

Intel Xeon E5649 processor 2.53 GHz 12 MB Smart Cache

Brand : Intel

Product family: Xeon

Product code:
AT80614006783AB

Product name : E5649



Intel® Xeon® Processor E5649

(12M Cache, 2.53 GHz, 5.86 GT/s Intel® QPI)

Intel Xeon E5649. Processor family: Intel® Xeon® 5000 Sequence, Processor socket: LGA 1366 (Socket B), Processor lithography: 32 nm. Memory channels: Triple-channel, Maximum internal memory supported by processor: 288 GB, Memory types supported by processor: DDR3-SDRAM. Market segment: Server, Supported instruction sets: SSE4.2, Bandwidth: 26214.4 MB/s. Package type: Retail box. Processor package size: 42.5mm x 45mm

| Processor | | Features | |
|--|----------------------------|--|---|
| Processor manufacturer * | Intel | Commodity Classification | |
| Processor model * | E5649 | Automated Tracking System (CCATS) | G077159 |
| Processor base frequency * | 2.53 GHz | Processor special features | |
| Processor family * | Intel® Xeon® 5000 Sequence | Intel® Hyper Threading Technology (Intel® HT Technology) | ✓ |
| Processor cores * | 6 | Intel® Turbo Boost Technology | 1.0 |
| Processor socket * | LGA 1366 (Socket B) | Intel® AES New Instructions (Intel® AES-NI) | ✓ |
| Processor lithography * | 32 nm | Enhanced Intel SpeedStep Technology | ✓ |
| Processor series | Intel Xeon 5600 Series | Intel Trusted Execution Technology | ✓ |
| Processor threads | 12 | Intel Enhanced Halt State | ✓ |
| System bus rate | 5.86 GT/s | Intel VT-x with Extended Page Tables (EPT) | ✓ |
| Processor operating modes * | 64-bit | Intel Demand Based Switching | ✓ |
| Processor boost frequency | 2.93 GHz | Intel 64 | ✓ |
| Processor cache | 12 MB | Intel Virtualization Technology (VT-x) | ✓ |
| Processor cache type | Smart Cache | Intel Virtualization Technology for Directed I/O (VT-d) | ✓ |
| Processor front side bus | 1333 MHz | Conflict-Free processor | ✗ |
| Thermal Design Power (TDP) | 80 W | Operational conditions | |
| Box * | ✗ | Maximum operating temperature | 76.2 °C |
| Cooler included * | ✗ | Tcase | 76.2 °C |
| VID Voltage Range | 0.75 - 1.35 V | Technical details | |
| Stepping | B1 | Born on date | Q1'11 |
| Bus type | QPI | Bus bandwidth | 5.86 |
| CPU multiplier (bus/core ratio) | 19 | Bus type units | GT/s |
| Number of QPI links | 2 | Launch date | Q1'11 |
| Memory bandwidth supported by processor (max) | 32 GB/s | Processor cache | 12288 KB |
| Processor codename | Westmere EP | Processor core voltage | 0.750-1.350 V |
| Processor code | SLBZ8 | Product name | Intel Xeon E5649 (12M Cache, 2.53 GHz, 5.86 GT/s Intel QPI) |
| Processor ARK ID | 52581 | Product type | Processor |
| Memory | | Status | Discontinued |
| Maximum internal memory supported by processor | 288 GB | Maximum memory | 288 GB |
| Memory types supported by processor | DDR3-SDRAM | Processor brand name | Intel Xeon |
| Memory channels * | Triple-channel | Supported memory types | DDR3-SDRAM |
| ECC | ✓ | Last change | 63903513 |
| Graphics | | Product family | Intel Xeon Processor 5000 Sequence |
| On-board graphics card * | ✗ | Bus speed | 5.86 GT/s |
| Features | | | |
| Execute Disable Bit | ✓ | | |
| Idle States | ✓ | | |
| Thermal Monitoring Technologies | ✗ | | |
| Market segment | Server | | |

| Features | | Logistics data | |
|---|--------------|-----------------------------|---------------|
| Supported instruction sets | SSE4.2 | Harmonized System (HS) code | 8542310001 |
| Bandwidth | 26214.4 MB/s | Packaging data | |
| Embedded options available | ✘ | Package type | Retail box |
| Physical Address Extension (PAE) | 40 bit | Weight & dimensions | |
| Export Control Classification Number (ECCN) | 5A992C | Processor package size | 42.5mm x 45mm |
| Other features | | Maximum internal memory | 288 GB |
| | | Maximum internal memory | 294912 MB |
| | | Cache memory | 12 MB |

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