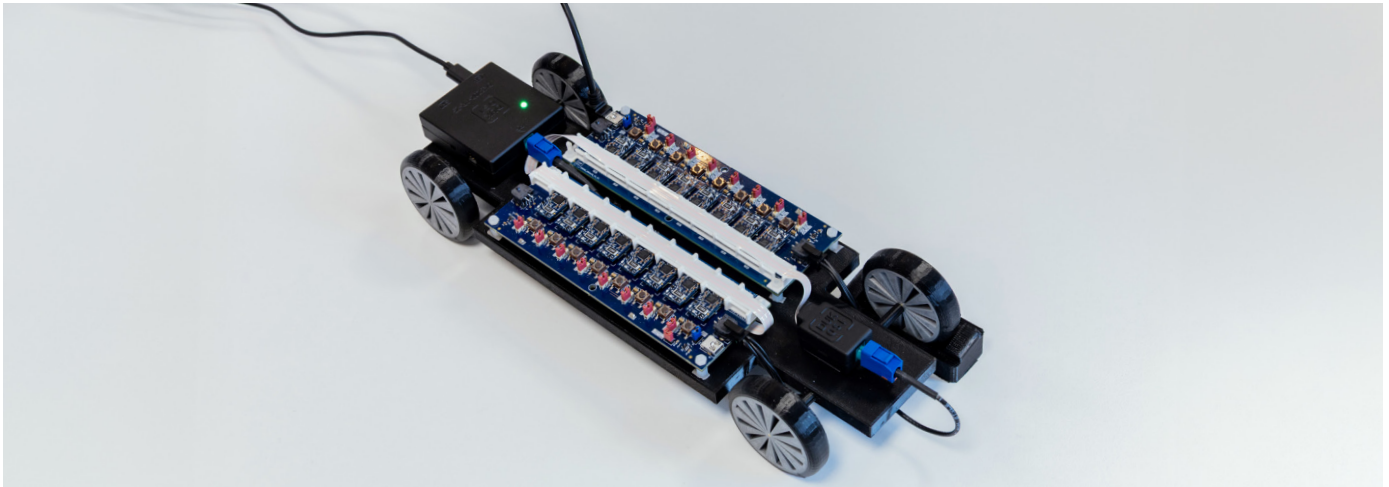


Design Brief

Dukosi Cell Monitoring System (DKCMS™) Demonstration for Automotive (xEV) Applications

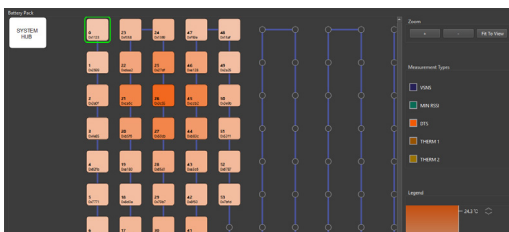


Modelled after a vehicle chassis, this live demonstration showcases the Dukosi Cell Monitoring System (DKCMS) with 16 Cell Monitors (CMs) connected via a single bus antenna to the System Hub (SH), representing a typical cell module size used in vehicles.

In this example, the CMs are not attached to live cells but still transmit data via near field, contactless communication using Dukosi's proprietary C-SynQ® protocol to the SH, which is connected via USB to a laptop.

Dukosi Cell Monitoring System

- Dukosi DK8102 Cell Monitor
- Dukosi DK8202 System Hub
- Dukosi Library API
- Dukosi C-SynQ® proprietary protocol
- Dukosi near field contactless communication



Visual representation of real-time cell temperatures

Address	Serial Number	Cell ID	Voltage (V)	Current (A)	Power (W)	Efficiency (%)	Cell Status
1	101	101	3.2	1.5	4.8	95	OK
2	102	102	3.2	1.5	4.8	95	OK
3	103	103	3.2	1.5	4.8	95	OK
4	104	104	3.2	1.5	4.8	95	OK
5	105	105	3.2	1.5	4.8	95	OK
6	106	106	3.2	1.5	4.8	95	OK
7	107	107	3.2	1.5	4.8	95	OK
8	108	108	3.2	1.5	4.8	95	OK
9	109	109	3.2	1.5	4.8	95	OK
10	110	110	3.2	1.5	4.8	95	OK
11	111	111	3.2	1.5	4.8	95	OK
12	112	112	3.2	1.5	4.8	95	OK
13	113	113	3.2	1.5	4.8	95	OK
14	114	114	3.2	1.5	4.8	95	OK
15	115	115	3.2	1.5	4.8	95	OK
16	116	116	3.2	1.5	4.8	95	OK

