

# VITA 62 Compliant 3U Power Supply for Air or Conduction Cooled Systems



## Features

- ◆ Power supply provides full Open VPX support or SOSA VPX support with integrated 50Msec hold up to 236W
- ◆ Available in Air cooled, and Reverse Side Wedge lock conduction cooled models
- ◆ Up to 244 Watts power output with 1" pitch form factor
- ◆ Over Voltage protection
- ◆ Standard INH# and EN# power control signals
- ◆ Front I/O panel includes LED status indicator
- ◆ VITA48.2 Compliant Inject / Eject levers for easy installation
- ◆ MTBF = Up to 2,442,024 hours in environment of ground Benign TA=25C (MTBF varies by version)
- ◆ Optional integrated PWM fan speed driver and filtered power feed for fan power of ATR chassis. (VITA46.11 option required)



## Specifications

### Mechanical

**Extended Shock and Vibration Per MIL-STD-810F**

**Card Guide style and Mounting:** .062 PCB or VITA 48.2 WedgeLocks

**Connector:** VITA 62 Compliant power connector TE 6450849-7

**Dimensions:** Standard 1" pitch Conduction cooled 1.6" pitch air cooled form factor

**Weight:** 1.65 Lbs/ 0.7478 Kg.

**Inject & Eject:** VITA 48.2 compliant inject and eject features

**Covers:** ESD protected inputs and robust covers on both sides of the board, accommodate military two-level maintenance

### Electrical

**MIL-STD-704F:** 50 mSec Hold Up built in, for up to 136W load.

**Input Voltage:** 18-55VDC

**Voltage Rails:** +12V (PO1), +3.3V (PO2), +5V (PO3), 3.3 AUX (SOSA Version) = +12V for P03)

### For Standard VPX Version:

Max Wattage total for +5V & +3.3V rail = 100W  
Max Wattage total for +12V & +12V\_AUX rail = 5W

Max Wattage total for -12V\_AUX = 5W

Total Wattage for unit = 110W

### For SOSA VPX Version:

Max Wattage total for +12V & +3.3 rail = 120W

Total Wattage for unit = 120W

### For High power VPX version:

Max Wattage total for +5V & +3.3V rail = 100W

Max Wattage total for +12V & +12V\_AUX rail = 72W

Max Wattage total for -12V\_AUX = 72W

Total Wattage for unit = 244W

**Filtering:** Built in MIL-STD461 Section CE-102 filter

**Ripple:** per VITA46 specification

**Isolation Voltage:** Input to Output (1500V)

### Environmental

**Storage Temperature:** -40°C to +100°C

**Operating Temperature:** -40°C to +85°C (at the Wedge lock edge)

**Power supply output dependent on chassis cooling capability**

## Overview

Dawn's VITA 62 Compliant PSC-8742 is designed to operate in a military environment over a wide range of temperatures at high power levels. Models available include air cooled, conduction to wedge lock cooled and conduction to bulkhead cooled, applications and configurations.

The optional VITA46.11 RuSH Monitor is interfaced into the OpenVPX (I<sup>2</sup>C) management plane, providing an I<sup>2</sup>C communication link with VITA46.11 compatible VPX cards.

Optional LED / Status / Power Good output.

Custom power capacity and voltage input range configurations available. Contact factory for additional information on custom Voltage options, controls, and VITA46.11 SOSA compatible controller.

# Efficiency chart for VPX Standard version of PSC-8742

## PSC-8742 Efficiency vs. Load estimate Charts

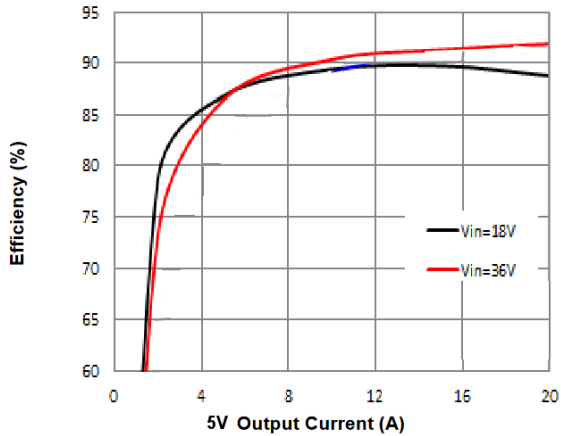


Figure 1. Efficiency vs. Load Current (25°C)

PSC-8742 draws current from the 5V rail to supply +3.3V. +3.3V output is typically 85% eff between 0.200 Amp and 4 Amp loads.

