

Performance / core

Goal: 8X peak FLOPs over 4 generations

512-bit Vectors
32 registers
Masking, Broadcast

Knights Landing
/Skylake Xeon

AVX2: FMA (2x peak flops)

256-bit integer SIMD. "Gather" Instructions.

Haswell
(22 nm Tock)

Half-float support, Random Numbers

Ivybridge
(22nm Tick)

AVX 1.0: 2X flops: 256-bit wide floating-point vectors

Since 2001:
128-bit Vectors

Sandy Bridge
(32 nm Tock)

2010

2011

2012

2013

2015/16