3U 400W Plug-in Power Supply for Air and Conduction Cooled Systems

Features
- True 6 Channel supply provides full Open VPX support
- Available in Air, Bulkhead conduction, and primary or secondary 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 share compatible with additional PSC-6629 units
- I2C interface for Status & Control
- Standard INH# and EN# 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
- VITA48.2 Compliant Inject / Eject levers for easy installation

Overview
Designed specifically for the Open VPX market, Dawn’s PSC-6629 is designed to operate over a wide range of temperatures at high power levels. Models are available for air cooled, conduction to bulkhead cooled, and conduction to wedge lock cooled applications and configurations.

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

Custom firmware enables additional features such as monitoring humidity, 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 MIL-STD-810F
- Card Guide style and Mounting: Wedge Locks
- Connector: 3U PICMG 2.11 Type 47 pin power connector
- Dimensions: Standard 1” Conduction cooled form factor
- Weight: 1.65 Lbs/ 0.7478 Kg.
- Inject & Eject: VITA 48.2 compliant inject and eject features
- Covers: ESD covers on both sides of the board, accommodate military two-level maintenance

**Electrical**
- PCB Design: 10-Layer, 2 oz. copper, high performance
- Input Voltage: 18-36VDC, 36-75VDC
- Voltage Rails: +12V (VS1), +3.3V (VS2), +5V (VS3), Aux+12V, Aux-12V, Aux+3.3V, VBAT (+3.0V typical)
- Output Current for Each Voltage Rail:
<table>
<thead>
<tr>
<th>Voltage</th>
<th>Output Current (Amps) for each channel</th>
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<tbody>
<tr>
<td>VS1</td>
<td>24V/48V</td>
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</tbody>
</table>
- Wattage Max +5V rail: 200W@28 or 48 V input
- Wattage Max +12V rail: 200W@28 or 48 V input
- Total Maximum Power: 400W@28 or 48 V input
- Ripple: <45mVp-p on +3.3V and +5V, <2mVp-p on +12V and -12V
- Isolation Voltage: Input to Output (1500V)

**Environmental**
- Storage Temperature: -40°C to +100°C
- Operating Temperature: -40°C to +85°C @ Wedge lock edge

Power supply output dependant on chassis cooling capability
Another Performance Design from the Team at Dawn

**Ordering Information**

**P/N 06-1016629-WXYZ**

<table>
<thead>
<tr>
<th>W</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
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</thead>
<tbody>
<tr>
<td>Power Input</td>
<td>Cooling/Coating Option</td>
<td>Firmware Options</td>
<td>Wedge Lock Side</td>
</tr>
<tr>
<td>1 = 12VDC Nominal</td>
<td>A = Air Cooled, No Conformal Coat</td>
<td>1 = Standard Firmware</td>
<td>0 = No longer applies**</td>
</tr>
<tr>
<td>2 = 28VDC Nominal</td>
<td>B = Conduction to Bulkhead, No Conformal Coat</td>
<td>2 = Custom, Includes Humidity</td>
<td>1 = Primary side wedge locks</td>
</tr>
<tr>
<td>3 = 48VDC Nominal</td>
<td>W = Conduction to Wedge Lock, No C. Coat</td>
<td>2 = Secondary side wedge locks</td>
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<tr>
<td>4 = 120VAC, 47-400Hz</td>
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<tr>
<td>5 = 240VAC, 47-400Hz</td>
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<tr>
<td>6 = 90-264VAC, 47-400Hz</td>
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Note: AC and 12VDC Nominal input option not available with this P/N

**W Cooling option and Primary side Wedge Lock option shown**

**Side View**

**Backplane Connector P/N**

**Power Supply Connector P/N**

**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