Layerscape® LX2160A, LX2120A, LX2080A Processors

LX2160A
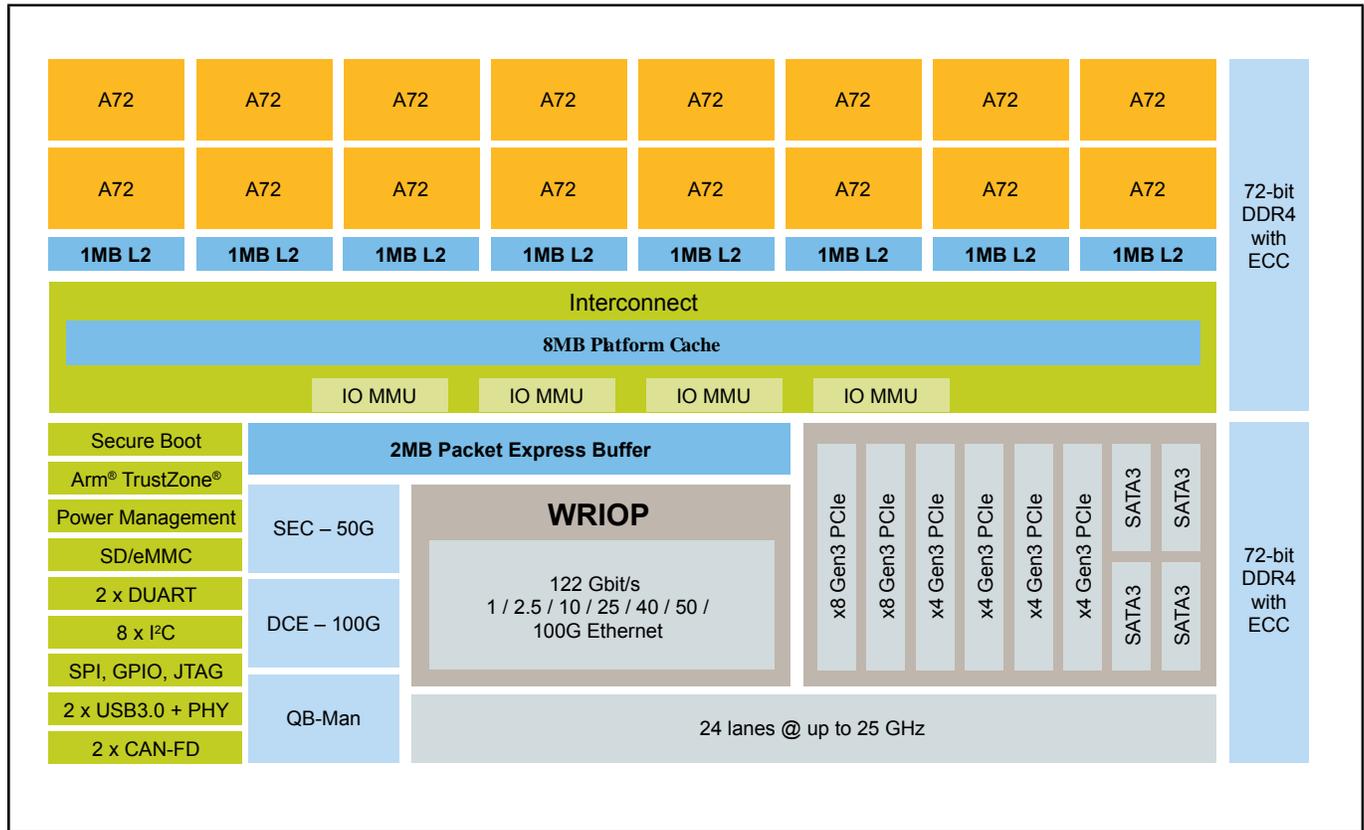
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The LX2160A multicore processor, the highest-performance member of the Layerscape family, combines FinFET process technology's low power and sixteen Arm® Cortex®-A72 cores with datapath acceleration optimized for L2/3 packet processing, together with security offload, robust traffic management and quality of service.

This advanced sixteen-core 64-bit Arm processor is ideal for applications such as 5G packet processing, network function virtualization (NFV), white-box switching, high-processing industrial computers, machine learning and smart Network Interface Cards. The high level of integration delivers significant performance benefits such as 100 GbE, hardware L2 switching, DPAA2 with 100 Gbps decompression/compression and 50 Gbps SEC and multiple PCIe Gen3.0 and SATA controllers.

For Edge Computing, this processor offers outstanding computing performance with a powerful packet offload and Ethernet controllers. You can have high-end and high-speed communications in one device, with low-speed peripherals such as sensors and the computing power to process and act upon all received information.

Layerscape processors are part of NXP's EdgeVerse™ edge computing platform.

Layerscape LX2160A Block Diagram Block Diagram

A72	A72	A72	A72	A72	A72	A72	A72	72-bit DDR4 with ECC
A72	A72	A72	A72	A72	A72	A72	A72	
1MB L2	1MB L2	1MB L2	1MB L2	1MB L2	1MB L2	1MB L2	1MB L2	

Interconnect

8MB Platform Cache

IO MMU   IO MMU   IO MMU   IO MMU

Secure Boot	**2MB Packet Express Buffer**	
Arm® TrustZone®		
Power Management	SEC – 50G	**WRIOP**
SD/eMMC		122 Gbit/s
2 x DUART	DCE – 100G	1 / 2.5 / 10 / 25 / 40 / 50 /
8 x I²C		100G Ethernet
SPI, GPIO, JTAG		
2 x USB3.0 + PHY	QB-Man	24 lanes @ up to 25 GHz
2 x CAN-FD		

x8 Gen3 PCIe x8 Gen3 PCIe x4 Gen3 PCIe x4 Gen3 PCIe x4 Gen3 PCIe x4 Gen3 PCIe SATA3 SATA3 SATA3 SATA3

72-bit DDR4 with ECC

View additional information for Layerscape® LX2160A, LX2120A, LX2080A Processors.

Note: The information on this document is subject to change without notice.