

# Hyundai Ioniq 5

## Benchmark program



[benchmarking@fev.com](mailto:benchmarking@fev.com)



[benchmarking.fev.com](https://benchmarking.fev.com)

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## Tech Nuggets

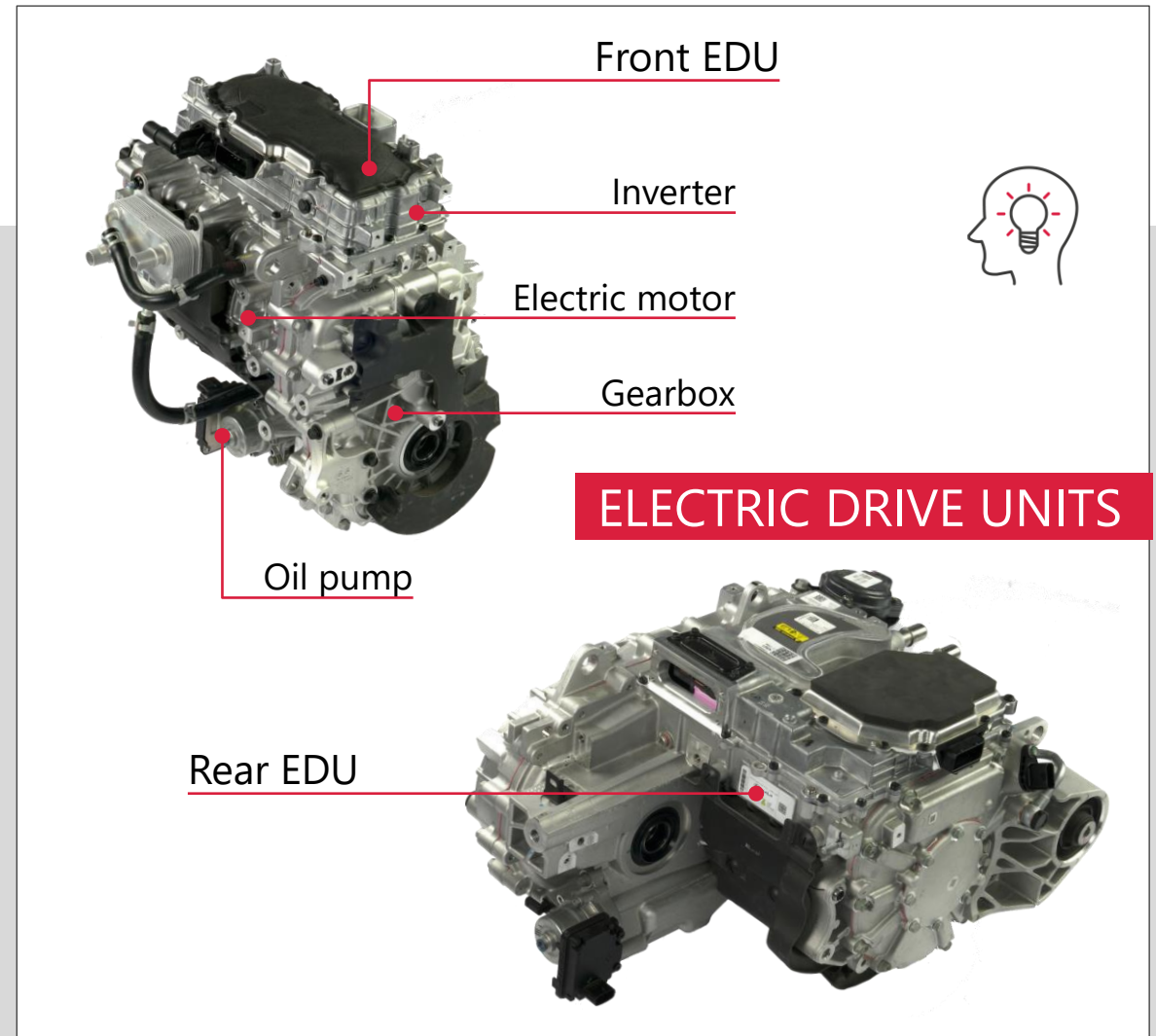
# TECH-NUGGETS – Electric drive unit

## HYUNDAI IONIQ 5 – BENCHMARKING PROGRAM

Interested in further details?  
Contact [benchmarking@fev.com](mailto:benchmarking@fev.com)!

