

**DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY,  
SHIBPUR, HOWRAH-711 103.**

No. 90/2018/EE-3/21(KM)

Dated: 31/12/2018

*From :* The Head of the Department,  
Electrical Engineering,  
IEST, Shibpur, Howrah-711 103


*To :* Enlisted vendors of the institute and other interested parties/ For Website Tender.

Dear Sir(s),

Sealed quotations are invited for supply of the following item(s) within **21 days** from the date of publication of this advertisement in the website. The quotation should include the 5% GST only as per institute rule, delivery charges, entry tax if any, etc. to Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur and should mention a firm delivery period. Preferences will be given to the suppliers who can supply ex-stock.

The vendors, who are not enlisted in the Institute register, should submit the copies of their valid Trade License, GST registration, PAN, latest Income Tax / Sales Tax Statement /Return, SSI/MSME certificate, if any etc. and any other commercial credentials. The institute will provide concessional GST rate certificate with the purchase order and will pay 5% GST only.

*Yours faithfully,*



Signature of the indenting Officer/  
Concerned Faculty Member



*Prof. & Head of EE Dept.*  
IEST, Shibpur, Howrah – 711 103

**Item No.:    Specifications**

**PEL#5: FPGA development boards, Altera based, with ADC, DAC, byteblaster cable with regulated DC power supplies – 2 sets (approx) consisting of the following:**

A world-renowned company-make Field Programmable Gates Array (FPGA) processor chip integrated properly with requisite power supply, Analog-to-Digital Converter (ADC's), Digital-to-analog Converters (DAC's), buffers, driver, interface card etc. The total solution has to be confined within preferably one PCB or in two PCB's in the worst case. Design should be compact, modular and such that EMI problems are absent.

- (i) Minimum 8 no.s of ADC channels, 4 numbers of DAC channels
- (ii) 60 Input/Output (I/O) lines minimum
- (iii) 12k logic elements minimum
- (iv) Serial programming option, JTAG equivalent byteblaster cable (USB computer port compatible) should accompany the kit
- (v) RS232 interface, USB interface, LCD interface, CAN interface features
- (vi) In-built 64 kB serial EEPROM memory
- (vii) Minimum 4 MB flash memory (active serial configuration device)

User/Customer will connect the board/kit to a 230V, 50 Hz single phase AC mains and all internal power supplies, viz. +/- 15V, +/-5V etc. as applicable, should be derived as per internal design of vendor.

The entire system should be housed inside a proper cubicle. ADC channel inputs, DAC channel outputs, ground and all user-usable digital I/O pins should be externally terminated to suitable screw-type connectors for user's access.

**Warranty requirements: 2 years at least.**