

Future Electronics presents:

# Complete BMS for E-Bike type by **Monolithic Power Systems**

Presenter: Hongxin Guo



Power Electronics & Energy Storage event  
27 juni 2023 | 1931 Congrescentrum 's-Hertogenbosch

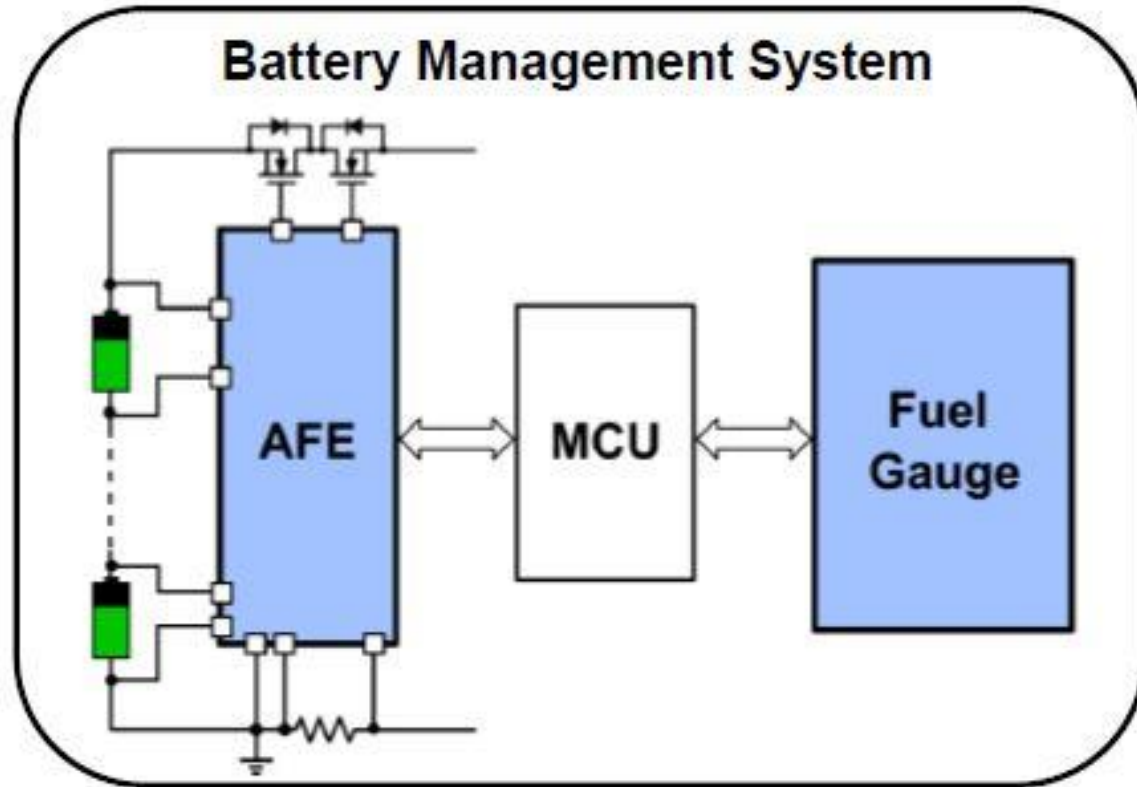
ENERGY STORAGE





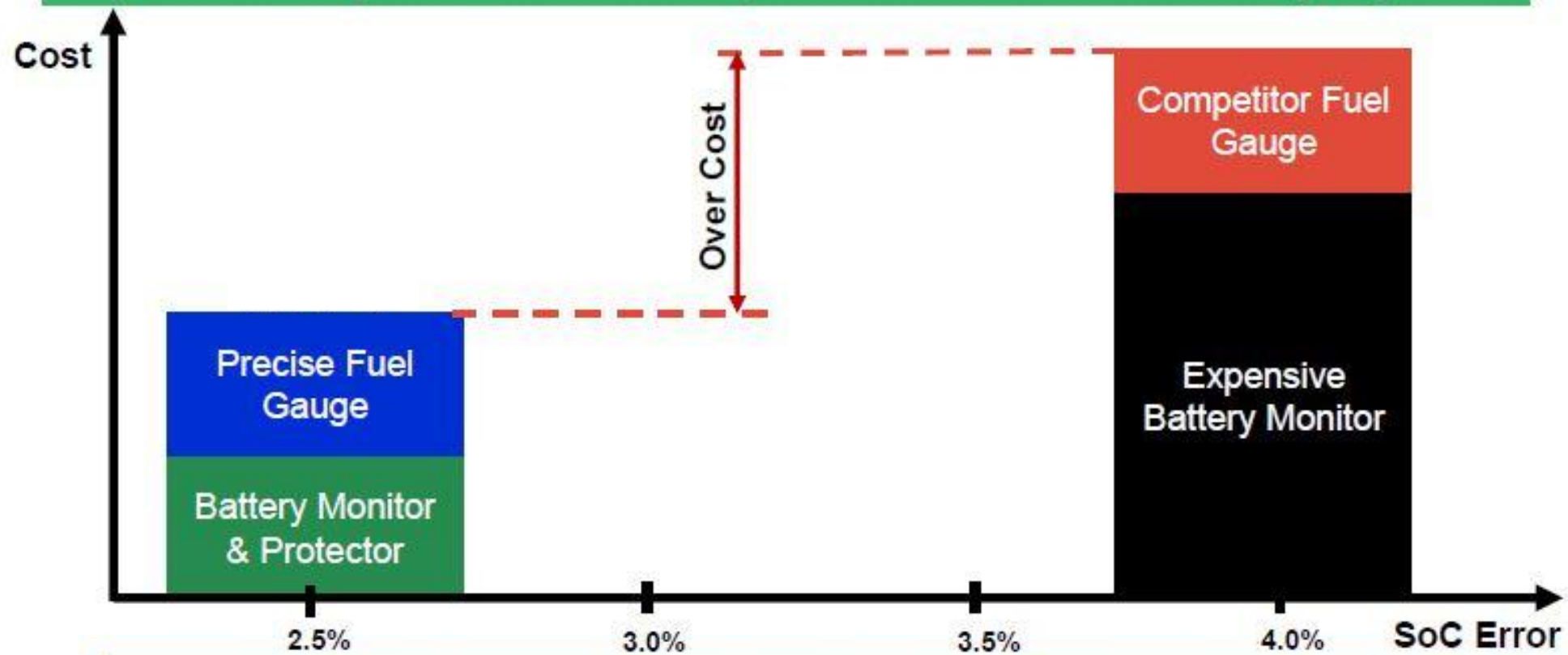
- Future Electronics is a worldwide leader in electronic components distribution and is recognized as one of the most respected and innovative companies in the industry today with a clear focus on supply chain solutions and technical expertise.
- Monolithic Power Systems (MPS) provides small, highly energy efficient, easy-to-use power solutions for systems found in industrial applications, telecom infrastructures, cloud computing, automotive, and consumer applications.

