

# Smart Power Management Trainer 「WOW-3029」



## Features

- It is designed to study flow of energy.
  - Generation / Power transmission & transformation of electric energy / Power consumption
- Built in meters to measure voltage, current and power.
- Serial/Parallel connection of solar cells.
- Real time monitoring for energy generation.
- Controlling power consumption for house, factory and building.
- Possible to monitor using PC GUI and App.

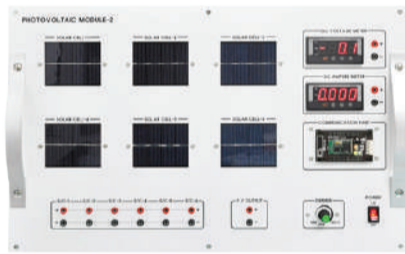
## Specification

### Composition

- Photovoltaic Module - 1



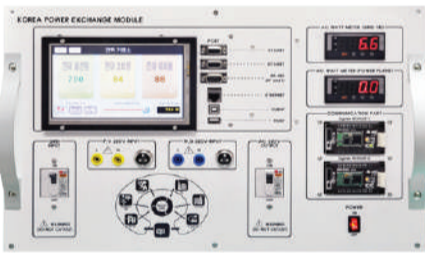
- Photovoltaic Module - 2



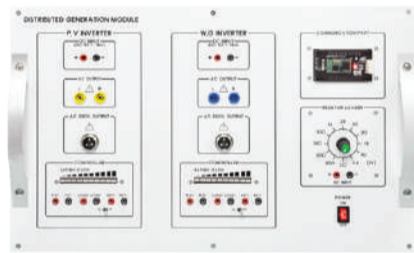
- Wind Generator Module



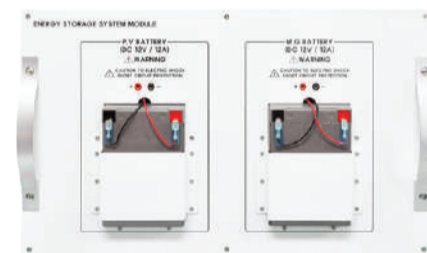
- Korea Power Exchange Module



- Distributed Generation Module



- Energy Storage System Module



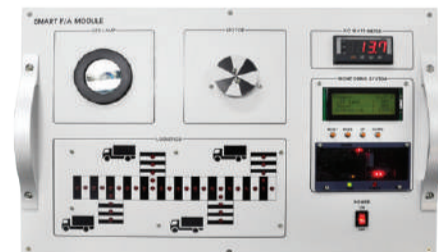
- SEM Server & Smart Home Module



- Smart IBS Module

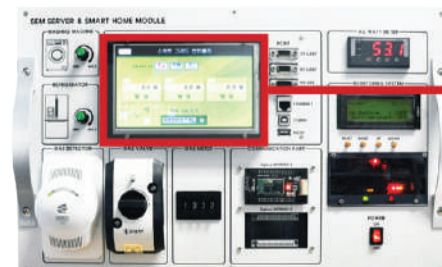
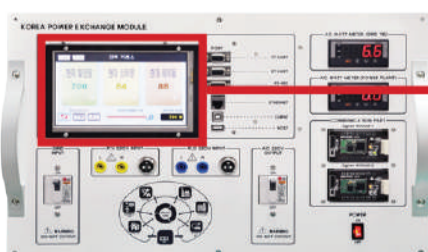


- Smart F/A Module



### Development Tool

- Embedded Monitoring System
  - Display Power Generation and Consumption Power.



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## • PC GUI



## • Android App



## Training Contents

- Principle of solar photovoltaic system. (Photoelectric effect simulation)
- Ohm's law and voltmeter & amperemeter experiment.
- Measurement bright of light.(Illumination)
- Solar photovoltaic as regarding solar radiation quantity.
- Solar photovoltaic as regarding shadow.
- Solar photovoltaic in series and parallel connection of solar cells.
- Solar photovoltaic as regarding wind speed.
- Understanding Zigbee.(Zigbee HAN Network)
- Real time power management of electrical grid.
- Real time monitoring a fault section in electrical grid.
- Controlling sectional electrical grid for restoring fault section.
- Restoring a power failure by decentralized power.
- Controlling home appliances as regarding ESS capacity in a power failure.
- Real time monitoring a graph of consumption power.
- Operation of a generation station as regarding consumption power.
- Real time monitoring a graph of generation.
- Real time monitoring a graph of reserve margin.
- Real time remote monitoring and control for power feeding part.(PC&App)
- Demand as regarding power feeding order at peak power.
- Saving energy using ESS.
- Real time monitoring power consumption for power demanding part.
- Real time remote monitoring and control for power demanding part.(App)