

## PicoCube™ for OpenCL—Learn it, Run it, Love it

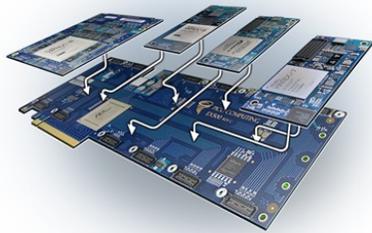
A complete, easy-to-use turnkey workstation for OpenCL-based FPGA development—the ideal platform for OpenCL developers and high-performance applications.

### It Really is this Easy

The PicoCube, a small form factor, Linux-based desktop PC, provides a powerful but easy-to-use high-performance computing platform configured especially for developers using OpenCL. In fact, it's as easy as 1-2-3:

1. Create your OpenCL code.
2. The OpenCL compiler calls the FPGA tools, which generate the bit image.
3. The bit image is downloaded automatically by the Pico Framework to the pre-installed FPGA-populated PCIe card.

No knowledge of FPGAs or HDL programming languages required. No worries about tool flows, special installations, or OS issues. Just take it out of the box, plug it in, and go.



The PicoCube can be configured with either Pico Computing's EX-800 (featuring up to four Altera Stratix V FPGAs and a single hybrid memory cube), the EX-850 (featuring a single Xilinx UltraScale device and up to eight HMCs), both shown above, or with a variety of Pico Computing's scalable modules—powerful FPGA-based computing elements that include a local memory sub-system and a fully-switched PCIe x8 communication structure (shown at left). Up to six fully interchangeable modules can be snapped onto a Pico Computing PCIe card, filling a single slot with a groundbreaking level of parallel processing density for compute-intensive applications.

### Ideal for Software Developers

Harnessing the awesome supercomputing power of FPGAs has never been easier. Software developers with no knowledge of FPGA programming methods can now create FPGA bitfiles using a familiar, C-like language. OpenCL—the open standard for parallel programming of heterogeneous systems—truly does bring FPGA technology to the masses. And now, Pico Computing makes it even easier by bundling all this capability into a diminutive desktop PC.

Being orders of magnitude faster than a conventional CPU-based computer, the PicoCube is the ideal solution not only for learning OpenCL, but for many high-performance computing applications spanning imaging to bioinformatics. To these ends, the included Pico Framework does all the heavy lifting where the FPGAs are concerned, providing host APIs, drivers, DMA controllers, device programming and management, and more to take all the friction out of using FPGAs. This compact unit, designed by the leading HPC technology development and solution provider, will change the way you think about FPGA-accelerated computing.