

# RECAP

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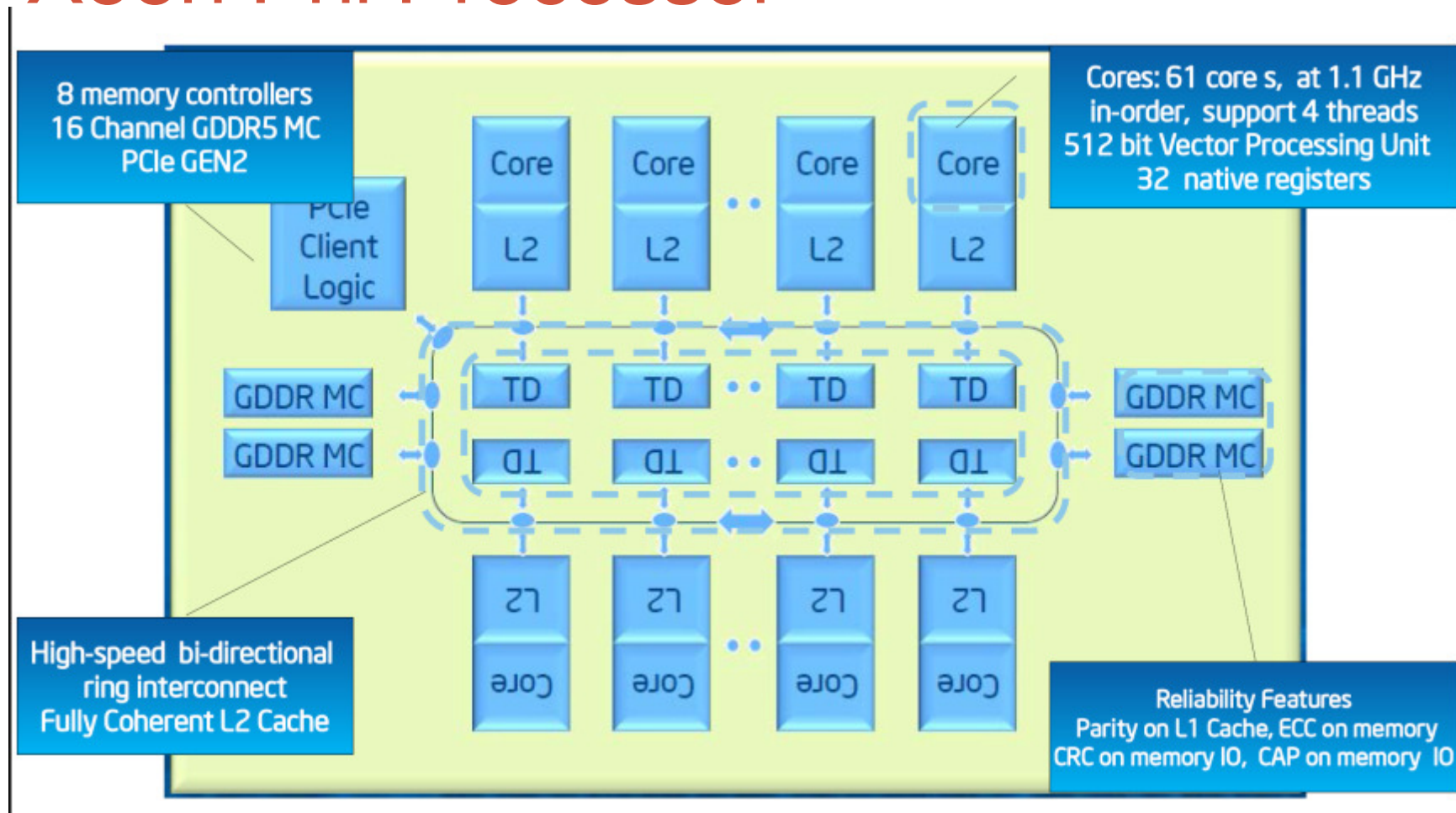
# Xeon Phi Processor



| epcc |



# Xeon Phi Processor



# Xeon Phi

- 60 cores -> 240 threads
  - 120 or above required for instruction issuing
- Two different programming models
  - Offload, native
  - OpenMP and MPI (also Cilk, OpenCL)
  - Also can use libraries to do the same (i.e. MKL)
- Accelerator card
  - Same as GPU, restrict data transfers for good performance

# Xeon Phi

- Xeon Phi hardware has potential for high peak performance
  - Particularly at single precision
- Achievable performance generally lower
  - Especially if memory or communication bound
- Full vectorisation and FMA essential for highest performance
  - Can still get good performance without
- Good memory re-use essential for highest performance
  - Same as for normal CPU code