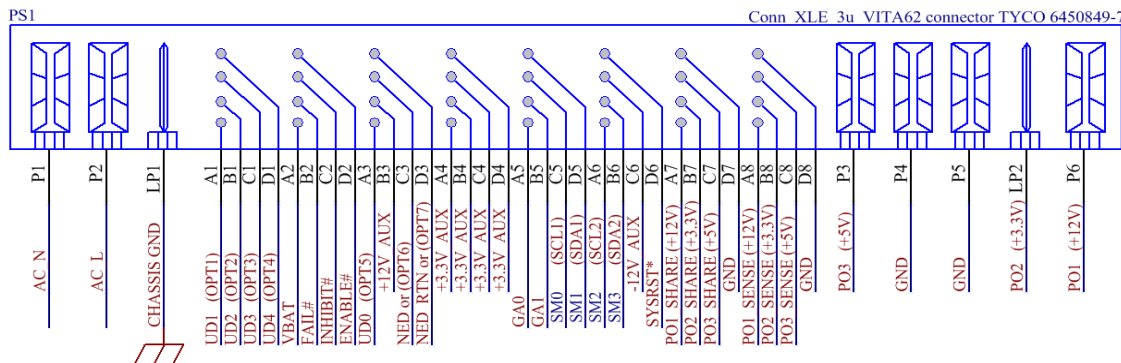


“W” Cooling/Coating Option Shown Front Panel View

Shows battery, USB connector, status indicator and ejectors

Additional Factory select Options below provide extended capability beyond the VITA 62 specification. Available on request.

(Connector pin out – VITA 62 Compliant – Card Connector Face View)



Backplane connector mate is:
Tyco P/N = 1-6450869-4

FACTORY SELECT OPTIONS:

- (OPT1) = DEG# or Custom I/O (= +3.3V TTL) or SDI (SPI Data out) (See NOTE 2) or NC
- (OPT2) = +28V (Hold up Input) or +28V output (current monitored & FET controlled ON/OFF) or NC (See NOTE 1)
- (OPT3) = +28V (Hold up Input) or +28V output (current monitored & FET controlled ON/OFF) or NC (See NOTE 1)
- (OPT4) = LED1 (TTL) or Custom I/O or +28V (hold up Input) or +28V output (current monitored & FET controlled ON/OFF) or NC (See NOTE 1)
- (OPT5) = +12V_AUX or SDO (SPI data out) or Custom I/O
- (OPT6) = NED or Custom I/O
- (OPT7) = GND or NC

NOTE1:
When NC (No connect) UD2, UD3, UD4
(OPT2 & OPT3 & OPT4) are Disconnected from +28V.

NOTE2:
SPI Data I/O and Chip select can be assigned to any Custom I/O pin.

Other Products from Dawn:

Card cages and enclosures for commercial, aerospace and military applications
 Enclosure 3D solid model design, manufacturing and production from commercial to full-rugged conduction cooled military
 Custom and Standard product PCB design, layout, production
RuSH™ Rugged system health monitor,
 Backplanes for **cPCI 2.1, cPCI 2.16, VME, VME64x, VXI, VXS, VPX, CUSTOM**, Build to Print Powered Enclosures for Development, Prototype, Production, Deployment Prototype Boards, Extender Boards, Form Factor Extenders, Front Panels, Filler Panels, Custom Panels, Build to Print Panels, Build to print machining, fabrication and assembly