Advanced Lithium–Ion Battery Solutions

Example Battery Specifications

	24V Module	48V Drawer
Nominal Voltage	24 VDC	48 VDC
Nominal Energy	910 Wh	3640 Wh
Nominal Capacity	35 Amp h	140 Amp h
Voltage Range	19.3 - 29.4 V	38.6 - 58.8 V
Recommended Discharge Current	17.6 A	35.2 A
Recommended Charge Current	17.6 A	35.2 A
Module Dimensions (W x D x H)	8.25 x 21.5 x 2.5 in 21.0 x 54.6 x 6.4 cm	16.5 x 21.2 x 5 in 42.0 x 54.6 x 12.8 cm
Module Weight	15 lbs (6.8 kg) module	87 lbs (39.5 kg) drawer
Visible LED Performance Indicators	Stoplight Configuration	
Two Available Communication Ports	WAN/ CAN Bus	
Cycle Life @ 25 C, 100% DOD	> 1,000	
Cycle Life @ 25 C, 50% DOD	> 10,000	
Operating Temperature	-20 to 60 C	
Storage Temperature	-30 to 60 C	

Features & Benefits

- Integrated management system for battery cell monitoring and protection
- Plug and Play connection to easily install and safely remove module from the string
- Safety features include protection against rapid discharge and current limitiation
- Configurable for energy systems from 24 VDC up to 600 VDC

Individual Battery Drawers can combined to meet larger capacity and duration requirements.

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Advanced Lithium-Ion Battery Modules

Energy Technologies Inc.

Rugged Power ◆ Global Solutions

www.BatteryModules.com

Integrating Computing, Power & Cooling into One Rugged Portable System:

Reliable computer operation has become vital to many segments of our daily lives. This is especially true in critical defense and industry applications where even momentary interruptions of computer functions can cost large sums of money or even endanger peoples' safety. However, the reliability of any computer is no greater than its power source. In fact, the number one cause of hardware related computer outages or failures are directly or indirectly related to power. The reliability of a computer is further jeopardized when operated in harsh environments where the power sources are poor, the temperature and humidity extremes may cause component failures and mechanical shock from transport may physically damage the equipment.

Core Systems and Energy Technologies, Inc. have teamed to offer Rugged Computer Systems™ as a total turnkey solution for highly reliable operations over a wide range of power and environmental conditions.

Advantages

- Both Core Systems and Energy Technologies are well established in the military and industrial markets with rugged, high-reliability products
- Between the two companies' product lines, complete system solutions can be configured for a wide array of applications
- Both companies can offer standard or custom engineered system or sub-system configurations that meet applicable Industry and Mil Standards
- Integrating all sub-systems into one turnkey unit minimizes setup time, logistics and cost
- Global AC and DC inputs allow operation from any local power grid, generator, vehicle or aircraft
- Optional long duration battery backup and renewable energy sources
- Total system mounted securely, protected from mechanical shock and vibration
- Available built-in cooling can extend operating temperatures beyond the standard –20°C to +70°C

Our Rugged Computer Systems are available in Configurations to *Fit* Your Application

Rugged Industrial Computers Built by Core Systems

Rugged Servers

Core rugged computers successfully meet MIL-STD-810F, MIL-STD-810G, MIL-STD-461F, and MIL-S-901D. Offering a wide variety of customizable options based upon customer applications, Core rugged systems are frequently trusted in ground vehicles, aircraft, and shipboard applications.

Rugged Displays

Ranging from ultra short depth 1U rack mounts to side-by-side multi-displays to 8U widescreen panel mounts, Core Systems' rugged LCDs come with lightweight all-aluminum construction, DVI and VGA inputs, and a wide variety of customizable options including keyboards, KVMs, and touch screen options.

Tactical Computing

Core Systems has a complete line of small rugged tactical computers. Each small, lightweight computer is conduction cooled and made for deployment into extreme temperatures and extreme shock/vibration zones. CPUs range from Core i7 to Core 2 Duo with I/O options for MIL-1553, CAN Bus, GPS and more.

Custom Products

Core Systems continually develops new, innovative custom solutions for unique customer needs. Core can customize any product to meet the needs of a particular program or installation. Core's expert systems engineering team, coupled with their rapid response prototyping capability uniquely positions Core Systems as the leading rugged systems provider to the modern warfighter.

Rugged Computer Features

Core Systems rugged computers are configured to meet your tactical needs. Core also offers a number of vital components including chassis, motherboards, SHBs and backplanes.

Core Rugged Computers Offer:

- Ultra-Rugged system designs
- Low total system wattage
- Superior system cabling/air flow
- Low acoustic dB Levels
- Customization options
- Standard 2 Year warranty

Core Rackmount Displays Offer:

- Lightweight all aluminum construction
- Multiple keyboard options available
- Multiple KVM options available
- Both DVI and VGA inputs

Uninterruptible Power Systems (UPS)

ETI offers power solutions that meet the demands of these rugged computers.

- True online design with computer grade or medical grade power for critical loads
- Input voltages: 85-270 VAC auto selectable
- Input voltages: 12, 24, 48 or 72 VDC
- Power factor correction: up to > .99
- Output voltages: 120-240 VAC, 3.3-125 VDC
- Output power ratings: from 1 to 24 kVA
- Brownout, blackout, overvoltage protection
- Monitoring & control: RS-232, SNMP, WAN, 10Base-T, HTTP & Telnet
- Rackmounts, briefcases, transit cases, NEMA & custom enclosures/ form factors
- Options:
  - Integrated PDUs
  - Additional batteries for up to 24 hrs. of run time
  - Galvanic isolation
  - MIL-STD compliant
  - EMI protection
- All weather operation