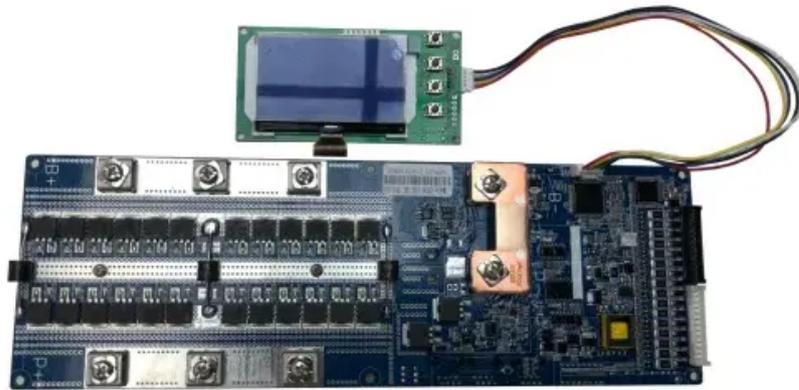


Microgrid Virtual Experiment System



Overview

The Wind Turbine Emulator-Solar PV Emulator-Fuel Cell Microgrid is a tri-source, fully integrated hybrid energy training platform that combines Wind Turbine Emulator (WTE), PV Emulator (PVE), and PEM Fuel Cell systems to simulate a real-world microgrid environment. There is an urgent need for clean and renewable energy sources. However, most re-newable energy sources, such as solar and wind, have very high initial costs, especially when used as a principal source. Distributed power generation using solar and wind power provides an effective. ch provides online access to the actual laboratory of ICCS-NTUA. PV inverter, loads) is performed via the laboratory SCADA, whereas the Virtual Lab uses a mathematical representation of the system. The GUI and control options. A microgrid is a group of interconnected loads and distributed energy sources as a single controllable entity with respect to the grid, used for power generation and energy storage. A microgrid is self-sustaining and can be operated in grid mode, or island mode where the system is disconnected from. The application of Virtual Reality (VR) in education has proven to be a great way of learning, making it more dynamic and motivating for the students., distinct producers and.

Microgrid Virtual Experiment System



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