::::: This is a comment from KSG.

Note: The design must enable selective integration so that optional subsystems (such as the Coral TPU or specific wireless modules) can be removed or left unpopulated without compromising the overall system integrity.

Internal:

* NXP i.MX RT1176

Coral board includes this controller already.

* We will need an on-board temperature sensor, such as a Bosch environmental sensor
* We will include the CORAL TPU for machine learning tasks, I have provided the Coral Dev Board reference design to help with this
* PMIC power control (e.g., MPF5020 or a similar device)
* **AD5940 Sensing**
  + ADR4520
  + Consider external precision ADC options (e.g., AD7768) if the internal ADC performance of the AD5940 is insufficient.

:::: Need to check the required ADC performance needed for this project. I cannot determine it without project requirement.

* + low-pass filtering and shielding

::::Low pass filtering cannot be considered (Need more information for the CA\_CE0 signal). Shielding can be considered on the PCB routing, like GND shielding or so on, but need to consider the effect of the capacitance incensement.

* + Evaluate the use of a dedicated sine wave generator (such as an external DDS like AD9833) to improve the excitation signal for EIS measurements.  
    ::: I don’t think we need a sine wave generator.
* Heater
* Wireless communication

Would be nice to have this included in the board, but could sit in a carrier board

* Other communication
  + for I²C, SPI, UART, RS-485, and CAN/FD bus **- Connect the unused pins to a pin header but try to group the pins by interface**

External:

* There is a set of external sensors on a small PCB (humidity, temperature, pressure), this external board will need to connect to the Luna PCB possibly via an FPC

Not sure :

* Crypto chip/secure element (SEO50)