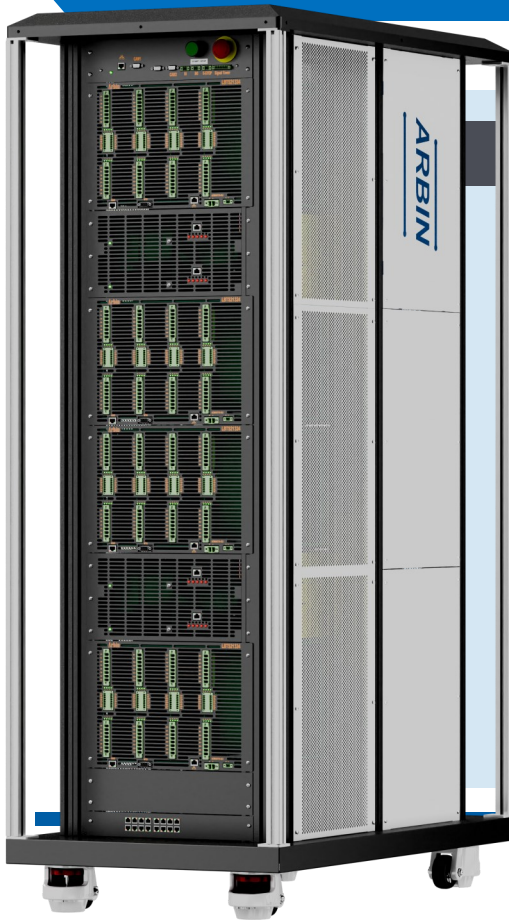




Key Features

- ✓ **100ppm Precision** with industry-leading 24-bit resolution across four current ranges per test channel
- ✓ **Natively supports** future in situ upgrade to 6 V range without sacrificing accuracy today
- ✓ **True Bipolar Circuitry** to ensure cross-zero linearity with no switching time between charge and discharge
- ✓ **Embedded MCU** for real-time calculations of battery capacity, power, energy, IR, and efficiency metrics
- ✓ **Minimize Floor Space** with enhanced channel density in a compact footprint

Beyond Precision

Arbin's next generation Laboratory Battery Testing (**LBTS**) series offers industry leading 24-bit resolution and high-precision measurements. The all-purpose tester provides true bipolar circuitry ensuring cross-zero linearity, four auto switching current ranges per test channel, and embedded MCUs for real-time calculations.

Developed in collaboration with industry leaders Ford Motors and Sandia National Lab, and supported by US DOE funding through DOE ARPA-E, Arbin utilizes exclusive technology to elevate battery testing standards.

Standard Configurations

Low Current Configurations	
Voltage Range	Current Range
-5 to 5V	1A/100mA/10mA/1mA
	5A/1A/100mA/1mA
0 to 5V	10A/1A/100mA/1mA
	20A/1A/100mA/1mA

High Current Configurations	
Voltage Range	Current Range
0 to 5V	50A/10A/1A/10mA
	100A/10A/1A/10mA
	150A/10A/1A/10mA
	300A/10A/1A/10mA
Up to 1,200A per Module	

System Information

Low Current Configurations	
Channels per Module	32
Channels per Chassis	Up to 128
Current Ranges per Channel	4 (auto switching)
Channel Parallel	Up to 640 A
Current Rise Time	<200 μ s
Built-In Auxiliary Inputs	
Temperature PT100	1 input/channel
2nd Voltage	1 input/channel
High Current Configurations	
Channels per Module	Up to 12
Channels per Chassis	Up to 48
Current Ranges per Channel	4 (auto switching)
Channel Parallel	Up to 1,200 A
Current Rise Time	<2 ms
Built-In Auxiliary Inputs	
Temperature PT100	Up to 2 inputs/channel
Control & Measurement Specifications	
Accuracy	$\pm 0.02\%$ FSR
Precision	$\pm 0.01\%$ FSR
Measurement Resolution	24 Bit
Control Resolution	16 Bit
Time Resolution	100 μ s
Data Acquisition Rate	Up to 1 kHz
Chassis Specifications	
Cooling	Air-cooled with built-in variable speed fans
Input Power	220V1P, 208V3P – 520V3P
Chassis Size	Width: 25" (635 mm) Depth: 45" (1143 mm) Height: 72" (1,828.8 mm)

Application Focus



Facility integration to interface with temperature chambers, test facilities, or other third party systems.



Data Sampling and Logging: Powerful embedded controllers provide ultra-fast data sampling and logging.



Comprehensive safety features for lithium-ion battery testing.



Dynamic data acquisition based on changes in time, voltage, and current to capture more data when it's needed and maintain efficient file sizes.



Simulation of Real World Test Profiles



dQ/dV & Coulombic Efficiency

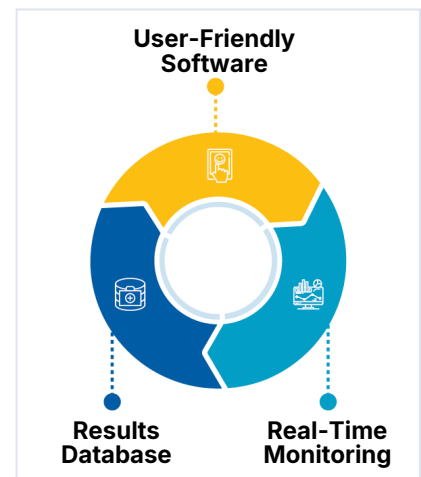


Cell-level Quality Control & Grading

Powerful Software Integration

Arbin's LBTS system, powered by our latest MITS software, optimizes the battery testing process by simplifying control of the testing process, and integrating the test station into a test facility.

- ✓ Create and manage test schedules, monitor real-time testing, and analyze results.
- ✓ Integration with third-party hardware and automation software.
- ✓ Suitable for both laboratory and production environments.
- ✓ Test data securely stored in a range of robust databased formats including MS SQL, PostgreSQL, or utilize Apache Kafka for additional flexibility.



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Rev: Aug 2025