



Hermes Telemetry System

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The Hermes Project

- **Telemetry** is the process of recording and transmitting sensory data of a system in real-time.
- The **Hermes Telemetry System** is a development platform to provide analytical telemetry data for UCI Design Projects in testing phase.
- **Hermes** is composed of three subsystems: The **Telemetry Box**, the expandable **Sensor Packages**, and the **On Board Diagnostics 2 Connectivity**.

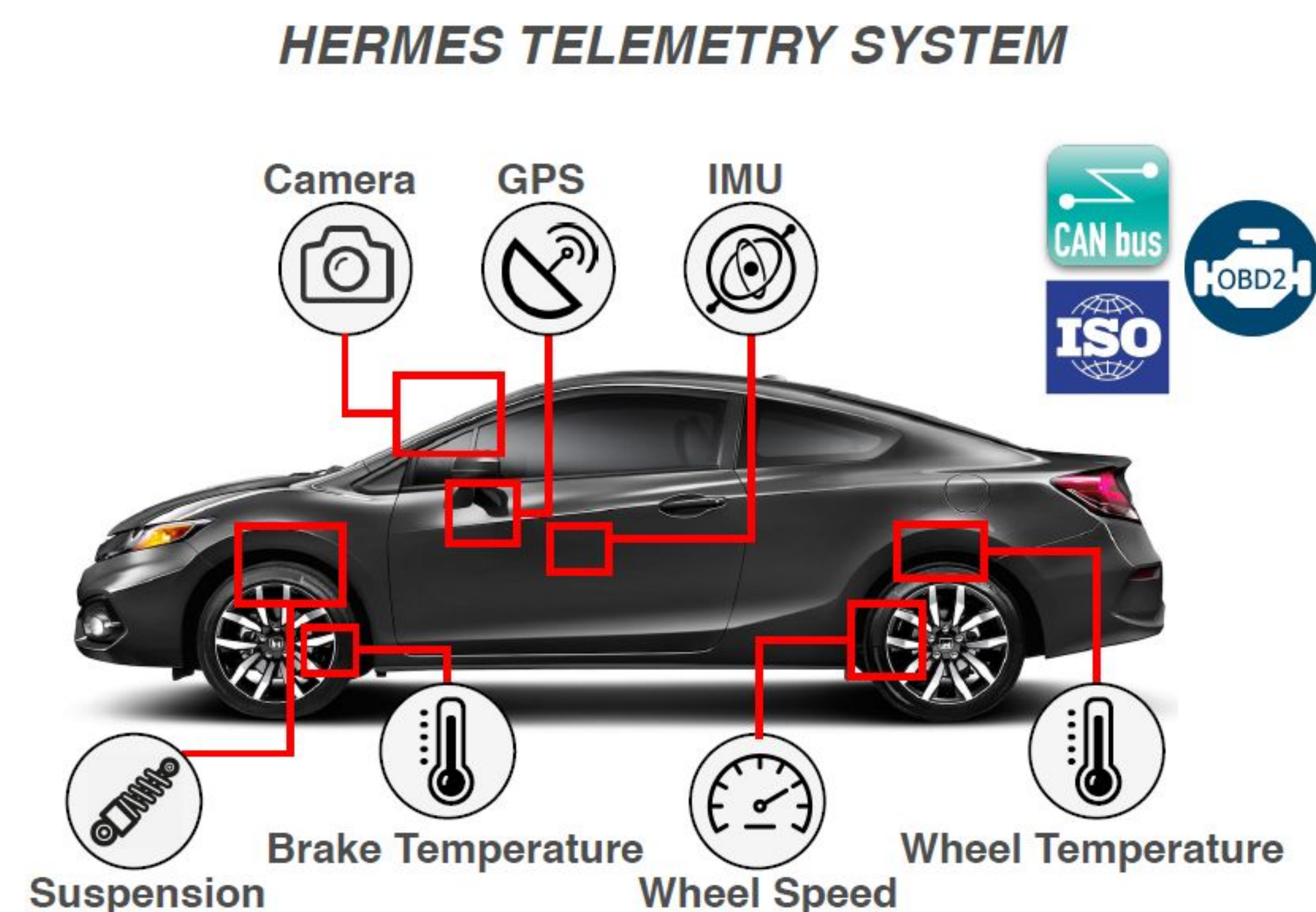
Project Organization

- **The Hermes Telemetry Box**
 - Rieli Tjan - tjanr@uci.edu
 - Nora Hotes - ehotes@uci.edu
- **Sensor Packages**
 - Michael Reza Honar - mhonar@uci.edu
 - Michael Barbosa - mabarbos@uci.edu
- **OBD2 Data and GUI**
 - Umesh Tanniru - utanniru@uci.edu



