

FPGA based high voltage control for gas feed system

Background: The tokamak vacuum vessel pressure is controlled by piezo electric valve. The piezo electric valve operate on 0-100VDC volt. The precise control of the voltage is required for precise stabilization of pressure in the vacuum vessel.

Objective: FPGA based precise high voltage control required to operate the piezo electric valve. The analog control voltage is sampled using analog to digital converter and compare with desired value in FPGA and generate required analog voltage to control piezo electric valve for the required amount of gas enter in vacuum vessel.

Deliverables: The students required to deliver required hardware for the high voltage control of piezo electric valve along with FPGA board interface. The FPGA program along with LabVIEW/Python interface program for online control of the required parameter.

Eligibility: Only students of M.E./M.Tech Electronics and Communication branches can submit their application at following email addresses

[Guide e-mail address: kkpatel@ipr.res.in] and [Project coordinator's e-mail address : project_ece@ipr.res.in]

Phone Number: 079-23962140 [Guide phone number]