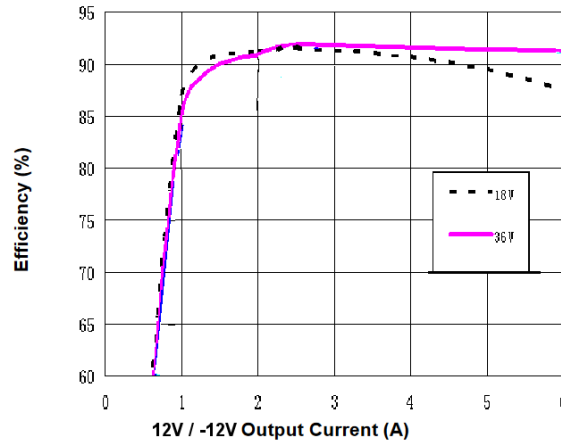


Figure 2. Efficiency vs. Load Current (25°C)

# Efficiency Chart for SOSA VPX version of PSC-8742

## SOSA Version - PSC-8742 Efficiency vs. Load estimate Charts

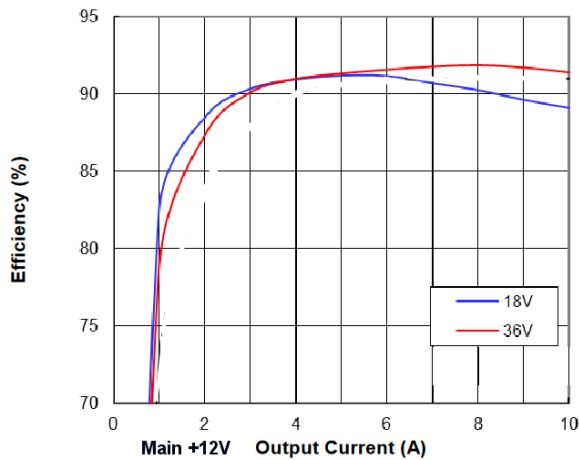


Figure 1. Efficiency vs. Load Current (25°C)

SOSA Version PSC-8742 draws current from the 12V rail to supply +3.3V. +3.3V output is typically 85% eff between 0.200 Amp and 4 Amp loads.

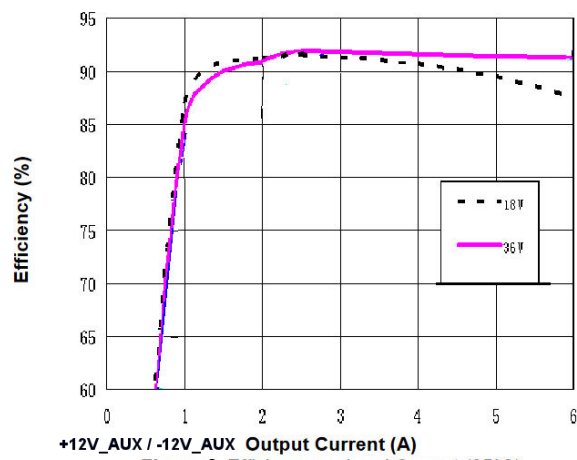


Figure 2. Efficiency vs. Load Current (25°C)

**Need VITA 46.11 support contact factory for quote.**

**Dawn VME Products (510) 657-4444**

# Ordering Information

## P/N 06-1018742-WXYZ

**W = Power Input**

- 1 = Not Available
- 2 = 28– 48VDC Nominal
- 4 = Not Available
- 5 = Not available
- 6 = Not Available

**X = Cooling/Coating Options**

- A = Air Cooled, No Conformal Coat
- W = Conduction to Wedge Lock, No C. Coat
- 1 = Air Cooled, Conformal Coated
- 3 = Conduction to Wedge Lock, Conformal Coated

