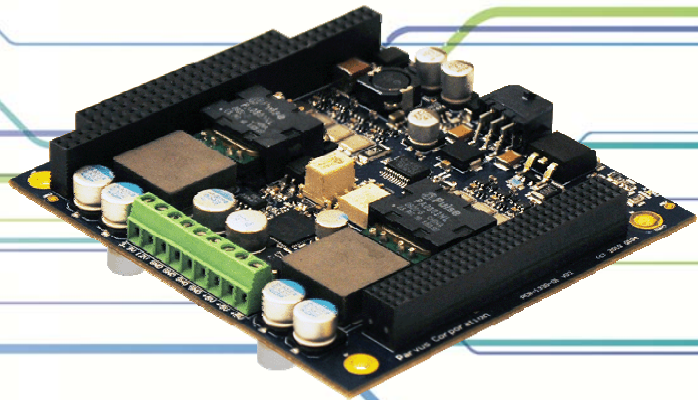


ACS-5180

PC104+ 80-Watt Isolated DC/DC MIL-704/1275 Power Supply

- 80 / 40 Watt PC104+ Power Supply
- 18V to 33VDC Input Range
- +3V, +5V, +12V DC Output
- High Efficiency: ~90%
- Extended Temperature: -40 to +85C
- MIL-STD-704E & MIL-STD-1275D Compliance
- MIL-STD-461E EMI Filter
- Designed for MIL-STD-810G Environments



FEATURES

FORM FACTOR: PC/104-Plus Power Supply

COMPLIANCE: Designed to Meet MIL-STD-810G, MIL-STD-1275D, MIL-STD-704F, and MIL-STD-461E

VOLTAGE INPUT: Nominal 28.0 V DC (+18 VDC to +33VDC with support for 250V spike and 100V surge per MIL-STD-1275)

VOLTAGE OUTPUT: +3.3V, +5V, +12V DC

ISOLATION: 1500V Galvanic Isolation DC

POWER OUTPUT: Up to 80 Watts at +85C: +5V @ 16A; +12V @ 2.0A, +3.3V @ 8.0A

POWER INPUT PROTECTION: Reverse Polarity, Voltage Transient, Surge, Spike, Over Current

POWER OUTPUT PROTECTION: Filtered Output, Current Fold-Back

POWER CONNECTORS: PC/104 Bus (ISA), PC/104-Plus Bus (PCI), Screw Clamp Terminal

REMOTE SHUTDOWN: Remote Shutdown Support

STATUS INDICATION: Status LED Indicator Signal for Power Fault/Power Good

HIGH EFFICIENCY: 90+% Efficient at Full Load

STATUS INDICATION: Activity, Link and Speed Indicator Signals Brought Out Through Connectors (No Onboard LEDs)

The ACS-5180 is a rugged PC/104-Plus isolated power supply capable of supplying up to 80 Watts of power output over extended temperature ranges to embedded computing devices in demanding military/civil ground vehicle, shipboard, and aircraft applications. Designed for extended temperature operation (-40 to +85C per MIL-STD-810G) and demanding power conditions dealt onboard military ground vehicles (MIL-STD-1275D) and aircraft (MIL-STD-704F) installations, this highly efficient (90%+), filtered DC/DC converter supplies DC voltage outputs (+3.3V, +5V, +12V) over the PC/104 (ISA) bus, PC/104-Plus (PCI) bus, or onboard screw clamp terminal.

Featuring a rugged mechanical design, this small form factor (3.550" x 3.775") card is designed to be used as the bottom card in a PC/104 system stack, operate without heatsinking or any active cooling, and provide resistance to high levels of shock and vibration. Featuring an onboard MIL-STD-461 EMI filter and transients protections for the 250V spike and 100V surge requirements of MIL-STD-1275, the card can replace the typical in-line power conditioning/EMI filtering devices integrated into military embedded systems. The product is offered in two output configurations: 40-watt or 80-watt to accommodate smaller to larger PC104(+) system power requirements.

