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	Xeon Gold 5118
Number of Cores/Bus Width	12 Core, 64-Bit
Speed	2.3GHz
Co-Processors/DSP	-
RAM Controllers	DDR4
Graphics Acceleration	No
Display & Interface Controllers	-
Ethernet	-
SATA	-
USB	-
Voltage - I/O	-
Operating Temperature	-
Security Features	-
Package / Case	3647-LGA Module
Supplier Device Package	3647-FCLGA (76x56.5)
Purchase URL	https://www.e-xfl.com/product-detail/advantech/96mpxe-2-3-16m36

Intel® Xeon® Gold 5118 Processor

16.5M Cache, 2.30 GHz

Spec Code	SR3GF
Ordering Code	CD8067303536100

[Intel® Xeon® Gold 5118 Processor (16.5M Cache, 2.30 GHz)](#)

Code Name	Skylake
Essentials	
Vertical Segment	Server
Processor Number	5118
Status	Launched
Launch Date	Q3'17
Lithography	14 nm
Recommended Customer Price	$1,273.00
Performance	
# of Cores	12
# of Threads	24
Processor Base Frequency	2.30 GHz
Max Turbo Frequency	3.20 GHz
Cache	16.5 MB L3
# of UPI Links	2
TDP	**105 W**
Supplemental Information	
Embedded Options Available	Yes
Conflict Free	Yes
Datasheet	Link
Product Brief	**Link**
Memory Specifications	
Max Memory Size (dependent on memory typ	768 GB

Memory Types	DDR4-2400
Maximum Memory Speed	2.40 GHz
Max # of Memory Channels	6
ECC Memory Supported ‡	**Yes**
Expansion Options	
Scalability	S4S
PCI Express Revision	3
Max # of PCI Express Lanes	**48**
Package Specifications	
Sockets Supported	FCLGA3647
T$_{CASE}$	81°C
Package Size	76.0mm x 56.5mm
Low Halogen Options Available	**See MDDS**
Advanced Technologies	
Intel® Optane™ Memory Supported ‡	No
Intel® Speed Shift Technology	Yes
Intel® Turbo Boost Max Technology 3.0 ‡	No
Intel® Turbo Boost Technology	2
Intel® vPro™ Technology ‡	Yes
Intel® Hyper-Threading Technology ‡	Yes
Intel® Virtualization Technology (VT-x) ‡	Yes
Intel® TSX-NI	Yes
Intel® 64 ‡	Yes
Instruction Set Extensions	Intel® SSE4.2, Intel® AVX, Intel® AVX2, Intel® AVX-512
# of AVX-512 FMA Units	1
Intel® Volume Management Device (VMD)	**Yes**
Security & Reliability	
Intel® AES New Instructions	Yes
Intel® Trusted Execution Technology ‡	Yes
Intel® Run Sure Technology	Yes
Mode-based Execute Control (MBE)	Yes