

The Logiicdev's V.nod is a specialised Edge AI, Hardware & software solution. It addresses critical challenges in battery performance, testing and simulation,

The Problem, developers and engineers face several significant challenges:

- **Unpredictable Battery Life:** The actual power consumption profiles, including active and sleep modes, complicate predictions of real-world battery longevity.
- **Complex Testing:** Traditional methods are time-consuming and often fail to replicate operational conditions accurately, making dynamic load validation a hurdle.
- **Optimisation Difficulties:** **Optimising** firmware and power management without precise data often relies on assumptions, causing suboptimal outcomes.
- **Scalability for Validation:** Testing multiple batteries and extensive validation cycles for product qualification can be cumbersome and not easily scalable.

The Solution, V.nod provides an accurate platform for batteries. Users can:

1. **Validate Batteries:** Conduct real-time charge, discharge, and cycling tests while designing custom scenarios to mimic actual usage.
2. **Profile Batteries:** Create detailed discharge profiles reflecting application behaviour, capturing specific power draw conditions.
3. **Emulate Batteries:** Simulate battery behaviour with V.nod hardware, allowing for precise testing against a controlled discharge profile without a physical battery.

Key Benefits

- **Exceptional Accuracy:** High-accuracy current monitoring ensures precise data for power analysis.
- **Realistic Device Behavior:** User-defined discharge profiles accurately represent application behaviour.
- **Cost-Efficient Scalability:** The solution allows easy scaling for batch validation and quick reconfiguration.
- **Accelerated Development & Testing:** Robust emulation capabilities shorten iteration cycles.
- **Comprehensive Battery Insight:** Enables in-depth performance analysis through customisable cycling tests.
- **Versatility:** Supports various battery types and configurations across multiple operating systems.
- **Optimized Battery Life:** Facilitates data-driven decision-making for efficient power usage.



Use Cases and Industries

- **IoT Device Manufacturers:** Essential for validating battery life and optimising firmware for minimal power consumption.
- **Embedded Systems Developers:** Aids in power budget analysis and optimising low-power modes.
- **Consumer Electronics:** Maximises performance for portable devices and troubleshooting battery issues.
- **Research & Development (R&D) Departments:** Useful for characterising new battery technologies and developing power management algorithms.
- **Automotive:** Ensures reliability of low-power battery-operated modules for key fobs and tracking devices.