The QorIQ LX2160A reference design board is a 1U form-factor tool for evaluation and design of value-added networking applications such as 5G packet processing, network-function virtualization (NFV) solutions, edge computing, white box switching, industrial applications, and storage controllers.

**OVERVIEW**

The highest performance member of the Layerscape family, the LX2160A excels at running Linux-based networking applications. With the low power of FinFET process technology, 16 high-performance Arm® Cortex®-A72 cores, large caches, accelerators to 100Gbps, 100 Gigabit Ethernet, and PCIe Gen4, the Layerscape LX2160A SoC enables machine learning, cloud-like computing, and NFV at the network edge for greater application responsiveness.

The QorIQ LX2160A RDB provides a comprehensive platform that enables design and evaluation of the LX2160A and its most popular features. It can also be used to evaluate the other two LX2 family members (12-core LX2120A; and 8-core LX2080A). The LX2160A reference design is a 1U form factor and will conform to all requirements for sale worldwide, including certifications for FCC Part 15 Class A.

The QorIQ LX2160A RDB comes pre-loaded with NXP’s board support package (BSP) based on a standard Linux® kernel. Some features enabled in the BSP include:

- Support for all IO, including 1GE, 10GE, 25GE, 40GE, 50GE, and 100GE; PCIe as both Endpoint and Root complex
- Yocto Project/Poky distributions
- DPDK APIs and example applications
- User space drivers for networking accelerator blocks and examples applications using them
- Virtualization: KVM, Dockers, virtio-net
- Uboot and UEFI bootloaders
- Standard GNU tool chain
- Available CodeWarrior tool chain

**LX2160A-RDB**
HARDWARE FEATURES

- **Processor**
  - LX2160A, 16x Arm Cortex-A72 CPU, up to 2.2GHz
  - DIP switch setting can configure device for 8- and 12-core operation

- **Memory**
  - Two DDR4 UDIMM to 3200MT/s
  - 32GB total capacity (16GB per UDIMM)
  - Flash: 128MB NOR, 128GB eMMC

- **Ethernet**
  - One 40G Ethernet QSFP+
  - Two 25G Ethernet SFP+
  - Two RJ45 10G Ethernet
  - Two RJ45 1G Ethernet

- **PCIe**
  - One PCIe Gen4 x8 slot
  - One PCIe Gen4 x4 slot

- **Other IO**
  - Four SATA3.0 connectors
  - One USB3.0 Type A connector
  - One USB3.0 micro AB connector
  - Monitoring of voltage, current, temperature, and power on I2C bus

COMPLETE ENABLEMENT, RICH ECOSYSTEM

NXP’s strong legacy of networking expertise and Arm’s rapidly growing development base provides a rich ecosystem for our customers. Our extensive third-party ecosystem, the largest and most established in the communications market, supports all QorIQ LS series devices. This environment also supports the vibrant, growing Arm ecosystem, including the Linaro™ not-for-profit engineering organization.

In conjunction with our expertise and worldwide support infrastructure, this broad ecosystem helps customers accelerate their migration from non-NXP solutions and legacy NXP devices, preserving investment costs and reduce time-to-market.

NXP professional services can further improve customer time to market with options ranging from guaranteed response time support to full turnkey solutions.

ORDERING INFORMATION

Two optional kits provide cabling and transceivers for 10GE and 40GE (LX2RDBKIT1-10-40) and 25GE (LX2RDBKIT2-25G).

<table>
<thead>
<tr>
<th>ORDERABLE PART NUMBER</th>
<th>PRICE (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LX2160A-RDB</td>
<td>$3995</td>
</tr>
</tbody>
</table>

www.nxp.com/LX2160

NXP, the NXP logo, CodeWarrior, and QorIQ are trademarks of NXP B.V. All other product or service names are the property of their respective owners. Arm and Cortex are registered trademarks of Arm Limited (or its subsidiaries) in the EU and/or elsewhere. All rights reserved. © 2018 NXP B.V.