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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	Discontinued at Digi-Key
Core Processor	i3-7101TE
Number of Cores/Bus Width	2 Core, 64-Bit
Speed	3.4GHz
Co-Processors/DSP	-
RAM Controllers	DDR3L, DDR4
Graphics Acceleration	Yes
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	1151-LGA Module
Supplier Device Package	1151-FCLGA (37.5x37.5)
Purchase URL	https://www.e-xfl.com/product-detail/advantech/96mpi3k-3-4-3m11t



Intel® Core™ i3-7101TE Processor

3M Cache, 3.40 GHz

Spec Code

SR374

Ordering Code

CM8067702867061

[Intel® Xeon® Silver 4116 Processor \(16.5M Cache, 2.10 GHz\)](#)

Code Name	Kaby Lake
<u>Essentials</u>	
Vertical Segment	Desktop
Processor Number	i3-7101TE
Status	Launched
Launch Date	Q1'17
Lithography	14 nm
Recommended Customer Price	\$117.00
<u>Performance</u>	
# of Cores	2
# of Threads	4
Processor Base Frequency	3.40 GHz
Cache	3 MB SmartCache
Bus Speed	8 GT/s DMI3
TDP	35 W
<u>Supplemental Information</u>	
Embedded Options Available	Yes
Datasheet	Link
<u>Memory Specifications</u>	
Max Memory Size (dependent on memory type)	64 GB
<u>Memory Types</u>	DDR3L-1600, DDR4-2400
Max # of Memory Channels	2
Max Memory Bandwidth	34.1 GB/s

ECC Memory Supported ‡	Yes
Processor Graphics	
Processor Graphics	Intel® HD Graphics 630
<u>Graphics Base Frequency</u>	<u>350 MHz</u>
Graphics Max Dynamic Frequency	1.10 GHz
Graphics Video Max Memory	64 GB
Graphics Output	eDP/DP/HDMI/DVI
<u>4K Support</u>	<u>Yes, at 60Hz</u>
Max Resolution (HDMI 1.4)‡	4096x2304@30Hz
Max Resolution (DP)‡	4096x2304@60Hz
Max Resolution (eDP - Integrated Flat Panel)‡	4096x2304@60Hz
Max Resolution (VGA)‡	N/A
<u>DirectX* Support</u>	<u>12</u>
OpenGL* Support	4.4
Intel® Quick Sync Video	Yes
Intel® InTru™ 3D Technology	Yes
Intel® Clear Video HD Technology	Yes
# of Displays Supported ‡	3
Device ID	0x5902
Expansion Options	
Scalability	1S Only
PCI Express Revision	3
PCI Express Configurations ‡	1x16,2x8,1x8+2x4
Max # of PCI Express Lanes	16
Package Specifications	
Sockets Supported	FCLGA1151
Max CPU Configuration	1
T_{JUNCTION}	88°C
Package Size	37.5mm x 37.5mm
Low Halogen Options Available	See MDDS
Advanced Technologies	
Intel® Optane™ Memory Supported ‡	Yes
Intel® Turbo Boost Technology	No

Intel® vPro™ Technology ‡	No
Intel® Hyper-Threading Technology ‡	Yes
Intel® Virtualization Technology (VT-x) ‡	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) ‡	Yes
Intel® VT-x with Extended Page Tables (EPT) ‡	Yes
Intel® TSX-NI	No
Intel® 64 ‡	Yes
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1/4.2, AVX2
Idle States	Yes
Enhanced Intel SpeedStep® Technology	Yes
Thermal Monitoring Technologies	Yes
Intel® Identity Protection Technology ‡	Yes
Security & Reliability	
Intel® AES New Instructions	Yes
Intel® Software Guard Extensions (Intel® SGX)	Yes
Intel® Memory Protection Extensions (Intel® MPX)	Yes
Intel® OS Guard	Yes
Intel® Trusted Execution Technology ‡	No
Execute Disable Bit ‡	Yes
Intel® Boot Guard	Yes