APPLICATION NOTE

ENERGY

ELMA
Your Solution Partner

Development system for FACTS power transmission system

INTEGRATED OPENVPX, FPGA-BASED DEVELOPMENT SYSTEM

POWER GRID

Elma provided dual lab environment test systems for application development. Each system consisted of:

- 3U OpenVPX E-frame chassis and backplane
- Core i7 SBC processor board Virtex® FPGA technology, Gigabit Ethernet and PCIe switching capability, A/D and D/A conversion
- Custom rear I/O card development activities
- Complete sub-system integration shipped development ready

Requirements

Provide a high performance development platform with which the customer could design a system used to maximize power transmission efficiencies. Flexible AC Transmission System (FACTS) uses power electronics to improve the control over a power system's voltage profiles in order to maximize the efficiency of power distribution through the grid.

Solution

Elma worked closely with the customer in defining the technical requirements, starting with a technology tutorial on the OpenVPX standard itself. Elma brought together the necessary technical experts at the hardware and software level to provide the right solution for this project's requirements. A very high performance FPGA based system was developed in order to provide the right tools for the project.

Benefits

The customer came to Elma for our technical expertise in packaging and embedded computing, as well as the ability to pull together a solution based on elements from multiple vendors.