HoneyComb
Powered by **SolidRun**

HoneyComb LX2K Datasheet

NXP Layerscape LX2160A based Arm Workstation

Embedded Edge Computing
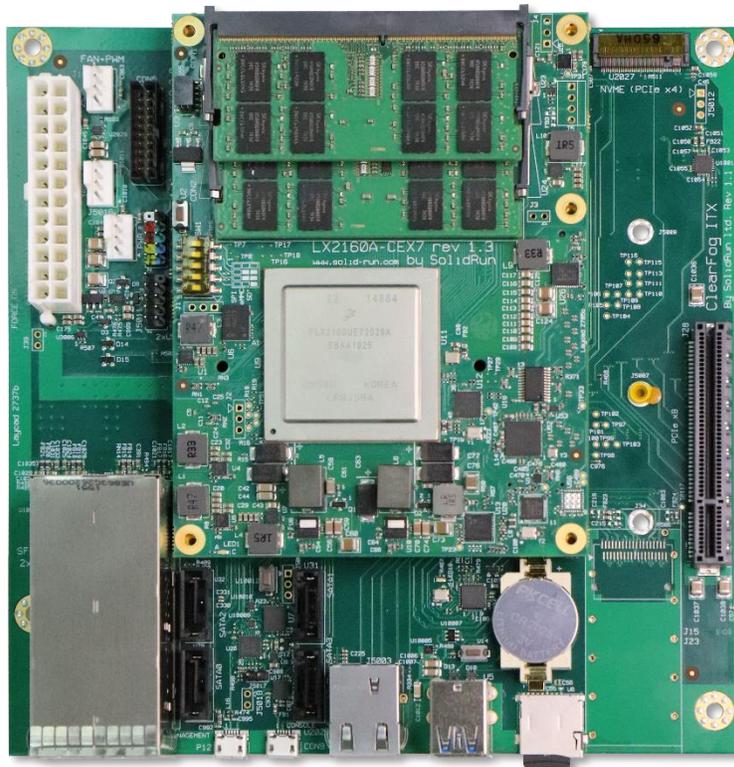
Overview

Introducing **HoneyComb LX2K** cutting-edge Arm workstation – designed for native Arm development and demanding computing and networking needs.

HoneyComb is based on NXP's Layscape 16 core LX2160A Arm Cortex A72 processor, and features 2 x SFP+ (10GbE each), dual channel DDR4 SO-DIMM RAM (up to 64GB), 3 x USB 3.0 and 3 x USB 2.0, 4 x SATA, 64GB on-board eMMC, M.2, PCIe x8 open slot (can support x16), and much more.

HoneyComb Highlighted Features

- NXP's Layerscape LX2160A 16-core Cortex Arm A72 (2GHz) processor
- Dual-channel DDR4 SO-DIMM (up to 64GB)
- 4 x SFP+ (10GbE each)
- Mini ITX form factor supporting easy mounting in a wide range of cases, enclosures and tower configurations
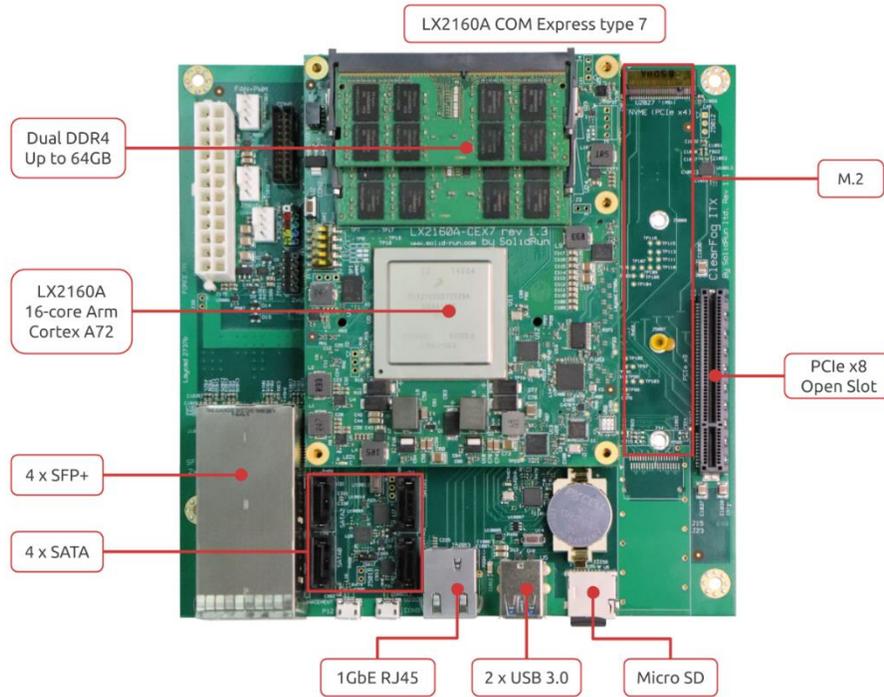
System Specifications

HoneyComb LX2K	
Processor	NXP LX2160A 16-core Cortex Arm A72 (up to 2Ghz)
Memory & Storage	Up to 64GB DDR4 SO-DIMM (dual channel) M.2 2240/2280 MicroSD 4 x SATA 3.0 eMMC
Connectivity & Interfaces	4 x SFP+ ports (2x2) 1 x 1GbE (RJ45) 3 x USB 2.0 3 x USB 3.0 1 x PCIe x8 (open slot)
I/O	MicroUSB for debug (UART over USB) USB to STM32 for remote management
OS	Linux kernel 4.14x Mainline Linux
Cooling	CPU air-cooled with heatsink + fan configuration
Power	ATX Standard
Environment	Ambient temp. (commercial): 0°C to 70°C CPU die temp. (commercial): 0°C to 105°C Ambient temp. (industrial): -40°C to 85°C CPU die temp. (industrial): -40°C to 105°C Humidity (non-condensing): 10% - 90%
Dimensions (WxL)	170mm X 170mm
Enclosure	Not included Supports mini ITX form factor enclosures