**Y = Firmware Options**

- 1 = Standard Firmware
- 2 = VITA46.11 Controller (With Voltage, Temperature Fan (1) Tach monitor and PWM fan speed controller)

**Z = Special Options**

- 0 = VPX Version (VS3 = +5V) (110W Version)
- 1 = SOSA Version (VS3 = +12V) (120W Version)
- 2 = VPX Version (Vs3 = +5V) & DC IN+ on A1,B1,C1 (High Power 244W Version)
- 3 = SOSA Version (VS3 = +12V) & DC IN+ on A1,B1,C1 (High Power 192W version with integrated +12V@6A fan power module feeding pin 6)
- 4 = VPX version (VS3=5V & VS1=+12V@6A, no=12V\_AUX) (Mid power 172W Version)

Note: AC input option is available with Dawn P/N 06-1016236



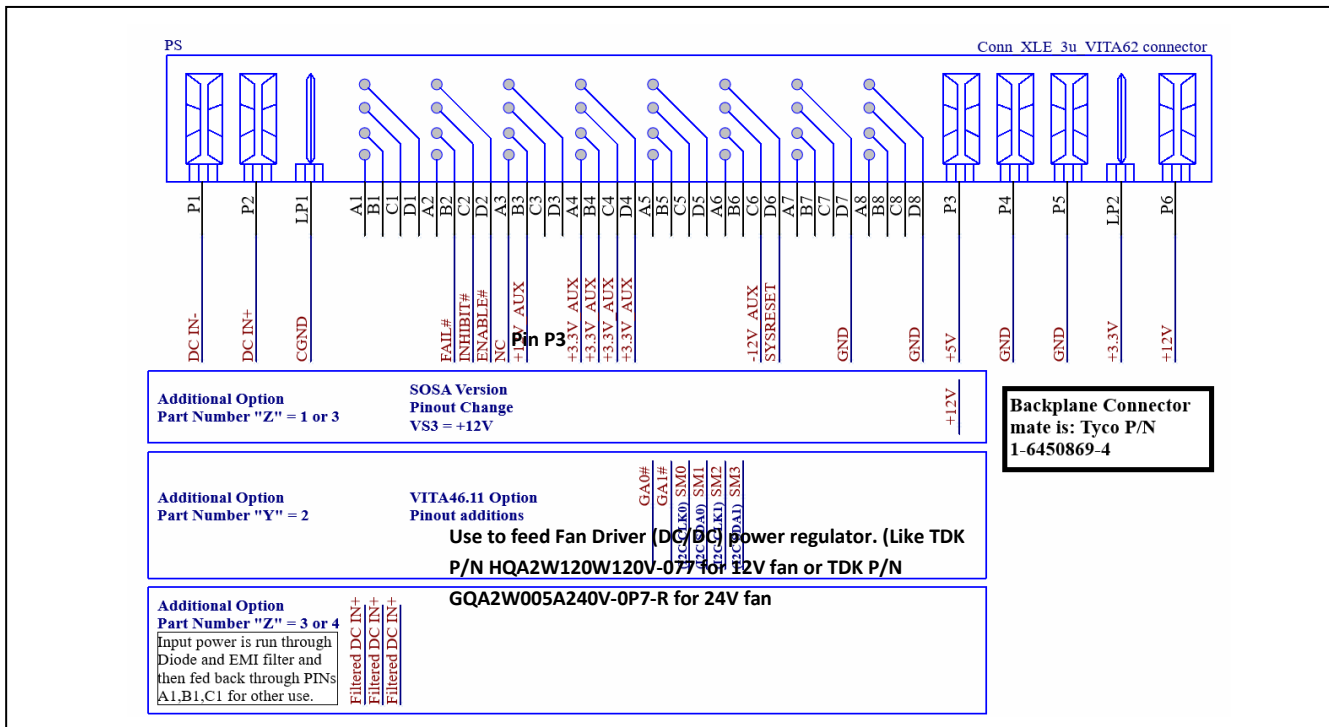
**W Cooling Option Shown**



**W Cooling Option Shown Front Panel View shows battery, USB connector and**

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)



**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