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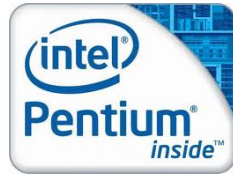**Understanding Embedded - Microprocessors**

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	Pentium G850
Number of Cores/Bus Width	2 Core, 64-Bit
Speed	2.9GHz
Co-Processors/DSP	-
RAM Controllers	-
Graphics Acceleration	Yes
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	1155-LGA Module
Supplier Device Package	1155-FCLGA
Purchase URL	https://www.e-xfl.com/product-detail/advantech/96mpp-2-9-3m11t

Intel® Pentium® Processor G850 (3M Cache, 2.90 GHz)

Specifications

Essentials

Status	Launched
Launch Date	Q2'11
Processor Number	G850
# of Cores	2
# of Threads	2
Clock Speed	2.9 GHz
Intel® Smart Cache	3 MB
Bus/Core Ratio	29
DMI	5 GT/s
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1/4.2
Embedded Options Available	Yes
Lithography	32 nm
Max TDP	65 W
Recommended Customer Price	$75 - $82

Memory Specifications

Max Memory Size (dependent on memory type)	32 GB
Memory Types	DDR3-1066/1333
# of Memory Channels	2
Max Memory Bandwidth	21 GB/s

Graphics Specifications

Processor Graphics ⚠	Intel® HD Graphics
Graphics Base Frequency	850 MHz
Graphics Max Dynamic Frequency	1.1 GHz
Intel® Quick Sync Video	No
Intel® InTru™ 3D Technology	No
Intel® Insider™	No
Intel® Wireless Display	No
Intel® Flexible Display Interface (Intel® FDI)	Yes
Intel® Clear Video HD Technology	No
Dual Display Capable	Yes

Expansion Options

PCI Express Revision	2.0

Package Specifications

Max CPU Configuration	1
T$_{CASE}$	69.1°C
Package Size	37.5mm x 37.5mm
Sockets Supported	FCLGA1155
Low Halogen Options Available	Yes

Advanced Technologies

Intel® Turbo Boost Technology		No
Intel® vPro Technology		No
Intel® Hyper-Threading Technology	🔍	No
Intel® Virtualization Technology (VT-x)	🔍	Yes
Intel® Virtualization Technology for Directed I/O (VT-d)	🔍	No
Intel® Trusted Execution Technology	🔍	No
AES New Instructions	🔍	No
Intel® 64	🔍	Yes
Idle States		Yes
Enhanced Intel SpeedStep® Technology	🔍	Yes
Thermal Monitoring Technologies		Yes
Intel® Fast Memory Access		Yes
Intel® Flex Memory Access		Yes
Execute Disable Bit		Yes

ORDERING AND SPEC INFORMATION

Ordering and Spec Information
Intel® Pentium® Processor G850 (3M Cache, 2.90 GHz) FC-LGA10D, Tray

Socket	Step	Step TDP	Ordering Code	Spec Code	Low Halogen	VT-x
FCLGA1155		65 W	CM8062301046204	SR05Q	Yes	Yes

Boxed Intel® Pentium® Processor G850 (3M Cache, 2.90 GHz) FC-LGA10D

Socket	Step	Step TDP	Ordering Code	Spec Code	Low Halogen	VT-x
FCLGA1155		65 W	BX80623G850	SR05Q	Yes	Yes