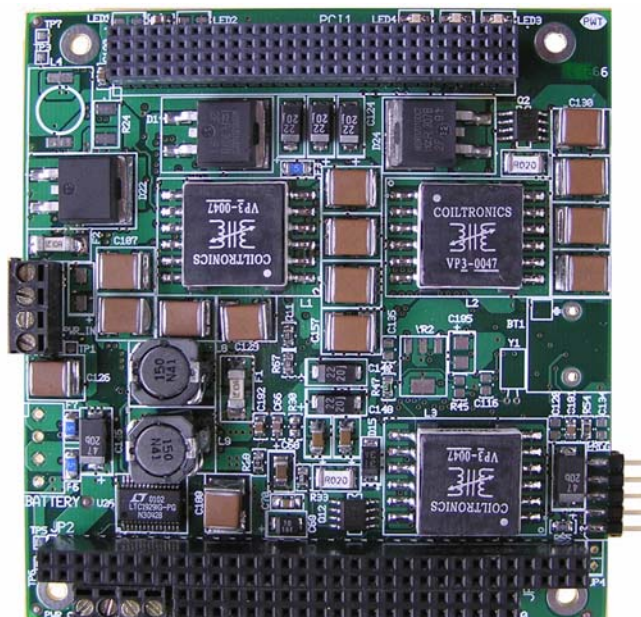


PSMU1000 PC/104+ Power Supply and Management Unit



General Description

The **PSMU1000** is a versatile Power Supply and Management Unit for PC/104+ systems providing clean and filtered DC voltage rails to the PC/104 and PC/104+ connectors. The PSMU1000 employs a robust 2-stage DC voltage conversion architecture with high efficiency to provide clean and stable DC voltages to the PC/104+ system from an input DC source. The wide input voltage range of the PSMU1000 allows PC/104+ systems to be powered from a wide variety of DC voltage sources including battery systems in Cars, Trucks and for Marine and Airborne applications. The two-stage conversion using SEPIC (single-Ended Primary Inductance Converter) topology ensures complete isolation between the input and output of the PSMU1000. The optional multi-chemistry Battery Charger, UPS and Real-Time Clock enables the PSMU1000 to be used in implementing sophisticated power reduction strategies in complex PC/104+ systems.

Features

- SEPIC DC/DC with inherent isolation
- Dual Stage DC/DC for excellent regulation
- Dual Phase conversion for lowest noise
- High Current +5V, +12V, -12V Outputs
- Multi-Chemistry Battery Charger (option)
- Uninterruptible Power Supply (UPS option)
- Time-of-day Power On/Off (option)
- Remote Power On/Off
- Power to PC/104 and PC/104+ connectors
- Wide Input range (+10V to +40V)
- Over-voltage, Load Dump Input protection

Advance Information (Rev A.10)
Subject to change without notification

Applications

- Power Supply for PC/104+ systems
- Ground Vehicle Power Supply
- Airborne Vehicle Power Supply
- Marine Vehicle Power Supply
- Wearable Computer
- Medical Instrumentation
- Data Acquisition
- Communications
- Internet/Network Appliance



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DC Power Input	+10V to +40V DC Input Line Regulation better than 20mV	
DC Input Protection	Over-voltage Protection Reverse Polarity Protection Vehicle Load-Dump Protection	
DC/DC Converters	Two-Phase SEPIC Input Stage generating 15V DC Capacitive isolation from DC Power input +12V and -12V DC/DC Output Stage to PC/104 and PC/104+ Two-Phase +5V DC/DC Output Stage to PC/104 and PC/104+ Over-Current and Short-Circuit protection on Outputs	
DC Power Outputs	Output to PC/104, PC/104+, Auxilliary Connectors	
+5V Output	Efficiency	up to 80%
	Current rating	5A (Main Output)
	Ripple	40mV
	Load Regulation	0.6%
+12V Output	Current rating	800mA
	Ripple	70mV
	Load Regulation	0.4%
-12V Output	Current rating	500mA
	Ripple	70mV
	Load Regulation	0.8%
UPS and Battery Charger (UPS option)	Primary and Secondary Battery Inputs (option) Dual-Battery Charging/Discharging Automatic Battery selection on main power fail Programmable Charging Current (up to 4A) Programmable Charging voltage (up to 28V) Support for NiCd, NiMH, Li-Ion, Lead-Acid Batteries	
Auto-Resume Controller (ARC option)	Built-in Real-time Clock (option) Programmable Power On (System Resume) Auto-Resume setting at Yearly, Monthly, Daily, Hourly intervals	
Miscellaneous	Operating Temp of 0 to 60degC (cooling required above 50degC) Extended Temp of -40 to +85degC (option) Altitude up to 30,000ft Standard 3.6 x 3.8in PC/104+ form factor	
Software	Drivers for Windows-NT/2000/XP-E, Linux	
Ordering Information	PSMU1K-5A-UPS/ARC	(5A main Output, with UPS and Auto-Resume)
	PSMU1K-5A-UPS	(5A main Output, with UPS, no Auto-Resume)
	PSMU1K-5A-ARC	(5A main Output, with RTC, no Auto-Resume)
	PSMU1K-5A	(5A main Output, no UPS, no Auto-Resume)
	PSMU1K-5A-xx/yy-Ext	(Extended Temperature -40 to +85degC)
Contact	Pre-sales Tech Questions:	info@ampltd.com
	Purchasing:	sales@ampltd.com
	Technical Support:	support@ampltd.com

Advance Information

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