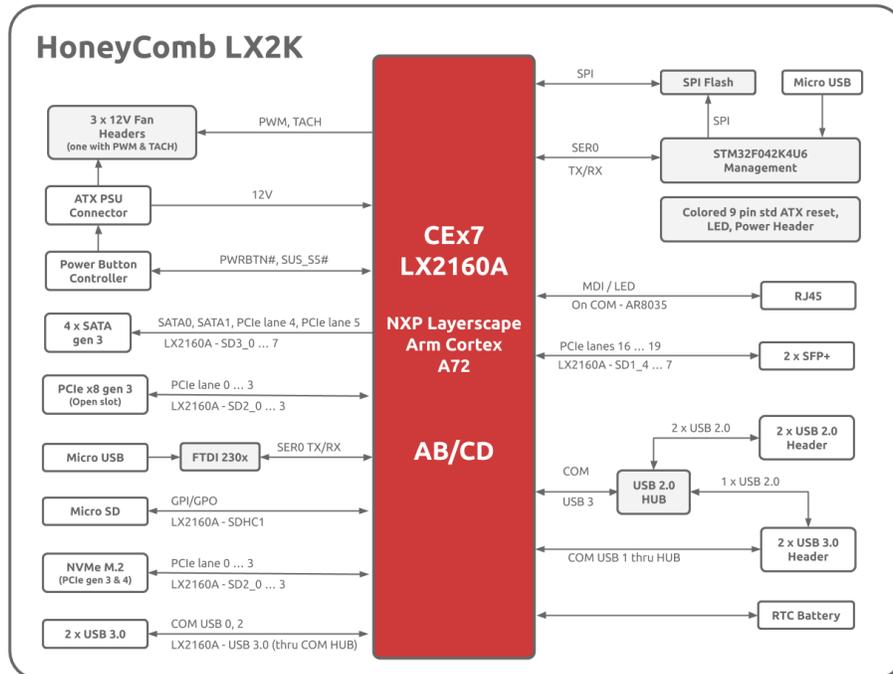## Available SKUs for HoneyComb LX2K

SKU	Description
SRLX216S00D00GE064H02CH	HoneyComb LX2K|64GB eMMC|Com. Temp|R0.2

(*) Different configurations available for MOQ

HoneyComb LX2K Layout

- LX2160A COM Express type 7
- Dual DDR4 Up to 64GB
- M.2
- LX2160A 16-core Arm Cortex A72
- PCIe x8 Open Slot
- 4 x SFP+
- 4 x SATA
- 1GbE RJ45
- 2 x USB 3.0
- Micro SD

HoneyComb LX2K Block Diagram

HoneyComb LX2K

CEx7 LX2160A — NXP Layerscape Arm Cortex A72 — AB/CD

- 3 x 12V Fan Headers (one with PWM & TACH) — PWM, TACH
- ATX PSU Connector — 12V
- Power Button Controller — PWRBTN#, SUS_S5#
- 4 x SATA gen 3 — SATA0, SATA1, PCIe lane 4, PCIe lane 5 / LX2160A - SD3_0 ... 7
- PCIe x8 gen 3 (Open slot) — PCIe lane 0 ... 3 / LX2160A - SD2_0 ... 3
- Micro USB — FTDI 230x — SER0 TX/RX
- Micro SD — GPI/GPO / LX2160A - SDHC1
- NVMe M.2 (PCIe gen 3 & 4) — PCIe lane 0 ... 3 / LX2160A - SD2_0 ... 3
- 2 x USB 3.0 — COM USB 0, 2 / LX2160A - USB 3.0 (thru COM HUB)
- SPI — SPI Flash — Micro USB
- SER0 TX/RX — STM32F042K4U6 Management — SPI
- Colored 9 pin std ATX reset, LED, Power Header
- MDI / LED On COM - AR8035 — RJ45
- PCIe lanes 16 ... 19 / LX2160A - SD1_4 ... 7 — 2 x SFP+
- COM / USB 3 — USB 2.0 HUB — 2 x USB 2.0 / 2 x USB 2.0 Header
- 1 x USB 2.0
- COM USB 1 thru HUB — 2 x USB 3.0 Header
- RTC Battery

Safety Notice

a. This device is to be used with Certified Power adaptor with output rated 12VDC, 1.5A. Power adapter must meet Limited power source (LPS) requirements.
b. Power adapter must meet local safety standards and requirements based on product intended use.
c. Power adapter must meet Operating environment conditions as specified above.

Disposal

Follow local regulations regarding disposal of the product. Dispose of your product in accordance with local regulations. In some areas, the disposal of these items in household or business trash may be prohibited.

Help us protect the environment- recycle!

IMPORTANT NOTICE – Please Read Carefully

No warranty of accuracy is given concerning the contents of the information contained in this document. To the extent permitted by law no liability (including liability to any person by reason of negligence) will be accepted by SolidRun ltd. or its employees for any direct or indirect loss or damage caused by omissions from or inaccuracies in this document.

SolidRun ltd. reserves the right to change details in this publication without

notice Product and company names herein may be the trademarks of their

respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

Support

For technical support please visit:

Our developer resources – https://developer.solid-run.com/

For direct support please contact us at: support@solid-run.com

Documentation

Additional documentation available at:
 https://developer.solid-run.com/products/honeycomb-lx2k/