

Below are **supplied to students** during their first lab, paid for with your lab fees. (See pages 2 and 3 for USB port requirements, either for your computer or for USB port expansion devices.)

- *Digilent* Analog Discovery (DAD) from <https://digilent.com/>
 - If you already have one (probably a DAD-2), you do not need to borrow one from ECE.
 - Students that borrow a DAD will get a DAD-3.
 - EE and CpE students will return during their last undergraduate semester in their BS degree program.
 - Other students will return before the end of the semester.
- DE10-Lite, from <http://www.terasic.com/>
 - All students will return at the end of the semester.

Below are parts that you will **need to purchase** or otherwise obtain on your own. Breadboard (with at least two panels). Note that the **OOTB**, a local store, has an [EEL 301 Accessory Kit](#) that includes the follow required items. (Feel free to buy them elsewhere.)

- 40-pin IDC cable (to connect DE10-Lite to the below breadboard breakout)
- DE10-lite breadboard breakout (connects IDC cable to breadboard)
- SPDT switch with breadboard breakout
- 2× 8 circuit SPST DIP switches for breadboard use
- 2× 10 circuit bar graph LEDs
- 2× DIP resistor packs 1 kΩ×8
- 2× SIP resistor packs 2.2 kΩ×8
- 2× 74HC00 ICs (NAND)
- 2× 74HC02 ICs (NOR)
- 2× Axial resistors 1 kΩ

Below are the parts that you will **need to purchase** elsewhere, i.e., not available at **OOTB**. I suggest [Jameco](#) (a well-known an online electronics component distributor).

- Breadboard (with at least two panels) ([Jameco Part #: 20774](#))
- Wire kit ([Jameco Part #: 19290](#))

The below parts are **optional**, i.e., **not** required, but might be helpful. If you have taken EEL3111C: *Circuits 1* you may already have this and the two above items.

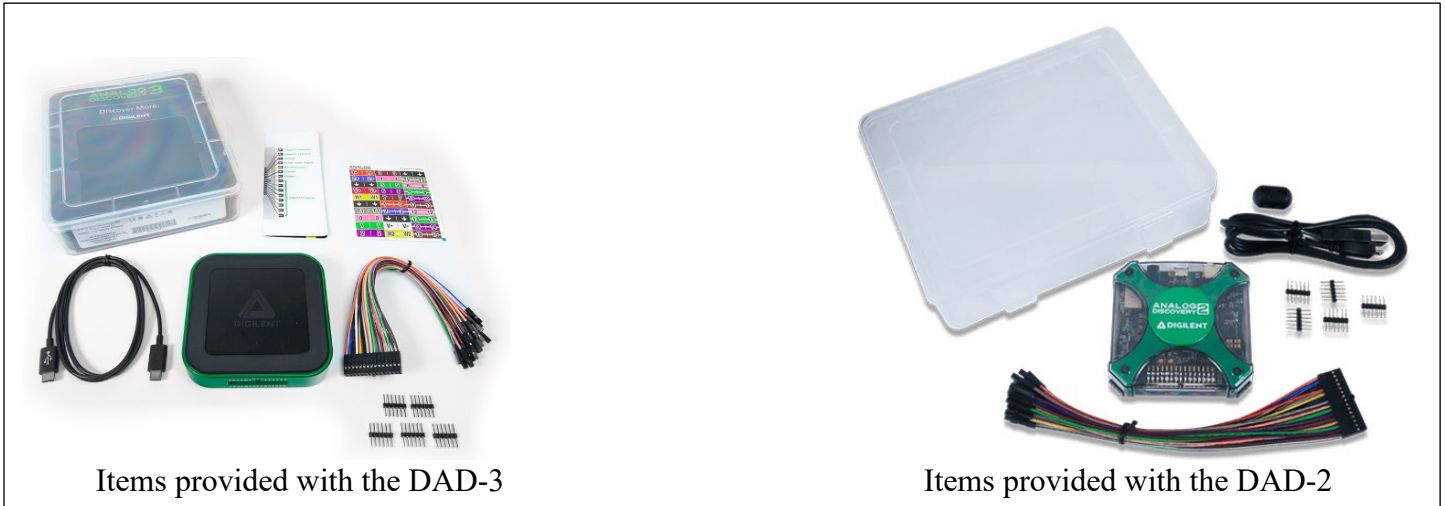
- Digital Multimeter ([Jameco Part #2318559](#) or [Harbor Freight](#), a local company at 2520 North Main Street)

You **MUST** have and use your own laptop computer for this course with a dedicated camera and microphone. (A cell phone **cannot** be used as the camera.)

