

Architecture and Development	Optimization	Multicore/Manycore	Silicon
High Performance Simulations Numerical Analysis Manycore Compute Engines Pipelined Processing Engines Multithreading/Multicore Data Acquisition/SAR/Beamforming High Frequency Trading Expert Systems Video Encoding/Decoding/Transcoding Transaction Execution Engines Packet Inspection and Processing Concurrent Networking Neural Networks Online Games Internet Content Servers Search Frameworks 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 Tesla OCTEON TI Keystone ARM AMD MIPS POWERPC SPARC
	OS	Everything Else	Transport/Bus
	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	Ethernet RapidIO Infiniband PCIe ATCA/OpenVPX