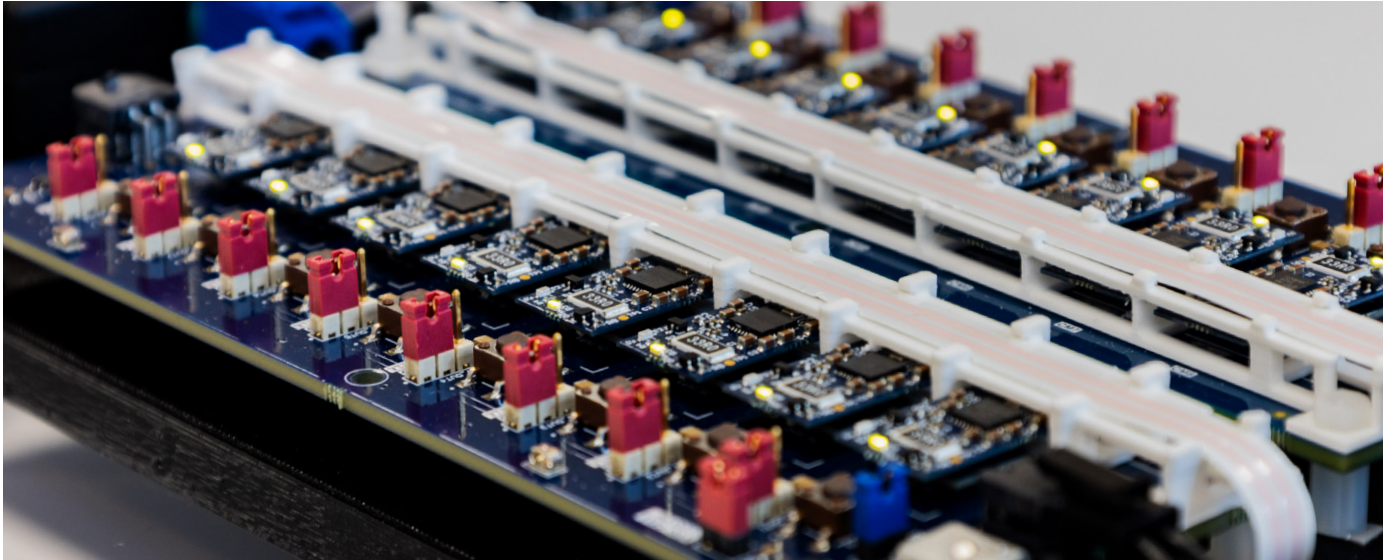
Real-time data stream from every Cell Monitor

Dukosi EVK & GUI

The Dukosi EVK and its GUI form an intuitive hardware platform and software environment that enable system designers to functionally evaluate the Dukosi Cell Monitoring System. The EVK and GUI visualize the battery using real-time data streamed from connected Cell Monitors, providing insight into the data and available options, while also helping to diagnose and optimize settings quickly and easily during the early stages of development. They serve as a gateway for developing in-house applications using Dukosi technology.

Design Brief

Dukosi Cell Monitoring System (DKCMS™) Demonstration for Automotive (xEV) Applications



The laptop runs the Dukosi Evaluation Kit (EVK) advanced GUI, enabling customers to easily evaluate our solution in their own proof-of-concept (PoC) designs. The simplicity of DKCMS is reflected in the fact that the Dukosi EVK can be set up and the GUI running in under five minutes.

Each CM has an assigned button that can disconnect it when pressed. This demonstrates, via the GUI, that DKCMS with C-SynQ can immediately and precisely identify if a problem occurs.

Additionally, the on-die temperature sensor on the CM can be tested by increasing or decreasing the temperature of any number of CMs. The change is immediately reflected in the GUI, demonstrating how accurately and quickly the DKCMS can detect temperature variations of each cell in a battery.

About Dukosi

Dukosi develops revolutionary technologies that dramatically improve the performance, safety and efficiency of high-power battery systems, and enable a more sustainable battery value chain.



Dukosi

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