

# TPSi1085 *PC/104-Plus Power Solution*

## Isolated 85W DC/DC Power Converter

## Overview

Tri-M's TPSi1085 is an isolated PC/104-Plus power solution, designed for embedded applications requiring isolation and clean power in rugged environments.



With wide-range input voltages, transient suppression, galvanic isolation, and quick-disconnect terminal mating plugs, this rugged design is ideal for any industrial application.

Designed for harsh environments, including military standards, shock, vibration and extended temperature, the TPSi1085 is well suited for transportation, defence, and aerospace industries. For reliable protection and high performance, the TPSi1085 is the perfect solution for isolated DC power.

## Key Specifications

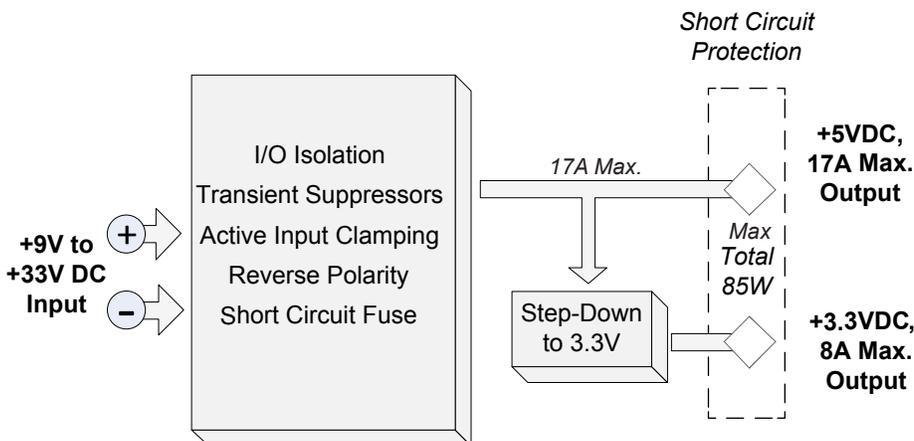
- **Enhanced Protection**  
2250V Input/Output Isolation  
6000W Transient Suppression  
Active Input Voltage Clamping  
Reverse Polarity, Short Circuit
- **Wide Input Voltages**  
Ranges from +9V to +33V DC
- **Standard Outputs**  
+3.3V@8A Max. & +5V@17A Max.  
85W Combined Total
- **High Performance**  
Up to 88% Efficiency
- **Extended Temperature**  
-40°C to +85°C / -40°F to +185°F

## Applications

- ✓ Military & Civil Vehicles
- ✓ Aerospace & Defence
- ✓ Industrial Automation
- ✓ Telecommunications
- ✓ Undersea & Marine

## Advantages

- **Rugged Design**  
Designed to Meet MIL Standards
- **Galvanic Isolation**  
Reliable System Protection
- **Simple Installation**  
Terminal Socket Mating Plugs
- **Space-Efficient Solution**  
High Density PC/104-Plus Module



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# TRI-M

TECHNOLOGIES

## Specifications

### Electrical

Input Voltage Range	+9V to +33V DC
+3.3V Output	8A Max.
+5V Output	17A Max.
Maximum Combined Power	85W Total*
Efficiency	Up to 88%*
Isolation Voltage	2250V Max.
Transient Supression	6000W Total
Output Ripple/Noise**	Typ 20mV, max 75mV
Line Regulation**	±0.05% Max.
Load Regulation**	±0.06% Max.
Switching Frequency	267kHz (5V), 1.01mHz (3.3V)
Current Limiting Fuse	Onboard 15A (on input source)
Quiescent current	22mA (LEDs & Outputs Off)

### Mechanical

Dimensions	PC/104 compliant, 90mm x 96mm x 15mm (3.55" x 3.775" x 0.6")
Weight	110g (3.9oz) no plugs 117g (4.1oz) with plugs

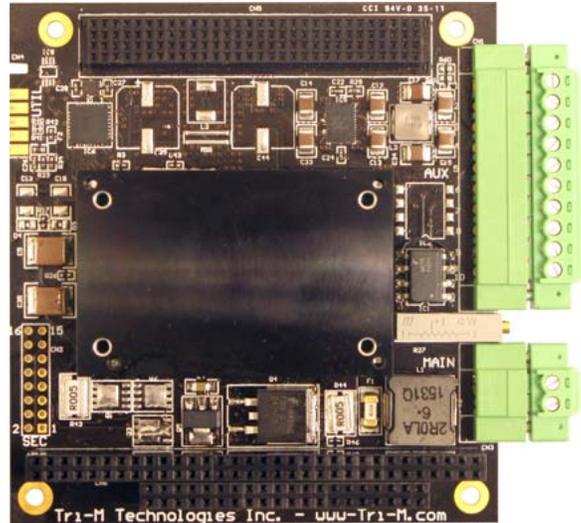
### Environment

Operating Temperature*	-40°C to +85°C (-40°F to 185°F)
Thermal Protection/Shutdown	+120°C (248°F)

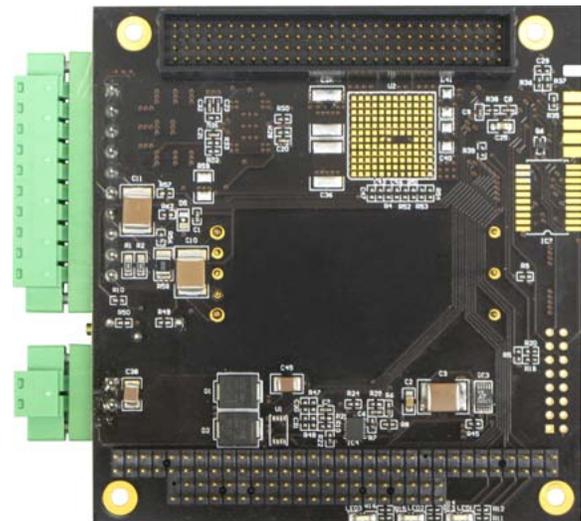
### Certifications



Manufactured in  
**ISO 9001:2008,**  
**ISO 14001:2004 &**  
**ANSI/ESD S20.20**  
Environments



Top View



Bottom View

### MODELS

TPSi1085 +3.3V,+5V, Combined Total 85W

### OPTIONS

Conformal Coating  
Non-Stackthrough



### Note

For detailed dimension, connector, and pin spacing information, please see the [User Guide](#)

# TRI-M

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