# Battery Management System Architecture

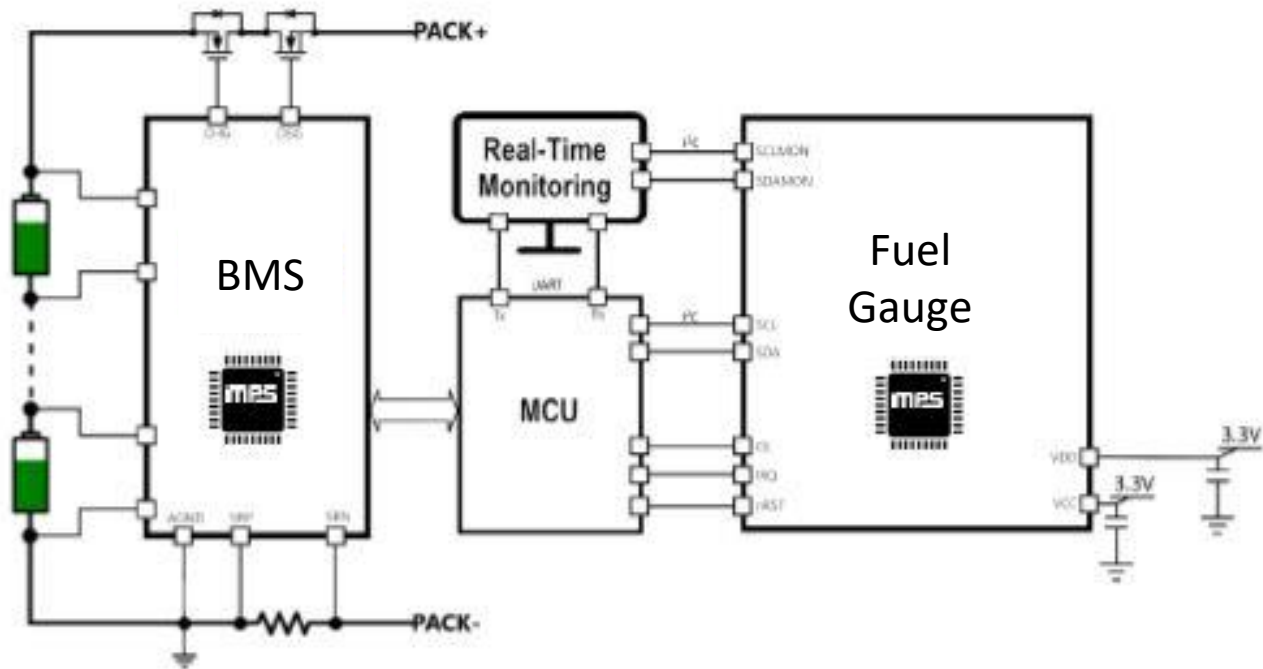


- The **most valuable** parameter is the **State of Charge (SoC)**
- Fuel Gauge provides SoC using the measurements from the AFE
- Voltage, Current and Temperature parameters are key for the Fuel Gauge

## Expensive battery monitors cannot compensate for inaccurate Fuel Gauge Algorithm



# BMS Overview



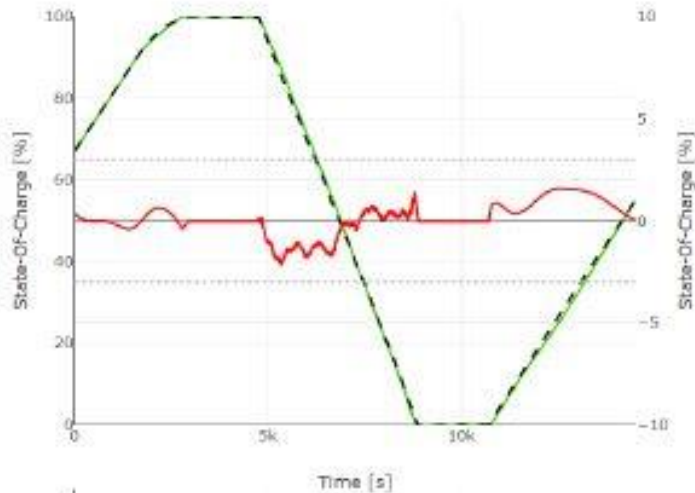
Complete BMS Solution pairing MPS Battery Protector & Monitor and Fuel Gauge

Ensures less than 2.5% State-Of-Charge deviation over temperature and time

Tracks each individual series cell State-of-Charge and Health

Easily adapted to every battery design

From 7 to 16s battery packs



Individual Cell State-of-Charge and Health Estimation to provide accurate Pack Values

+

Individual Cell Equivalent Series Resistance (ESR) monitoring over time

+

Highly Accurate Cell Mathematical Model

+

Easy-to-use solution for quick time to market

=

Best In Class Fuel Gauge

# Contact details

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