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Hermes Architecture



Design Standards

On Board Diagnostics 2

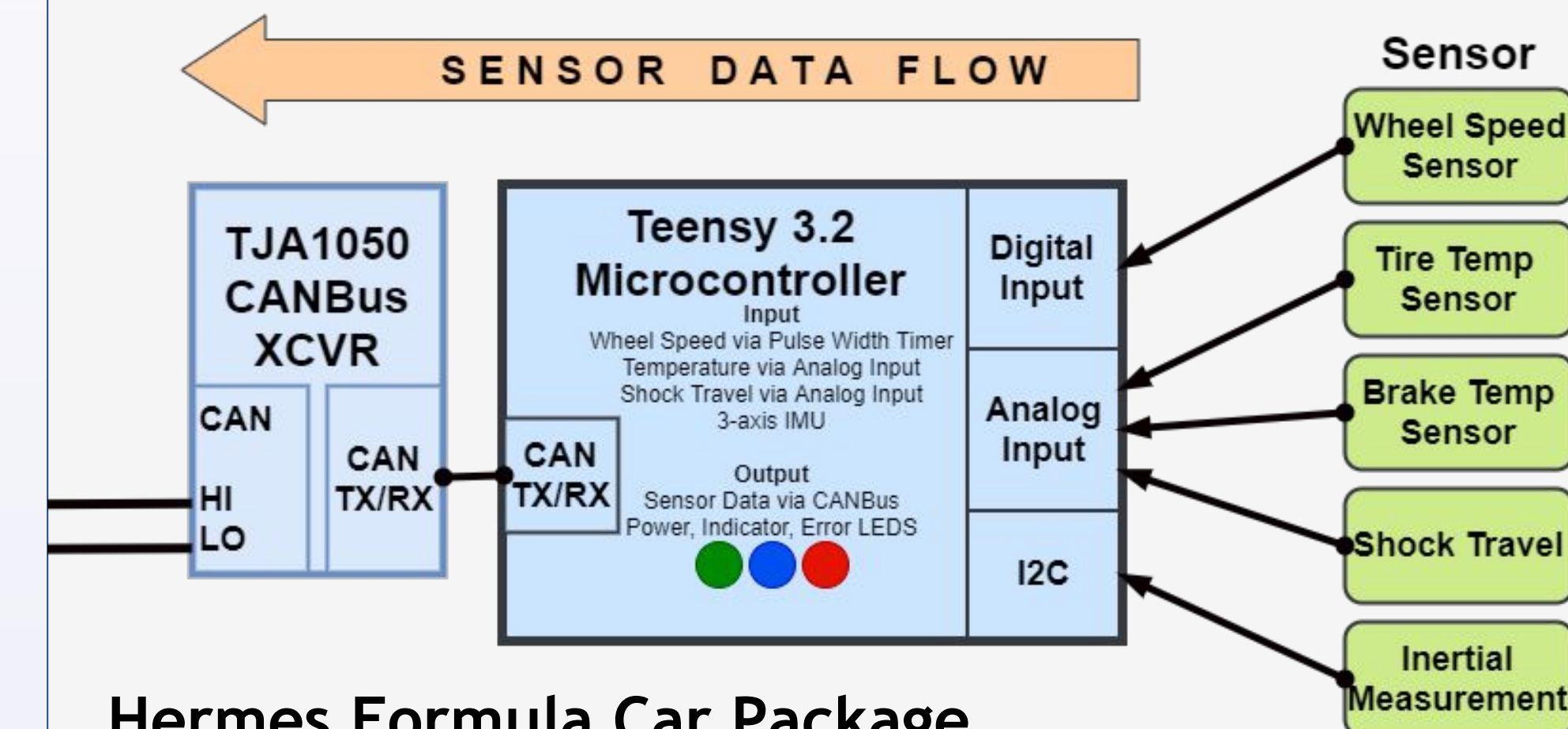
SAE J1962 - Defines Standard OBD Plug Receptacle

ISO 15765 - Defines Standard Controller Area Network Communication Protocol

Data Interfaces

Analog-to-Digital Converter, Serial Peripheral Interface, Inter-Integrated Circuit Bus

Sensor Packages



Hermes Formula Car Package
Hermes Club & Street Car Package
Hermes Off-Road Package
Hermes Pod Racer Package
Hermes Aero Package
Sensors à la carte

References

- Chandiramani, J. R., Bhandari, S., & Hariprasad, S. A. (2014). Vehicle Data Acquisition and Telemetry. *2014 Fifth International Conference on Signal and Image Processing*. doi: 10.1109/icsip.2014.35
- Khan, S., & Sonti, S. (2009). Data acquisition system for a 600cc formula SAE race car. *2009 IEEE International Conference on Vehicular Electronics and Safety (ICVES)*. doi: 10.1109/icves.2009.5400316
- Segers Jörg. (2014). *Analysis Techniques for Racecar Data Acquisition, Second Edition*. Warrendale, PA: Society of Automotive Engineers.

Winter Timeline

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