

## High Efficiency DC Power for ATX Compatible Servers



- **DC Input**  
-48VDC Nominal  
(-40 to -56VDC Continuous Input Range)
- **High Efficiency**  
>91% power conversion efficiency
- **Multi-Output**  
+12V, +5V, +3.3V, -12V, +5V  
(stand by)
- **ATX Compatible**  
Compatibility with Intel Specification SE7500WV2
- **High Reliability**  
100% HASS Tested – Projected MTBF >1 million hours
- **Compact Size**  
Low profile package fits standard 1U Server Designs

### PRODUCT OVERVIEW

Designed for use with TDI's Distributed DC UPS (d<sup>2</sup>ups<sup>TM</sup>) Signature Power Systems, this ATX-compatible power converter provides high operating efficiency along with excellent reliability and compact size. The converter allows high performance personal computers or servers to operate from standard DC power plants, eliminating the need for DC-AC inverter stages. Industry standard pin-outs and sizing provide compatibility with existing AC-based designs, easing implementation. Designed in compliance with NAVSO P-3641A, and with full Highly Accelerated Stress Screening (HASS) on all units, the converter provides the reliability required by enterprise critical applications.

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### **TDI - Transistor Devices**

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### SPECIFICATIONS

#### DC INPUT

**Input Voltage:** -40 through -56VDC  
**Peak Inrush Current:** Less than 50A peak  
**Efficiency:** 91% typical

#### DC OUTPUTS

**Output Voltage:** +12VDC, +5VDC, +3.3VDC, -12VDC  
**Standby Bias:** +5VDC

#### ALARMS AND CONTROL

**Output Control Signal:** PSON signal (active low) enables converter main outputs operation  
**Output Status Signal:** PWR\_OK signal (active high) indicates input and output voltages within specified limits  
**Control Signal Interface:** The converter is designed to operate in accordance with Intel document C25653-001 paragraph 10.3.2, which pertain to power supply timing requirements.

Output:	+12VDC	+5VDC	+3.3VDC	-12VDC	+5V SB
Min Volts	11.76VDC	4.9VDC	3.23VDC	-11.4VDC	4.85VDC
Max Volts	4200w	3360w	2500w	1680w	840w
Output Current (Continuous)	20A	15A	10A	0.3A	1.4A
Output Current (Peak)	25A	25A	18A	--	--
Ripple (pk-pk)	120mV	50mV	50mV	120mV	50mV

**Output Power:** 300W continuous @ 50oC\*

\* With 100LFM airflow externally supplied

#### PROTECTION FEATURES

**Output Over-voltage:** All outputs protected with over-voltage shutdown circuitry

**Input over-current:** 10A Fuse

**Output over-current:** Automatic electronic current limit circuitry

**Remote Sensing:** Remote sensing available for +12, +5and +3.3VDC outputs

#### ENVIRONMENTAL CONDITIONS

**Operating Temperature:** 0 to 50oC

**Storage Temperature:** -10 to +85oC

**Humidity:** 0 to 95% non-condensing, operating and storage

#### MECHANICAL

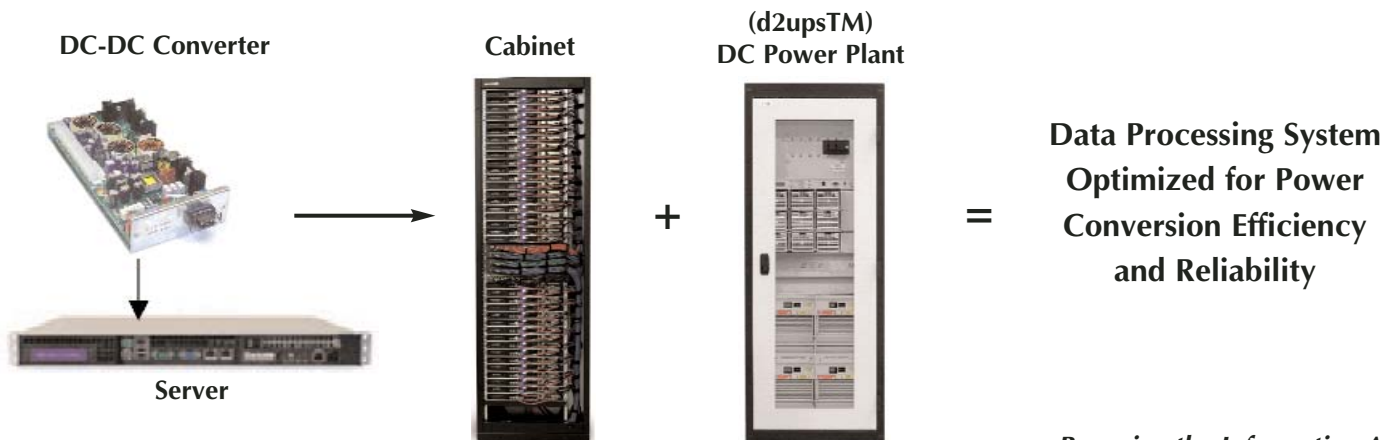
**Converter Size:** 7.75"L X 4.3"W X 1.25"H

**Input Connector:** Three terminal, blind mate DC Connector

**Output Connectors:** Two board mount, cable compatible connectors

**Safety Agency:** UL approved to EN60950

### OPTIMIZED POWER SYSTEMS FOR DATA PROCESSING FROM TDI



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