


CADEX C8000 TECHNICAL SPECIFICATIONS

System	
<p>Standard Components</p> 	<p>Each Standard System includes:</p> <ul style="list-style-type: none"> • C8000 Test Unit • BatteryLab PC Software (CD-ROM) • 4 Power Port Cables • 4 Auxiliary Cables • 1 Dual Power Port Cable • 1 Ethernet Cable • 3AC Power Cords (N. America, Europe, UK type) • Rack Mounting Bracket Set for 19" 3U Rack • 1 Quick Start Guide
Channels	4 Independent Channels each including: 1 Battery Port + 1 I/O Port
Physical	
Dimensions	480mm x 380mm x 140mm (18.9" x 15.0" x 5.5")
Weight	15.5 kg (34 lb)
Mounting Options	Desktop or 19" (483mm) 3U Rack-mount (brackets included)
Display	5.7" (145mm) QVGA 320x240 graphics with backlight
Battery Ports (front panel)	4 Ports each including: <ul style="list-style-type: none"> • Battery Positive (+) • Battery Negative (-) • Sense Positive (+) • Sense Negative (-) • Thermistor Input • Thermistor Ground
Input/Output (I/O) Ports (front panel)	4 x DB25 Type each including: <ul style="list-style-type: none"> • 4 Differential Analog Inputs: 0-5V, 0-10V, or 0-15V • 4 Digital Inputs: 0-5V • 2 General Purpose Analog Outputs: 0-5V • SMBus Enabled: 5 Possible Termination Signals
Active Data Ports (back panel)	Ethernet 10/100 MB for connection to PC Designated Serial Port for External Load Designated Serial Port for Environmental Chamber
Environment	
Recommended Operating Temperature	5°C-35°C (40°F-95°F)
Recommended Storage Temperature	-20°C-70°C (-4°F-160°F)
Battery Testing	
Chemistries	All Standard Battery Types: <ul style="list-style-type: none"> • Lead Acid • Ni-based: NiMH, NiCd • Li-based: Li-ion, Li-Phosphate
Capacity Range	50mAh to 1000Ah
Battery Interfaces	
Power Port Cable (Standard) - power	4x 1.8m (6') with alligator type clips
Auxiliary Cable (Standard) - data	4x 1.8m (6')
Dual Port Power Cable - power	1x 1.8m (6') – connects to channels 1+2 or 3+4 to increase current capability from 10A to 20A
SnapLock Battery Adapter Unit	2-bay unit connects to C8000 standard cables supports: <ul style="list-style-type: none"> - SnapLock Battery Adapters (4-Wire type only) - RigidArm Universal Adapter
Electrical	
Input Power	100-240 VAC, 50-60 Hz
Battery Voltage Range	Nominal 1.2V-36V (max 45V) supports serial connection of: <ul style="list-style-type: none"> • Up to 10 Li-ion cells (3.6V/cell) • Up to 18 Lead Acid cells (2.0V/cell) • Up to 30 Nickel-based cells (1.2V/cell) – Note: 45V maximum total
Maximum Charge Power	100W per channel = 400W total
Maximum Discharge Power	80W per channel = 320W total 160W per channel pair using Dual Power Port cable <i>External Load may be used to increase discharge up to 2400W</i>
Maximum Charge/Discharge Current	30mA to 10A set in 1mA increments 20A maximum discharge rate using Dual Power Port cable <i>External Load may be used to increase discharge up to 240A</i>
Output Frequency	Square 2kHz (500 microseconds)
Accuracy	Voltage = 0.1%, Current = 0.25% full scale
Power Management	Current automatically scaled down if power limits are exceeded – message indicates scaled test

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Charge Methods	Charge methods are dependent upon chemistry: Li-ion + Lead Acid = constant voltage with a current limit Nickel-based = constant current with optional Reverse Load Charge method
Discharge Methods	Constant current / Constant power
Data Acquisition	
System Sample Rate	500 microseconds
Terminal Data (last 500 samples) Capture Rate	2-200 mS
Capture/Display Rate (non-termination)	1-60 S
Load Capture	Minimum Sample Rate Increment = 500 microseconds # of Samples = 10-500
Certification	
Safety	CSA, UL, CE
Environmental	RoHS, WEEE
Programs	
Service	Standard Service Programs: <ul style="list-style-type: none"> • Charge • Auto • Prime • Boost
Rapid Tests	Standard Rapid Tests: <ul style="list-style-type: none"> • OhmTest • Impedance
Advanced	Standard Advance Programs: <ul style="list-style-type: none"> • Runtime • Life Cycle • Self-Discharge • Discharge Only • CDMA • GSM • Extended Prime • Load Capture (requires BatteryLab + LCU)
SMBus	<ul style="list-style-type: none"> • Battery Info • Fuel Gauge Calibrate • SMB Charge • SMB Discharge
Custom (requires BatteryLab)	Maximum Steps = 100
External Test Equipment Control	
Environmental Chambers	Models supported: Thermotron 2800/3800/8800, Test Equity Watlow 4
External Digital Loads	B&K Precision Programmable DC Electronic Loads 8500 Series models supported: <ul style="list-style-type: none"> • 8510 (0.1V-120V/120A/600W) • 8514 (0.1V-120V/240A/1200W) • 8518 (0.1V-60V/240A/1200W) • 8520 (0.1V-120V/120A/2400W)
Load Capture	Cadex Load Capture Unit (LCU)
Security	Password protection
Warranty	
Standard	2 year limited warranty (materials & workmanship)
Extended (Optional)	Additional 2 years (total = 4 years)
Calibration	Recommended factory calibration every 1 year <i>Contact Cadex for further information</i>
Upgrades	Firmware upgrades enabled by BatteryLab software

BatteryLab™: Technical Specifications

System	
System Requirements	PC with the following available: <ul style="list-style-type: none"> • - Windows XP O/S • - Ethernet connection • - 1.2 GHz processor • - 512 MB RAM • - 10 GB storage memory
# Test Systems	Each BatteryLab license operates: <ul style="list-style-type: none"> • Up to 8 C8000 test systems • Up to 32 individual batteries