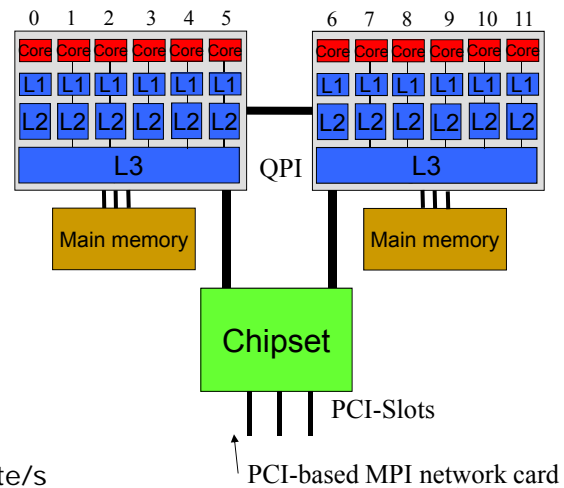# ARMINIUS: Intel X5650 „Westmere"

- 6 Kerne pro Prozessor, 2,67 GHz, Core i7
- 32 nm, 1.900 Mio. Transistoren
- je Kern
  - 32 kByte L1-D-Cache, 8-wege
  - 256 kByte L2-Cache, 8-wege
  - 64 Byte Cache-Lines
- 12 MByte L3-Cache
- Speicherkontroller
  - 3 Speicherkanäle
  - 133 MHz / DDR3-1066
  - kein ECC
- MESIF Cache-Kohärenzprotrokoll
- Quick Path Interconnect (QPI)
  - Bidirektionaler Link
  - 3200 MHz Taktfrequenz
  - je Richtung: 20 Bits, 6.4 GT/s, 16 GByte/s

Exercises

- STREAM-Benchmark
  - Use the OpenMP version of the benchmark to analyze the performance of the ARMINIUS system.
  - What are the advantages and disadvantages of processor binding?
  - How to get the most performance out of a single ARMINIUS node?

- NAS Parallel Benchmark
  - Compile and run the OpenMP version of the NPB Multi-Zone on ARMINIUS

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