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Understanding Embedded - Microprocessors

Embedded microprocessors are specialized computing chips designed to perform specific tasks within an embedded system. Unlike general-purpose microprocessors found in personal computers, embedded microprocessors are tailored for dedicated functions within larger systems, offering optimized performance, efficiency, and reliability. These microprocessors are integral to the operation of countless electronic devices, providing the computational power necessary for controlling processes, handling data, and managing communications.

Applications of Embedded - Microprocessors

Embedded microprocessors are utilized across a broad spectrum of applications, making them indispensable in

Details	
Product Status	Obsolete
Core Processor	Xeon E3-1275
Number of Cores/Bus Width	4 Core, 64-Bit
Speed	3.4GHz
Co-Processors/DSP	-
RAM Controllers	-
Graphics Acceleration	Yes
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	1156-LGA Module
Supplier Device Package	1156-LGA
Purchase URL	https://www.e-xfl.com/product-detail/advantech/96mpxe-3-4-8m11t

Intel Xeon E3-1275

General information

Type	CPU / Microprocessor
Market segment	Server
Family	Intel Xeon E3-1200
Model number	E3-1275
CPU part number	CM8062307262003 (SR00P)
Box part number	BX80623E31275 (SR00P)
Frequency (MHz)	**3400**
Package	1155-land Flip-Chip Land Grid Array
Socket	**Socket 1155 (Socket H2)**

Architecture / Microarchitecture

Microarchitecture	Sandy Bridge
Platform	Bromolow
Manufacturing process	0.032 micron High-K metal gate process
Data width	**64 bit**
Number of cores	**4**
Floating Point Unit	Integrated
Level 2 cache size	**4 x 256 KB**
Level 3 cache size	**8 MB**
Multiprocessing	Uniprocessor
Features	- MMX instruction set - SSE - SSE2 - SSE3 - Supplemental SSE3 - SSE4.1 - SSE4.2 - AES instructions - Advanced Vector Extensions - Extended Memory 64 technology (EM64T) - Execute disable bit - Virtualization technology - Turbo Boost technology - Trusted Execution technology
On-chip peripherals	- Integrated DDR3 SDRAM Memory controller - HD graphics controller

Electrical/Thermal parameters

Thermal Design Power (W)	**95**

Notes on Intel CM8062307262003

- Memory controller supports DDR3-800, DDR3-1066 and DDR3-1333 memory