

Dukosi's smarter, safer, more sustainable cell monitoring solutions drive electrification across industries.



The demand for safe, reliable, and intelligent battery systems is reshaping industries. The **Dukosi Cell Monitoring System (DKCMS™)** brings award-winning chip-on-cell monitoring technology and an innovative new battery architecture to support the electrification of air, land, and marine applications, improving performance, flexibility, scalability, reliability, and sustainability in high-power batteries.

► DKCMS™ Advantages

GROUND SUPPORT EQUIPMENT (GSE)

A flexible, scalable platform that can easily be adapted to all vehicle types. Extend fleet life, improve safety and reliability, and lower operational costs.

AEROSPACE

Rigorous safety standards with reliable, contactless cell monitoring that's ideal for electrified aviation.

BATTERY ENERGY STORAGE SYSTEMS (BESS)

The performance, reliability, safety, and lifecycle management gains needed for large battery storage systems that operate at grid-scale or support advanced AI datacenters.

MARINE

Sustainable, safer, and reliable energy storage options for hybrid and fully electric vessels, whether above or below the waterline.

INDUSTRIAL AUTOMATION & ROBOTICS

Maximize performance, extend fleet life, and lower operational costs through reliability advances. Benefit from flexible, scalable batteries that fit unique applications, with high safety even in challenging environments.

ELECTRIC VEHICLES (xEV)

Enable flexible, scalable battery designs to quickly adapt to fast-evolving markets and supply-chains. Maximize performance, range, safety, and reliability, improving brand image, and enhancing the customer experience.

COMMERCIAL & OFF-HIGHWAY VEHICLES

Support for extremely large, high-power battery packs that need to work in challenging conditions, whether seasonal or continuously.

► Inside DKCMS™

DKCMS has been architected from the ground up expressly for high performance batteries.

It consists of **Dukosi DK8102 Cell Monitors**, which are installed on each cell to capture accurate measurements of voltage and temperature. Each Cell Monitor uses **Dukosi's C-SynQ® proprietary communication protocol** to synchronously capture and send data to a **Dukosi DK8202 System Hub** using near field RF via a single bus antenna placed over the battery pack cells. The System Hub typically resides on the same PCB as the BMS host processor and communicates using the **DKCMS Library API**.

CONTACTLESS CELL COMMUNICATION

Utilizes a single RF bus antenna and Dukosi's proprietary C-SynQ® protocol to relay data from each on-cell monitor to the BMS host – eliminating complex wiring harnesses and unreliable connectors.

ENABLING NEXT-LIFE APPLICATIONS

By storing data at each cell to allow individual tracking and streamlined grading, it helps to create a circular economy (reduce, reuse, recycle) and a sustainable battery value chain.

RICHER DATA FOR OPTIMIZED PERFORMANCE

More accurate cell-level voltage, current, and temperature data, empowering designers to optimize charge/discharge cycles, enhance thermal management, and maximize usable capacity over the pack's lifetime.

2*GREATER RELIABILITY 10*LOWER BOM

By removing mechanical failure points like connectors, solder joints, and harnesses, DKCMS delivers twice the pack-level reliability vs wired architectures, while cutting parts count (and assembly time).

UNMATCHED DESIGN FLEXIBILITY

Supports up to 216 cell monitors per System Hub and employs Dukosi's highly robust C-SynQ® communications protocol, enabling seamless scaling from small modules to megawatt-scale packs with minimal redesign.

ENHANCED SAFETY THROUGH PER-CELL INTELLIGENCE

Captures synchronous voltage and temperature reporting at the cell level, enabling rapid, precise fault detection to alert the BMS for proactive intervention before full-pack anomalies occur.

[Click here](#) to learn more about how Dukosi can help you meet your battery system design, performance, safety and/or sustainability goals.