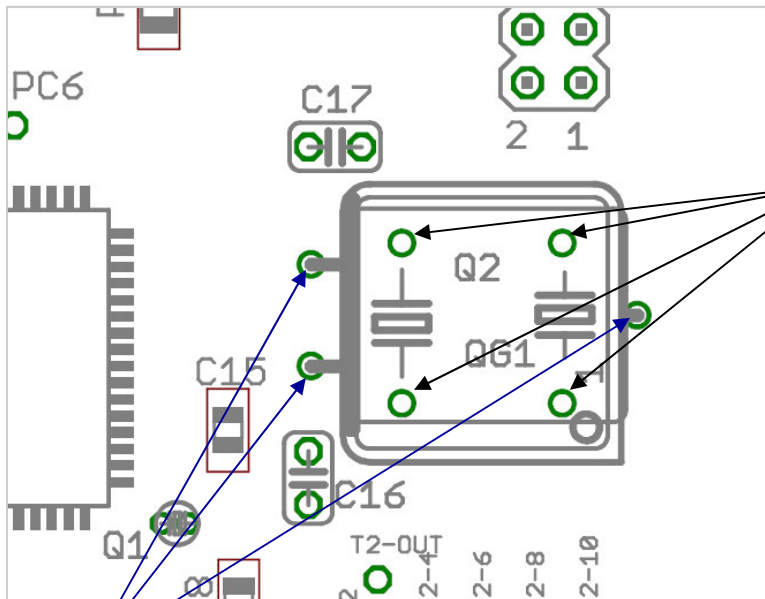


Installing an external Crystal or Oscillator

The PDK-I includes the footprints for using either an external crystal or oscillator. We intentionally overlapped the two devices. This saves board space and ensures that no one would try to use both at the same time. However, this layout has caused a bit of confusion. Hopefully, the diagram below will clarify things.



If you want to use an external “half size” TTL oscillator, you can just solder it down using these holes.

Do not install optional C16 or C17.

Note that pin 1 is in the bottom right corner.

You will need to select the external clock option in the fuses.

To use an external HC49 style crystal or resonator , you’ll need to install it in these holes.

The far right hole is an optional ground (if your device has a third pin).

You will probably need to install C16 and C17; the value is dependant on your crystal.

You will also need to select the appropriate fuse settings (See data sheet).

Warning: if you select the external clock option, (CKSEL3..0 = 0000) you MUST have an external clock present to reprogram the device! This includes changing the fuse settings.