

Deliverable D3.3 EIS board gen2 prototype



The EIS 2° generation board will be composed by these main blocks:

- Front End Board, through which will be acquired voltage and current of the Solid Oxide fuel cell stack (FEB)
 - Two Channels For Fuel Cell Current (LEM Hall effect current transducer , Shunt)
 - One Channel For Fuel Cell Voltage
 - For every analog channel a 4th order Analog Filter is enclosed
 - Voltage and current are sampled by ADC 24-Bit delta-sigma ($\Delta\Sigma$)
 - A new programmable device (Microcontroller unit)
 1. ARM Cortex M4 core, 32-bit architecture
 - CAN ,ETH interfaces , RS485
- BeagleBone Black board
- - Linux SO
 - ETH interface
 - USB driver for external mass storage device
 - 100T-base ETH interface
 - Serial communication ports for setting the measurement range
- The board needs a DC Voltage to operate (5V+/- 10% - Current consumption: 0,3 A)

Public Abstract

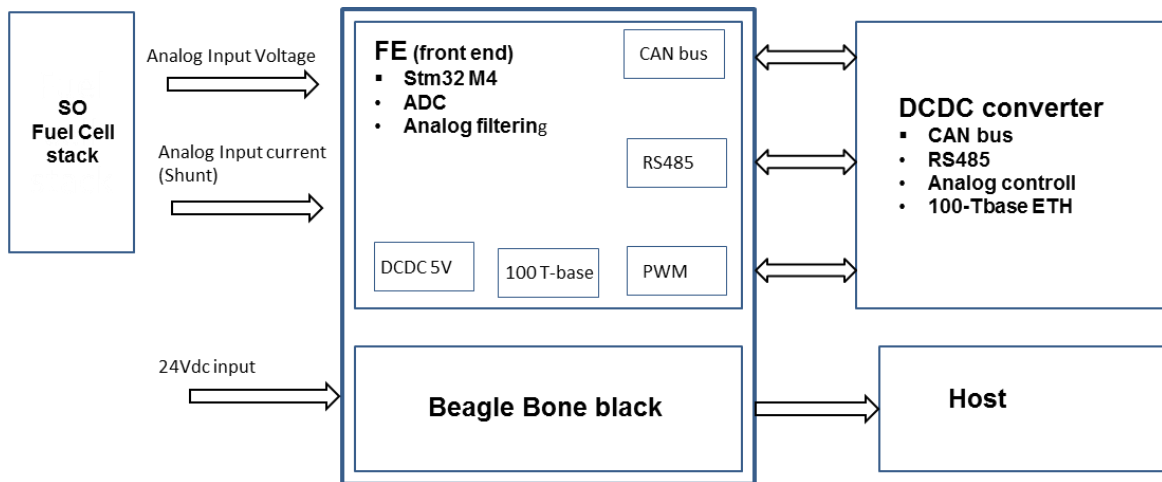


Fig 1- EIS 2° generation board Block Diagram



Fig 2- EIS 2° generation board