### INSIGHTS

- While Hyundai Ioniq 5 is also available as RWD, the top-spec variant is driven by two electric drive units (EDUs) with overall system power of 225 kW
- Both EDUs include
  - Oil cooled electric motor
  - Inverter using SiC MOSFET technology
  - 1-speed reducer gearbox
- Front EDU features a clutch to disengage unit for certain operation modes
- Rear EDU covers DC charging functionality for voltage conversion from 400V to 800V



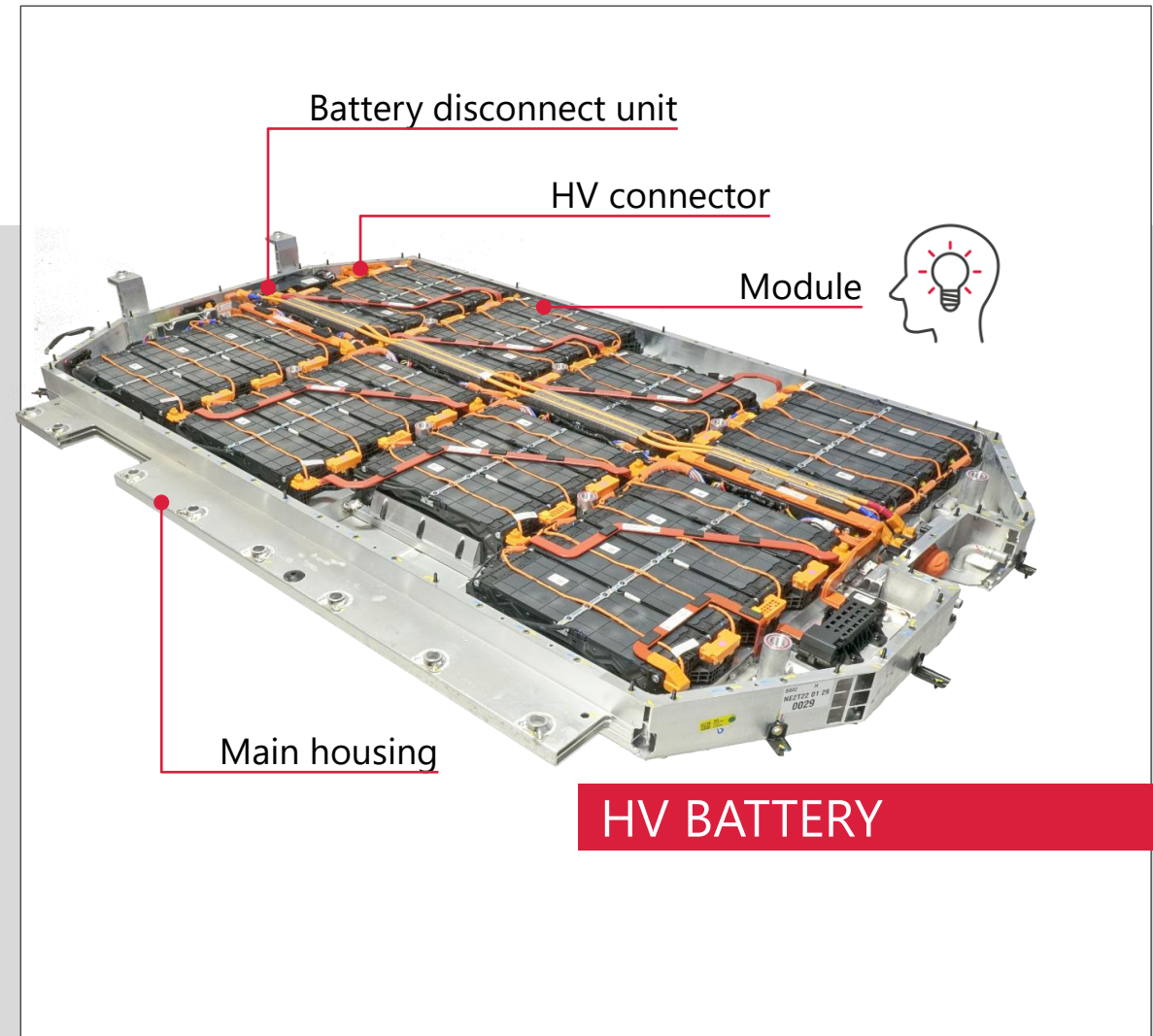
# TECH-NUGGETS – HV Battery

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### INSIGHTS

- The Hyundai Ioniq 5 is available with different battery variants from 58 kWh up to 77.4 kWh in the MY2023 version
- As part of the E-GMP platform, the battery has a voltage level of 800 V which mainly affects the number of modules and HV connections
- The housing consists of
  - Main housing out of welded aluminum profiles
  - Sheet metal cover
  - Polymer underride guard
- The cooling plate is integrated into the main housing



# TECH-NUGGETS – Power Electronics

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### INSIGHTS

- Apart from the traction inverters, different power electronic components are part of the Ioniq 5 powertrain
  - 11 kW bidirectional On-board Charger
  - Switch box to distribute energy at rear EDU
  - Power delivery unit to distribute energy at front EDU
- The Integrated Charging Control Unit (ICCU), supplied by Hyundai Mobis, includes 11 kW AC charging functionality and a 12 V DC/DC converter
- Ioniq 5 is available with “Vehicle-to-Load” option, where a 220 V socket at the back seat is supplied by the On-board Charger

