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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	Active
Core Processor	i7-2710QE
Number of Cores/Bus Width	4 Core, 64-Bit
Speed	2.1GHz
Co-Processors/DSP	-
RAM Controllers	-
Graphics Acceleration	Yes
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	988-PGA Module
Supplier Device Package	988-Micro-FCPGA
Purchase URL	https://www.e-xfl.com/product-detail/advantech/96mpi7m-2-1-6m9t



Intel Core i7 Mobile i7-2710QE

General information

Type	CPU / Microprocessor
Market segment	Mobile
Family	Intel Core i7 Mobile
Model number	I7-2710QE
CPU part number	FF8062700841002 (SR02T)
Frequency (MHz)	2100
Turbo frequency (MHz)	3000
Clock multiplier	21
Package	988-pin micro-FCPGA10 (rPGA988B)
Socket	Socket G2 (rPGA988B)

Architecture / Microarchitecture

Microarchitecture	Sandy Bridge
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	4 MB
Physical memory (GB)	8

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
- HyperThreading technology
- Turbo Boost technology 2.0
- Virtualization technology (VT-x/VT-d)
- Trusted Execution technology

Low power features	Enhanced SpeedStep technology
On-chip peripherals	<ul style="list-style-type: none">• Integrated dual-channel DDR3 SDRAM Memory controller• Graphics controller

Electrical/Thermal parameters

Thermal Design Power (W)	45
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Notes on Intel FF8062700841002

- Embedded microprocessor
- Integrated graphics controller runs at 650 MHz, and up to 1.2 GHz in Turbo mode
- Memory controller supports DDR3-1066, DDR3-1333 and DDR3-1600 memory