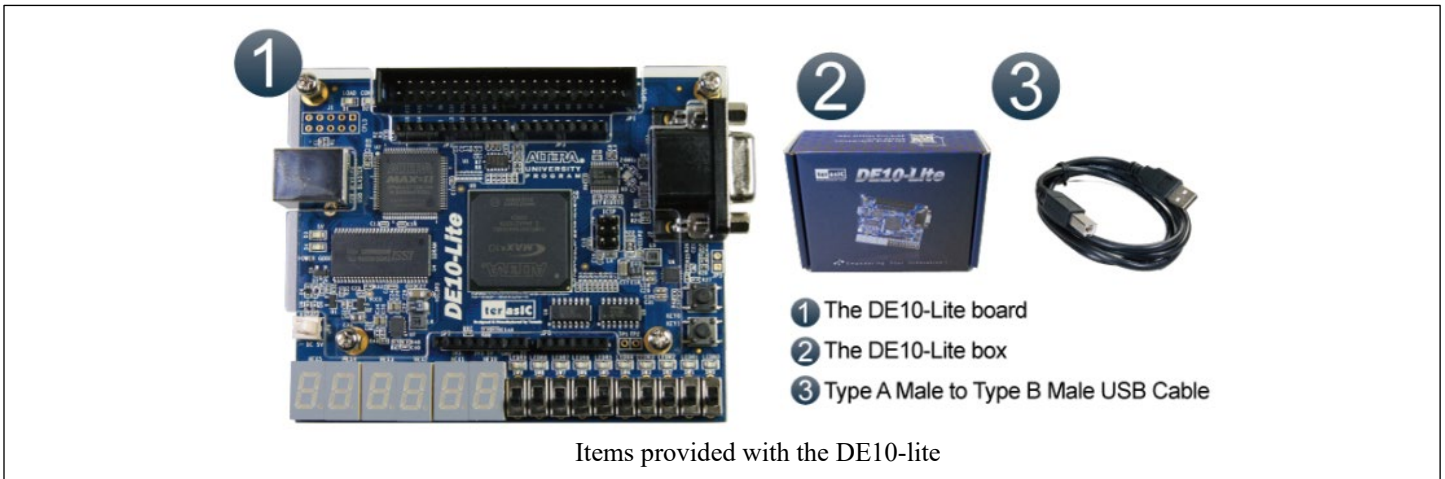
See the next two pages for USB port requirements, either for your computer or for USB port expansion devices.

Your computer will need the necessary USB ports to connect to the DAD and DE10-lite. If it does not have the proper ports **than you will need to purchase a USB Port Expander or USB Converter cable(s).**

- The DAD-3 requires a female USB C type port on the PC (with a female USB C type port on the DAD-3).
- The DAD-2 requires a female USB A type port on the PC (with a female USB B type port on the DAD-2).



The DE10-lite requires a female USB A type port on the PC (with a female USB B type port on the DE10).



One solution, if you have a shortage or the wrong kind of USB ports, is to get a USB hub like one of those below.

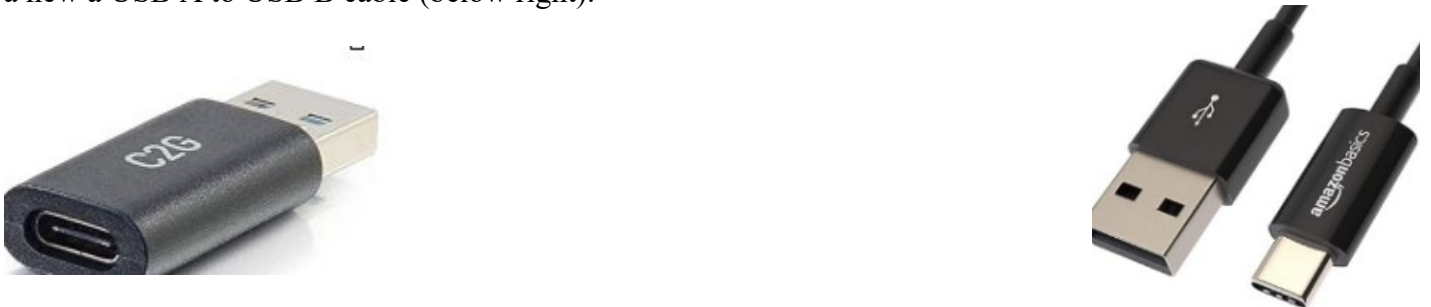


Parts List
Revision 0

Alternatively, if you have two USB C ports on your computer, you could get one of the below adapters for the DE10-lite (on the left) or you could get a new a USB C to USB A cable (on the right).



If you have two USB A ports on your computers, you could get one of the below left adapters for the DAD-3 or a new a USB A to USB B cable (below right).



If you are unsure, please bring your laptop to a PI during office hours and they will help you decide the best solution.