

Dukosi chip-on-cell technology helps hit next-gen EV battery targets



DUKOSI BLOG | Published: 25 Sep 2023

In a recent article¹ the world's third-largest carmaker group by sales, Stellantis, claims current electric vehicle (EV) batteries are "just too heavy", making vehicles "not compatible" with sustainability targets.

The group aims to reduce battery weight by at least 50% by 2030 as part of its long-term efforts to improve batteries and, ultimately, the efficiency and sustainability of their vehicles.

Dukosi's chip-on-cell solution with contactless near-field communications can reduce battery weight by a few kilos depending on the size and configuration. In a typical EV battery, this technology can reduce component count by 10x, and improve reliability by up to 2x.



Lighter, more reliable, and more sustainable

The unique solution measures cell parameters, such as voltage and temperature at each cell, and provides highly accurate, granular cell data that can generate new insights into long-term battery performance and reliability. This allows manufacturers to reduce the guard bands and unlock more usable energy per cell, increasing the range from the existing battery capacity, or achieving the same range from a smaller battery, further reducing weight and materials.

Dukosi's chip-on-cell battery monitoring solution uses a bus antenna for contactless communication with every Dukosi Cell Monitor IC, eliminating complex wiring harnesses and other components typically found in traditional wired architectures. Configuring packs for different market segments or multiple product platforms is as simple as adding or removing cells from the pack. This avoids the frequent 'one pack size for everything' approach to manufacturing and facilitates the introduction of new pack formats that can further reduce material costs, shipping costs, and weight.

Besides a simpler and lighter battery pack, Dukosi enables safer batteries with 24/7 monitoring of every cell's voltage and temperature, identifying abnormal conditions immediately, including when the BMS controller is in standby.

Through our unique chip-on-cell technology, Dukosi is already leading the industry towards a truly sustainable battery value chain via weight and component reduction, improved performance and lifetime traceability of each cell.

[Learn more](#) about how Dukosi chip-on-cell technology can reduce EV weight, extend range, and provide more reliable vehicles.

[¹EV batteries will have to be 50% lighter in future, Stellantis tech chief says | Reuters](#)

Dukosi Ltd develops revolutionary technologies that dramatically improve the performance, safety, and efficiency of battery systems, and enable a more sustainable battery value chain. The company provides a unique cell monitoring solution based on chip-on-cell technology and C-SynQ® communication protocol for electric vehicles (EV), industrial transportation and stationary battery energy storage markets.

For more information, email info@dukosi.com or visit www.dukosi.com.