

## CSEM Battery Hub

CSEM is a non-profit-oriented public-private Swiss technology innovation center renowned for developing advanced technologies with profound societal impact. Our mission is to transfer these innovations to industries, strengthening the economy. Within our battery innovation hub, we serve as pioneers, revolutionizing batteries for a sustainable future. Our comprehensive range of services includes battery design, development, optimization, and characterization. We specialize in material development for Li-ion and solid-state batteries, as well as development of Battery Management System based on electrochemical impedance spectroscopy (EIS). At CSEM, we actively address the crucial challenges faced by battery technologies and by tackling these hurdles head-on, we play a vital role in driving the transition towards a cleaner energy future. [www.csem.ch](http://www.csem.ch).

## CSEM role in the project

In BATTERY2LIFE CSEM in collaboration with SUNLIGHT are developing the demonstrator for the 1<sup>st</sup> pillar. In that context, CSEM is in charge of the development of the electronics. This includes naturally the Battery Management System (BMS) and slave boards that include advanced sensing based on Electrochemical Impedance Spectroscopy (EIS). In the 1<sup>st</sup> phase of the project CSEM has put in place a demonstrator to validate the BMS-EIS approach on a second life module of SUNGLIGHT. Based on these findings, CSEM has improved the design of the electronics and is currently testing the new version prior to integrating in on the final demonstrator.



Figure 1: module level slave board with EIS sensing capabilities