






Smart Controller Laboratory (SCLab)

TREE Building, TERI Gram
Gwal Pahari, Gurgaon-Faridabad Road
Haryana, India



Infrastructure/Facility:

Solar Array Simulator		<ul style="list-style-type: none"> • Make: ElgarTM by Ametek • Model: 570236601 • Input: 380/400AC, 3-Phase Delta connection, 70Amps • Output: 0-600VDC, 0-25A • Power: 30kW • Software: TerraSAS, Version 1.6.0.2
Load Emulator		<ul style="list-style-type: none"> • Make: Quinling Energy resources • Model: ACLT-3803H • Power :30kW • 10kW Resistive load • 10kVAr Capacitive load • 10kVAr Inductive load • Software: ACLT-3803H Device Manager
Grid Emulator		<ul style="list-style-type: none"> • Make: California Instrument by Ametek • Model: MX30-3P-400-LF-SNK • Input: 400VAC, 50-60Hz, 36kVA • Output: 150/300VAC, 16-500Hz • Power: 30kVA • Software: MXGUI, Version 1.18
Embedded System and Controller		<ul style="list-style-type: none"> • NI CompactRIO-9074 • NI LabVIEW Developer Suite • NI LabVIEW Real-Time Module • NI LabVIEW FPGA Module • NI 9227, NI 9225, NI 9481, NI 9403 • NI 9211, NI 9205, NI 9870
Hybrid and PV Inverter with Battery Bank		<ul style="list-style-type: none"> • 8kVA PV Inverter • 5kVA Hybrid Inverter • Battery Bank of 48V and 12V

Vision

Design and develop innovative, cost effective smart and sustainable distributed power solutions for various applications in vertical domains.

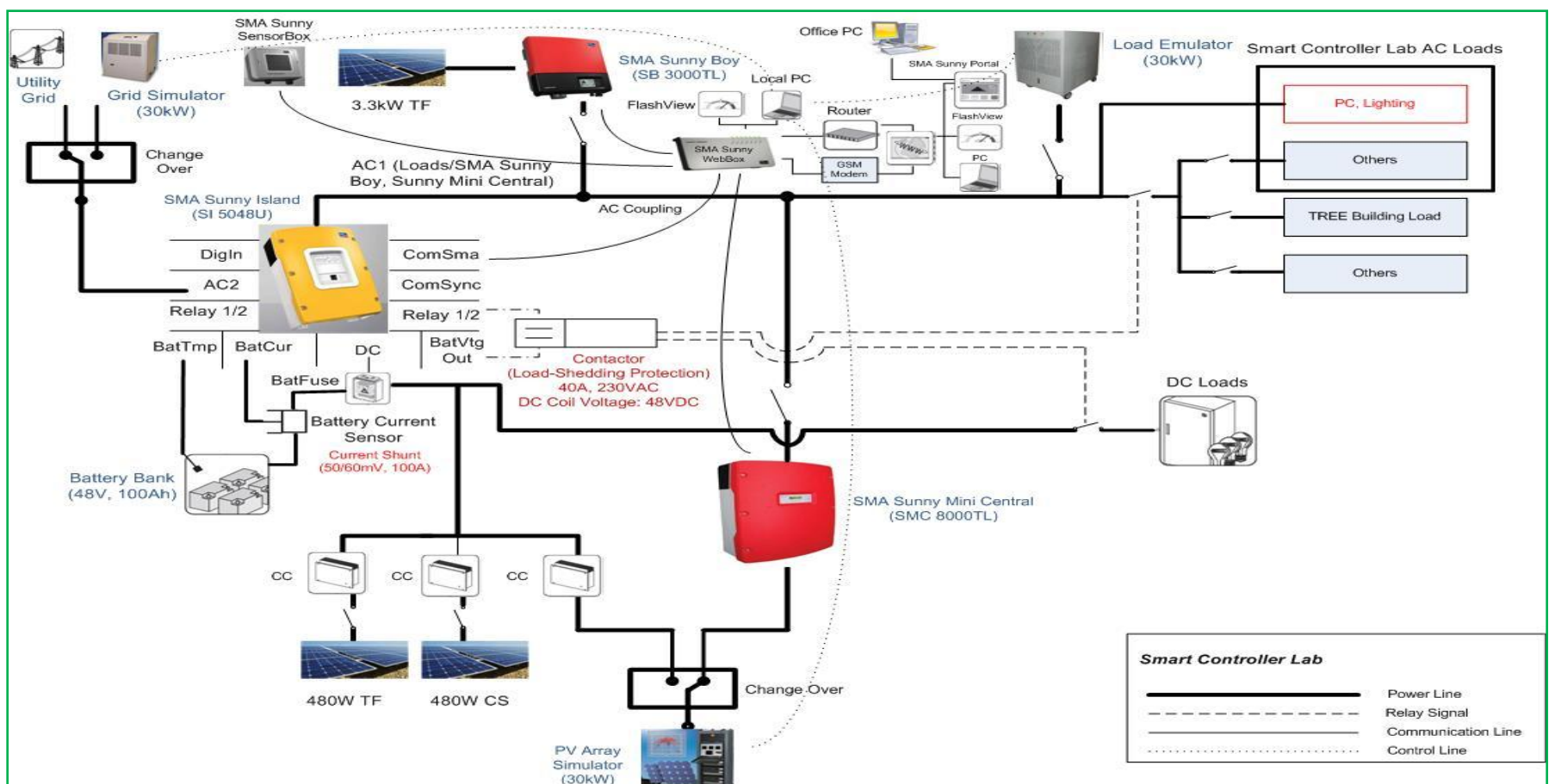
Mission:

- ❖ Established as an independent state-of-the-art Testing, Evaluation and Research laboratory for Distributed Power Systems and Smart Controllers;
- ❖ Performance Assessment of different Distributed Power Systems;
- ❖ Design and Development of customized Smart Solutions and Packages for various applications;
- ❖ Acting as knowledge expert to several Distributed Generation based Program and Policies;
- ❖ Develop qualified and field proven professionals through specialized Technical Training courses and Knowledge Transfer.

Services Offered:

- ❖ Testing and Long-term Performance Assessment of different Photovoltaic (PV) technologies both in standard lab (indoor) conditions and field (outdoor) environments;
- ❖ Testing and Long-term Performance Assessment of different Battery technologies;
- ❖ Testing and Performance Assessment of different Inverters;
- ❖ Testing and Assessment of Renewable energy based Hybrid systems (including Smart Micro/Mini-Grids) under different operating conditions.

Single Line Diagram (SLD) and Operation Schematics for Smart Controller Laboratory:



For further details, please contact:

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