



EFT-HCU-1x

The EFT-HCU-1x (Hybrid Controller Unit) is designed as a central control unit for any hybrid electric powertrain. The main function is to supervise and control the ICE/Turbine, the Alternator, Power Electronics and Batteries. Its modular power and control interface allows the EFT-HCU-1x to be integrated with ease into any hybrid system.

Power Management	Power Management of ICE/Turbine, System Voltage Regulation, Charge Control of Battery
Smart Monitoring	Monitoring and recording of all relevant parameters and alert processing
Modularity	Simplified interfaces for modularity and ease of integration
ICE/Turbine Sensors	<ul style="list-style-type: none"> • 7 high temperature Thermocouples for engine temperature monitoring (Oil, exhaust and cylinders) • Oxygen/Lambda Sensor • Fuel Flow Sensor • Fuel Gauge Sensor • CAN2.0b Interface for ECU and sensors
Battery Sensors	<ul style="list-style-type: none"> • 2 Temperature Sensors • Pack Voltage Sensor • Pack Current Sensor
Alternator Sensor	<ul style="list-style-type: none"> • Stator Temperature Sensor
Additional Sensors	<ul style="list-style-type: none"> • IMU (Inertial Measurement Unit) • Barometer
Communication Interfaces	<ul style="list-style-type: none"> • CAN2.0b • UART • SPI • ADCs • RS-232 • I2C • PWM Input/Output • DACs
Data Storage	<ul style="list-style-type: none"> • SD Card with high rate data logging
Safety Functions	<ul style="list-style-type: none"> • Input filtering and protection • Output Power management IC
Power Distribution	<ul style="list-style-type: none"> • Protected 12V Rail with 3 individual Outputs • Protected 5V Rail with 4 individual Outputs