

Architecture and Development	Optimization	Multicore/Manycore	Silicon	
High Performance Simulations Proof of Concept R&D Benchmarking and Trade Studies Numerical Algorithms and Analysis Packet Inspection and Processing Manycore Compute Engines Heterogeneous Computing Pipelined Processing Engines Multithreading/Multicore Data Acquisition/SAR/Beamforming High Frequency Trading Deep Learning & Machine Intelligence Video Encoding/Decoding/Transcoding Transaction Execution Engines Concurrent Networking Internet Server Applications In-memory Databases	Memory Problems Cache Problems Microarchitecture SIMD Vectorization Multicore/Manycore Intel MKL/IPP x86/ARM/C66x/RISC	Analysis + Optimization Porting + Validation OpenMP/OpenACC CUDA/OpenCL MPI/OpenMPI/MPICH Intel TBB pThreads	x86-64/x86-32 nVidia GPU OCTEON TI Keystone ARM AMD MIPS POWERPC SPARC	
	OS	Everything Else		
	Linux vxWorks SYS/BIOS QNX Solaris NetBSD OS X	Adaptive and On-time Feature Driven People Before Process Communication Before Decision Buy Before Build Documentation is Key Configuration Management	<th data-bbox="1956 794 2380 889">Transport/Bus</th> Ethernet RapidIO Infiniband PCIe ATCA/OpenVPX	Transport/Bus