PE-i Lab

ApECOR
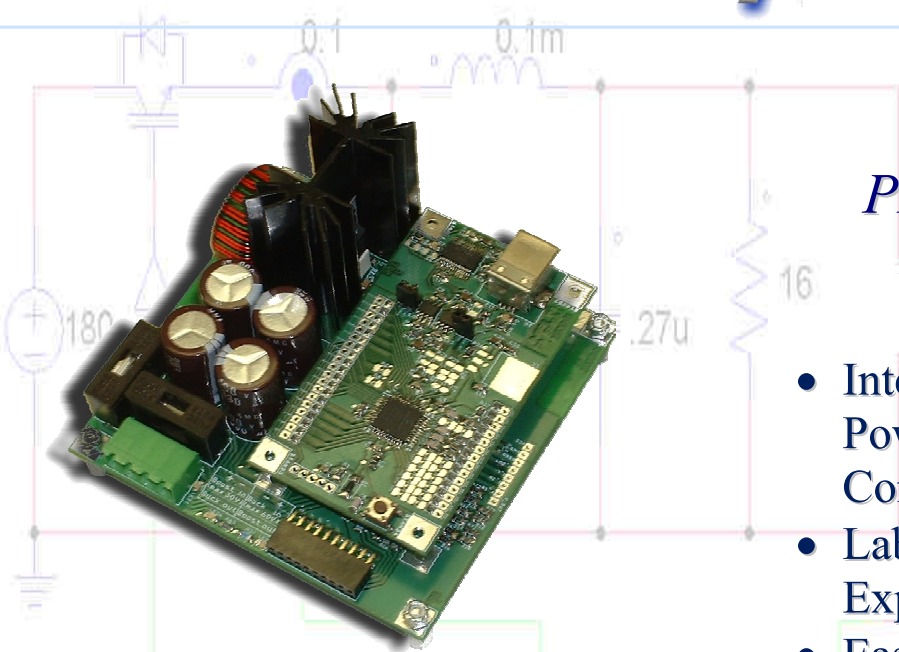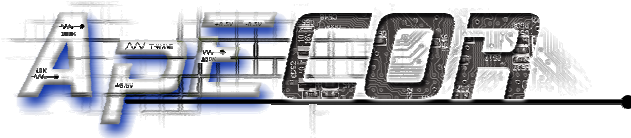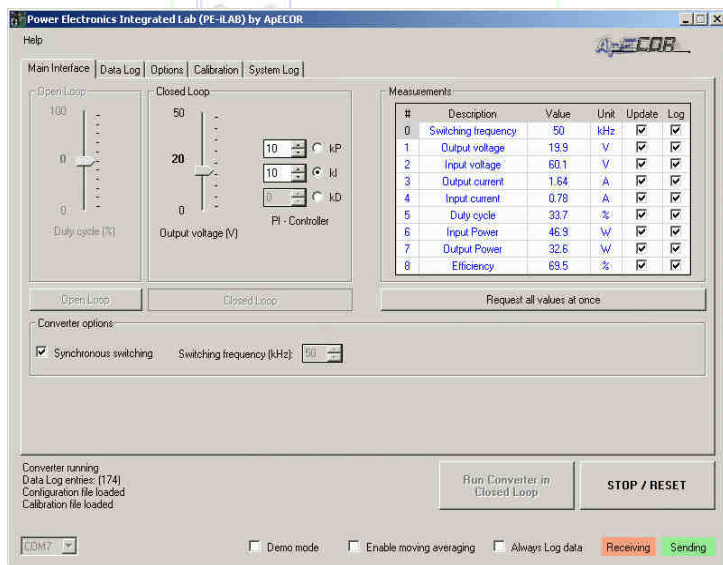
PE-i Lab *Helping Power Electronics Education*

- Interactive Environment to Learn Power Electronics and Digital Control
- Lab Manual Included (8 Experiments)
- Easy-to-use Computer Interface

PE-i Lab 100 Series

- 200W Buck/Boost Converter
- Interactive Digital Control
- Control Options
  - o Open/Closed Loop
  - o Switching Frequency
  - o Synchronous Switching
  - o Control Type(P,PI,PID)/Gain
- I/O Sensing
- Sensing Calibration
- Active Data Logger
- Lab Manual Included (8 experiments)
- Probe Points for I & V Sensing
- Safety through Hard I , V & Duty Cycle Limits
- USB Interface

Currently in use at the University of Central Florida

Join the group!

Students learn to design and optimize digital controllers
through simulation and experimental testing

Future Series

- More topologies (flyback, forward, and full bridge)

- Advanced controller designs
  - Maximum Power Point Tracking (MPPT)
  - Power Factor Correction (PFC)
  - Battery Charging (BC)

- Controller mode change capability (Current mode - Voltage mode)

- Soft switching design & evaluation

- Current sharing experimentation (Multiple module interfacing)

- Variable frequency & variable frequency control

- Editable digital controller code