

PUNJAB ENGINEERING COLLEGE
(Deemed to be University), Chandigarh

Notice for procurement of ECP Model 505 (with system options, SO1 and SO2) being proprietary Article under Rule 166 of General Finance Rules, 2017.

The department of Electrical Engineering of this Institute intends to purchase ECP Model 505 (with system options, SO1 and SO2) Inverted Pendulum having following specifications:

Detailed Specifications

1. **ECP Model-505 Inverted Pendulum Complete System (Includes full-featured ECP Executive® program):** Dynamics: 4th order, non-minimum phase, open loop unstable, kinematic & gravitationally coupled nonlinearities.
Parameter Adjustment: Adjustable vertical and horizontal rod mass, inertia, and CG offset. I/O: SISO, SIMO, Poles: Adjustable 0.4-1.2 Hz. Feedback: High res. encoders (16,000 count/rev, θ , 44,000 count/m, x). Actuator: High Torque density, rare earth magnet type. Bench-top size: 30x30x40 cm. (12x12x16 in.)
Safety Features: Travel limit micro-switches (horizontal rod), fail-safe shutdown, limit cushions (vertical rod), amplifier over-current protection. In firmware (complete system only): i²t thermal protection.
2. **SO1 Executive USR:** User-Written Control Algorithm Package: Supports general control law generation in High level language. Provides for user-written control laws beyond the many (Virtually all linear forms) supported in the standard ECP Executive.
3. **SO2 Real-Time Simulink®:** Real Time Simulink Interface (via ECP extension to RTWT). Provides Real-Time Simulink® environment for operation of ECP Systems. Requires from the MathWorks: Matlab®, Simulink®, Real-Time Workshop®, & RTWT (for Windows-OS).

As per knowledge of this Institute, above said article/ equipment is only manufactured by M/s Educational Control Products (ECP), 1 Buckskin Court, Bell Canyon, CA, 91307, USA and the said firm sells the same through its authorized agency/ reseller Technics Infosolutions Pvt. Ltd., 4648/21, Sedhumal Building, Daryaganj, New Delhi-110 002 in the Chandigarh region. The Proprietary Article Certificate issued by the OEM is attached as **Annexure-I**

In case, there is any other OEM or its authorized agent/ reseller for the above said article then they are requested to submit their proposal to the Director, Punjab Engineering College (Deemed to be University), Sector-12, Chandigarh through email- headelec@pec.ac.in / hard copy latest by **16-02-2018** failing which it will be presumed that there is no other firm who manufacture the required article/ equipment and purchase will be processed and finalized from the available source.

Head of Department
Department of Electrical Engineering