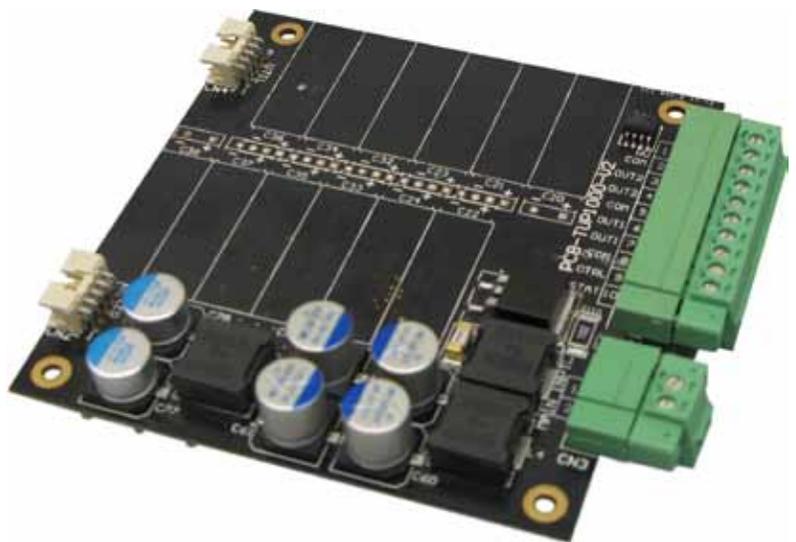


# TPS1000-512

PC/104 5V@7A & 12V@3.5A Dual Output DC-DC Converter

- **10,000W Transient Protection**  
Active voltage clamping  
Reverse polarity
- **Input Voltage Range**  
4.5V to 33V DC
- **Standard Output**  
5V @ 7A max., 12V @ 3.5A max.
- **High Efficiency**  
Up to 96%
- **Extended Temperature**  
-40°C to +85°C
- **Shock & Vibration**  
Tested to meet MIL-STD-810G
- **Communication**  
USB: CDC & MSC  
RS232: TTL
- **Indicator LEDs**  
3 Full colour: Input, Output & Status  
Programmable



## Power/OS onboard



**Enables** setup, control and calibration of the module



**Protects** from harmful environmental conditions



**Schedules** tasks including self tests and fault detecting



**Monitors** inputs, outputs, environment and interfaces



**Logs** history of operation and events

The TPS1000-512 is an ultra high efficiency dual programmable output DC-DC power converter.

Three stage input protection with the on-board PowerOS ensures the system is safeguarded against spikes and transients.

An extended operating temperature range and rugged design allows the TPS1000-512 to be reliably used in extremely harsh environments.

Three full colour RGB LEDs provide a visual at-a-glance indication of input, output and TPS1000-512 operation.

# Specifications

Power				
Main Input				Units
Input Voltage Range	4.5 to 33			V
Output 1 (X)	5	12	X	V
Voltage Range	4.75 to 5.25	11.4 to 12.6	4.6 to 12.6	V
Current	7	3.5	3.5 to 7	A
Ripple Voltage	10 to 20	15 to 50	10 to 50	mV
Load Regulation	100 to 120	80 to 100	80 to 120	mV
Line Regulation	<10			mV
Output Temp Drift	100			mV
Efficiency	92	95	92 to 95	%
Output 2 (Y)		12	Y	V
Voltage Range		11.4 to 12.6	6.5 to 25	V
Current		3.5 to 7		A
Ripple Voltage		80 to 100		mV
Load Regulation		<350		mV
Line Regulation		10 to 20		mV
Output Temp Drift		150		mV
Efficiency		96		%

Mechanical	
<b>PC/104 Size &amp; Mounting</b>	
Dimensions	90 × 96 × 11mm (3.55 × 3.775 × 0.43")
Weight	46g
<b>Environmental</b>	
Storage Temperature Range	-40°C to +85°C (-40°F to +185°F)
Operating Temperature Range	-40°C to +85°C (-40°F to +185°F)
<b>Communication</b>	
USB	CDC and MSC
RS-232, TX & RX	TTL Levels
LED Indicators	3 on-board RGB Off-board LEDs: 3 RGB or 9 single colour
<b>Configuration</b>	
OS Support	Linux, Windows XP, Windows 7 (32 and 64 bit)
<b>Certifications</b>	 Manufactured in <b>ISO 9001:2008</b> <b>ISO 14001:2004 &amp;</b> <b>ANSI/ESD S20.20</b> Environments

# Ordering Information

## Models

- TPS1000-512** 5V & 12V dual output power supply
- TPS1000-5** 35 watt 5 volt single output power supply (OEM quantities only)
- TPS1000-12** 42 watt 12 volt single output power supply (OEM quantities only)
- TPS1000-XY** Specify Output 1 (X) and Output 2 (Y) (OEM quantities only)  
Ex: TUP1000-524 would have output 1 @ 5V and output 2 @ 24V or order as TPS1000-XY for fully programmable outputs.

## Options

- Conformal Coating** Acrylic, Silicone or Urethane coatings available
- COM-ADP1** RS-232-TTL Adapter board: includes 3 full colour RGB LEDs, microUSB connector and temperature sensor

## Block Diagram

