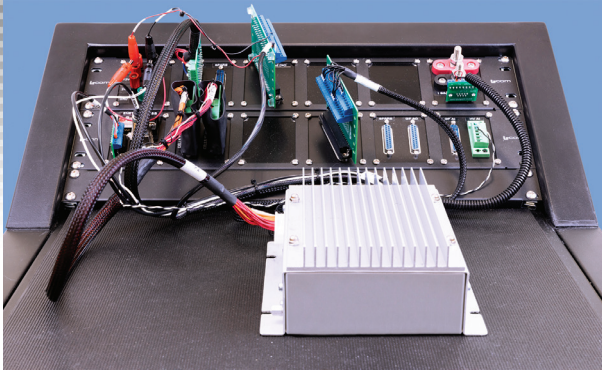




Automated test solutions for the entire product lifecycle



Reduce your capital expense and time to market with Bloomy's test as a service!

Until now, validation test of your Battery Management System has required costly and time-consuming development of a custom, one-off test system. Now you can test your BMS at a fraction of the cost and time by using Bloomy's unique *BMS Validation Test Service*.

With this one-of-a-kind service, you have access to Bloomy's *FLEX BMS™* Validation System, the electrification industry's go-to solution for BMS validation. Once your BMS is connected to our multi-cell hardware-in-the-loop test system at our Technology Evolution Center in South Windsor, Connecticut, you can run custom test scripts to validate your BMS's safety and control algorithms. You can also take advantage of our ten-plus-years of validation experience and use Bloomy's predefined templates to test for functional safety with multiple drive or flight scenarios. Need to test a custom algorithm to see how the BMS will react? Manually interact with the BMS signals, communications and cell chemistry models, using our interactive display.

Do you need to purchase your own BMS Test System?

Inquire about Bloomy's turnkey BMS test solutions.

BMS Validation Test Service

FEATURES

FLEX BMS™ Validation System

- Accommodates centralized or small distributed BMSs of 2-48 cells
- Simulates cell voltages, balancing currents, thermistors, pack current, discrete controls
- Measure and control battery and pack voltage, contactor/FET states, discrete outputs, other BMS outputs
- Communicate with BMS
- Develop and execute automated test sequences
- Standard test templates for functional safety, SoC algorithms, and drive/flight cycles
- Test result reporting and data export

Bloomy's Facility and Resources

- Climate-controlled, spacious, bright and clean test environment
- On-site availability of J-STD-001, IPC-610 trained technicians
- Secure receipt and storage of test materials and articles
- In-house cable design and build
- BMS and battery simulation experts on staff
- Convenient access to BDL Airport and numerous hotels and restaurants

Designed to simulate most e-mobility system topologies, our *FLEX BMS™* Validation System simulates 2-48 advanced chemistry battery cells, pack voltage of up to 300 volts, and pack current of up to 150 amps. Additional interfaces simulate contactors, temperature feedback, and other I/O necessary for complete BMS testing. Advanced real-time CAN and serial interfaces provide the digital communications required for BMS control and monitoring.

Once you're up and running with the *FLEX BMS™* Validation System, it's your option whether you will conduct testing yourself or if you'd like to use Bloomy's experienced engineers to perform the testing. In either case, you don't have to be an expert in developing or controlling the test system. Instead, your focus can be where it matters the most: on your product.

OUR PROCESS



1. Complementary Consultation

Jumpstart your success! We'll discuss your BMS test needs and design a plan to achieve them.



2. Test Strategy Planning

A test is only as good as the plan, so we'll collaborate to ensure that your test strategy meets your needs.



3. System Preparation

After we've agreed on a plan and how your BMS connects to the system, you'll turn us loose to make cables and configure the system for your use.



4. UUT Integration

Now the fun really begins! Whether it's your first test of your BMS or you're refining your control algorithms, you'll see your BMS in action! Manually control and monitor BMS signals and communications using customizable user interfaces.



5. Test Sequence Development

Manual interaction with your BMS can only take you so far — automation is the key to quality! We'll develop scripts which ensure your tests happen repeatably. You can even use our test script templates to speed development!



6. Test Execution

Now you can successfully execute tests repeatably. You can fine tune your BMS for efficient, safe operation for your application. Our BS1200s provide instant change in cell state of charge to help you see the effects of your efforts quickly and efficiently!



7. Test Summary Reporting

No test is complete unless you have the data, and every bit of data produced during testing is yours! Use your own tools to analyze your data, or use our formal test report template to provide a summary of the tests you conduct.



8. Re-Engagements

Sometimes, once just isn't enough! Take what you've learned while at Bloomy and try it in your real-world application. If things don't quite go as expected, come back and re-script, re-test, and refine your BMS control. We're always happy to help as you may need!

Call 860-298-9925 or visit
www.bloomy.com