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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 E5540
Number of Cores/Bus Width	4 Core, 64-Bit
Speed	2.53GHz
Co-Processors/DSP	-
RAM Controllers	-
Graphics Acceleration	-
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	1366-LGA
Supplier Device Package	1366-LGA
Purchase URL	<a href="https://www.e-xfl.com/product-detail/advantech/96mpxe-2-53-8m13t">https://www.e-xfl.com/product-detail/advantech/96mpxe-2-53-8m13t</a>

# Intel® Xeon® Processor E5540

Processor Specifications:	
sSpec Number: SLBF6	Package Type: LGA1366
CPU Speed: 2.53 GHz	Manufacturing Technology: 45 nm
PCG:	Core Stepping: D0
Bus Speed: 5.86 GT/s	CPUID String: 106A5h
Bus/Core Ratio: 19	Thermal Design Power: 80W
L3 Cache Size: 8 MB	Thermal Specification: 76°C
L3 Cache Speed: 2.53 GHz	VID Voltage Range: 0.75V -1.35V
<b>Product Documentation:</b> <a href="http://support.intel.com/support/processors/sb/CS-028967.htm">http://support.intel.com/support/processors/sb/CS-028967.htm</a>	

Product Order Codes:	
<b>Box Order Code:</b> BX80602E5540	<b>OEM Order Code:</b> AT80602000789AA

Supported Features:
<ul style="list-style-type: none"><li>• Quad Core</li><li>• Enhanced Intel Speedstep® Technology</li><li>• Hyper-Threading Technology <sup>1</sup></li><li>• Intel® EM64T <sup>2</sup></li><li>• Intel® Virtualization Technology</li><li>• Enhanced Halt State (C1E)</li><li>• Execute Disable Bit <sup>3</sup></li></ul>

Notes:
1/1/1/2 are the available frequency bins (+133 MHz)of Intel® Turbo Boost Technology that are available for 4, 3, 2, 1 active cores respectively.

Legal Disclaimers:
1 Hyper-Threading Technology requires a computer system with an Intel® Pentium® 4 processor or Intel® Core™ i7 processor supporting HT Technology and a Hyper-Threading Technology enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See <a href="http://www.intel.com/info/hyperthreading/">http://www.intel.com/info/hyperthreading/</a> for more information including details on which processors support HT Technology.
2 Intel® EM64T requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. Performance will vary depending on your hardware and software configurations. See <a href="http://www.intel.com/info/em64t">http://www.intel.com/info/em64t</a> for more information including details on which processors support Intel® EM64T or consult with your system vendor for more information.
3 Enabling Execute Disable Bit functionality requires a PC with a processor with Execute Disable Bit capability and a supporting operating system. Check with your PC manufacturer on whether your system delivers Execute Disable Bit functionality.