# HPC-LX2 System on Module





### HPC-LX2 key features:

- NXP Layerscape® LX2 SoC variants: LX2160A/LX2120A/LX2080A
- Up to 256GB DDR4 DIMM with ECC
- 10/25/40/100 Gbit/s Ethernet connectivity
- Over 224,000 CoreMark® Performance

NXP Layerscape® LX2 SoC variants: 	HPC-LX2 Specifications	
WeinforyDDR4 SDRAM with ECC (up to 3200 MT/s) <b>BX 25</b> Gbit/s SerDes lanes capable of: - up to 2x 100 Gbit/s or 2x 40 Gbit/s - up to 6x 25 Gbit/s - up to 8x 10 Gbit/s 1x 1 Gbit/s with on-board 1000BASE-T PHY <b>PCIe</b> 32x PCIe Gen 3 lanes 1x PCIe Gen 3 lane for BMC <b>SATA</b> 2x 6 Gbit/s SATA 3.0 ports <b>USB</b> 4x USB 3.0 4x USB 2.0 <b>Additional</b> features2x UART 12x GPIO 2x SPI 2x 12C SMBus, IPMB 16MB QSPI flash for firmware <b>Debug</b> Conclusive Developer Cable connector providing access to: - System UART - JTAG port - System 12C busLinux 61 & 6.5 U-BootLinux 61 & 6.5 U-Boot	SoC	<ul> <li>LX2080A, 8 core Arm® Cortex®-A72</li> <li>2.2 GHz CPU with DPAA2</li> <li>LX2120A, 12 core Arm® Cortex®-A72</li> <li>2.2 GHz CPU with DPAA2</li> <li>LX2160A, 16 core Arm® Cortex®-A72</li> </ul>
Ethernet- up to 2x 100 Gbit/s or 2x 40 Gbit/s - up to 6x 25 Gbit/s - up to 8x 10 Gbit/s 1x 1 Gbit/s with on-board 1000BASE-T PHYPCle32x PCle Gen 3 lanes 1x PCle Gen 3 lane for BMCSATA2x 6 Gbit/s SATA 3.0 portsUSB4x USB 3.0 4x USB 2.0Additional features2x UART 12x GPIO 2x SPI 2x 12C SMBus, IPMB 16MB QSPI flash for firmwareSecurityTPM 2.0 Secure bootConclusive Developer Cable connector providing access to: - System UART - JTAG port - System 12C busLinux 61 & 6.5 U-BootLinux 61 & 6.5 U-Boot	Memory	
PCle1x PCle Gen 3 lane for BMCSATA2x 6 Gbit/s SATA 3.0 portsUSB4x USB 3.0 4x USB 2.0Additional2x UART 12x GPIO 2x SPI 2x 12C SMBus, IPMB 16MB QSPI flash for firmwareSecurityTPM 2.0 Secure bootDebugConclusive Developer Cable connector providing access to: - System UART - JTAG port - System 12C busLinux 6.1 & 6.5 U-BootLinux 6.1 & 6.5 U-Boot	Ethernet	- up to 2x 100 Gbit/s or 2x 40 Gbit/s - up to 6x 25 Gbit/s - up to 8x 10 Gbit/s
Line outper land of partsUSB $4x$ USB 3.0 $4x$ USB 2.0Additional features $2x$ UART $12x$ GPIO $2x$ SPI $2x$ I2C SMBus, IPMB 	PCIe	
USB4x USB 2.0Additional2x UART 12x GPIO 2x SPI 2x 12C SMBus, IPMB 16MB QSPI flash for firmwareSecurityTPM 2.0 Secure bootDebugConclusive Developer Cable connector providing access to: - System UART - JTAG port - System 12C busLinux 6.1 & 6.5 U-Boot	SATA	2x 6 Gbit/s SATA 3.0 ports
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Security     Secure boot       Debug     Conclusive Developer Cable connector providing access to: - System UART - JTAG port - System I2C bus       Linux 6.1 & 6.5 U-Boot		12x GPIO 2x SPI 2x I2C SMBus, IPMB
access to: - System UART - JTAG port - System I2C bus Linux 6.1 & 6.5 U-Boot	Security	
U-Boot	Debug	access to: - System UART - JTAG port
Software Yocto support Buildroot Ubuntu FreeBSD (on request)	Software support	U-Boot Yocto Buildroot Ubuntu
Power supply 12 V DC	Power supply	12 V DC
Dimensions 160 x 160 mm	Dimensions	160 x 160 mm
Form factor COM-HPC Server variant D	Form factor	COM-HPC Server variant D

#### **About Conclusive Engineering**

We provide reliable development and consulting services for various embedded platforms, assisting enterprises and manufacturing companies in optimizing their processes through tailored embedded system services, products, and hardware solutions.

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