ACS-5180

Specifications

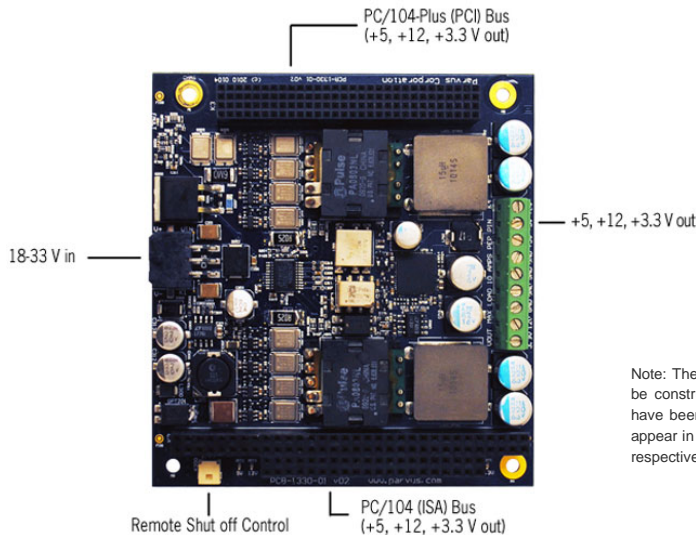


Top View



Bottom View

EFFICIENCY	Power Conversion Greater than 90% Efficient at Full Output
INPUT PROTECTION	<ul style="list-style-type: none"> • Designed to Meet Input, Surges, Spikes, Transient Requirements of MIL-STD-1275D and MIL-STD-704D • +/- 250 Volt Spike Protection • 100 Volt Reverse Polarity Protection • 100 Volt/50ms per MIL-STD-1275 Operation • 1,500 Watt Bi-Directional Transient Voltage Suppressor (TVS) • Over Current Shut Down Over 18A Nominal
OUTPUT PROTECTION	Current Fold-Back Protection
SWITCHING FREQUENCY	330kHz
NOISE RIPPLE	Organic capacitors reduce ripple noise to less 30mV
POWER OUTPUT	80 Watt Version: <ul style="list-style-type: none"> • +5V @ 16A; +12V @ 2.0A, +3.3V @ 8.0A 40 Watt Version: <ul style="list-style-type: none"> • +5V @ 8A; +12V @ 1.0A, +3.3V @ 4.0A
BUS	<ul style="list-style-type: none"> • 16-bit PC/104 (ISA): +5V and +12V DC Outputs • 32-Bit PC/104-Plus (PCI): +3.3V, +5V, and +12V DC Outputs
PHYSICAL	<ul style="list-style-type: none"> • Dimensions: 3.550" x 3.775" (90x96 mm) • Weight: -0.40 lbs (0.18 kgs) for fully populated 80W version • Form Factor: PC/104-Plus Compliant; Intended to be Used as Bottom Board of PC104(+) stack • Connectors: Non Stack-Through PC104 (ISA) and PC/104+ (PCI) Buses, Screw-Clamp Terminal Block
EMI/EMC	Designed for Compliance with MIL-STD-461E (CE102, CS101) – Qualification Testing Pending
ENVIRONMENTAL	Designed to Meet MIL-STD-810G (Qualification Testing Pending): <ul style="list-style-type: none"> • Operating Temperature: -40° to +85C / -40°F to +185°F (MIL-810G, Methods 501,502) • Storage Temperature: -40 to +85C / -40°F to +185°F (MIL-810G, Methods 501,502) • Operating Shock: 40g, 11ms, 3 pos/neg per axis, 18 terminal peak sawtooth pulses (MIL-STD-810G, Method 516) • Random Vibration: 5Hz to 2000Hz, 7.98 GRMS Power Spectral Density (PSD) Integral, 3 Axes, 1 Hour/Axis (MIL-STD-810G, Method 514, per Hybrid Jet, Helo, Ground Mobile & Tracked Vehicle Profile) • Humidity: Up to 95% RH @ 40C, Non-Condensing (by analysis)
RELIABILITY	<ul style="list-style-type: none"> • No Moving Parts. No Active Cooling Required. • MTBF: TBD • Assembled to IPC-A-610 Class III Workmanship • All Industrial Temperature Grade Components
WARRANTY	• 1 Year RTF Warranty (Extended Service Contracts Available)
OPTIONS	<ul style="list-style-type: none"> • Conformal Coating • Custom Connectors • Non-Isolated Power Control • Integrated into Mil-Qualified DuraCOR 810-Duo Mission Computer, DuraNET 1268 Gigabit Ethernet Switch, etc.



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