

# Large Scale Solar Array Simulation Featuring over 1 MW DC Power

Realized with TopCon Quadro Series

## Keywords

TopCon TC.P., TopCon Quadro, TopCon system integration, TopCon series/parallel operation, TopCon MAC-parallel bus, large scale Solar Simulation, SAS Solar Array Simulation, SASControl.

## The Customer's Requirements

Based on the thousand fold approved SAS functionality of programmable TopCon High Power DC supplies made by Regatron AG, a large scale Solar Array Simulation System had to be manufactured. The customer decided in favour of a Regatron system for the following reasons:

- Very large SAS systems developed by Regatron AG already operative in world's most famous test institutes test circuitry, both in science and industry
- Proverbial high reliability and stability of TopCon systems made by Regatron AG
- High dynamic response and resolution even at the highest output power levels
- Comprehensive and powerful SASControl application software
- International reputation, worldwide servicing and assistance, on-site instruction



**1280 kW Solar Array Simulation System with MAC bus "single authority" control made by Regatron AG**

## Technical Hints

Controlling a system of that size requires special measures and experience. The famous MACBUS based system control appears as a single TopCon unit to the operator, whatever the configuration of the individual units will be. As a parallel bus structure, maximum performance and speed is guaranteed. The high efficiency of 94% at full load simplifies ventilation installation considerably. With a view to future energy storage applications: The system is able to run in CV, CP and CRi mode at any time. It has to be pointed out, that parts of the system even down to each single TopCon unit are always fully operational in stand-alone mode also – a big step ahead when looking for varying test and load demands!

SAS systems made by Regatron AG – good reasons for modularity.