



# QorIQ® Layerscape LA1575 Programmable Wireless Platform

The LA1575 architecture delivers a new level of innovation and integration. LA1575 offers a fully programmable wireless and wired solution from the Physical layer to the Application layer, all on a single device.

LA1575 delivers the highest level of wireless SoC integration and a full complement of user programmable elements. The solution enables rapid time to market with new wireless protocols and field equipment investment protection for broadly deployed applications.

## OVERVIEW

LA1575 is the first product targeted at 802.11ax access points, 802.11ad fixed wireless and future OFDMA wireless systems.

The programmable nature of the LA1575 enables OEM and ODM customers to rapidly introduce and deploy new wireless products, even prior to final standards.

Customer programmability, including the physical layer, ensures that any needed updates to standards and specifications, down to the modulation methods, will be supported on the LA1575 platform. This programmability protects customer equipment in the field and delivers the ability to enhance features and build on the development work investment.

NXP software delivers tested layer 1, layer 2 and application libraries and additionally supports custom modulation and processing via CodeWarrior® Tools suite via standard language programming.

## TARGET APPLICATIONS

The Layerscape LA1575 processor addresses several dynamic market segments. Secure, programmable wireless features coupled with the performance delivered from the integration of offload packet processing, single-pass encryption/decryption and the ARM® v8 general purpose cores are an ideal combination for any wireless system.

- ▶ Enterprise Access Points
- ▶ Residential Gateways
- ▶ Fixed Wireless Gateways
- ▶ Small Business Routers
- ▶ Home Wireless Routers
- ▶ IoT Aggregation Gateways
- ▶ Industrial Wireless Access Gateways
- ▶ Hospitality and Service Provider Gateways
- ▶ Transportation Wireless Access – Vehicle, Train and Commercial Airlines
- ▶ 5G Small Cells



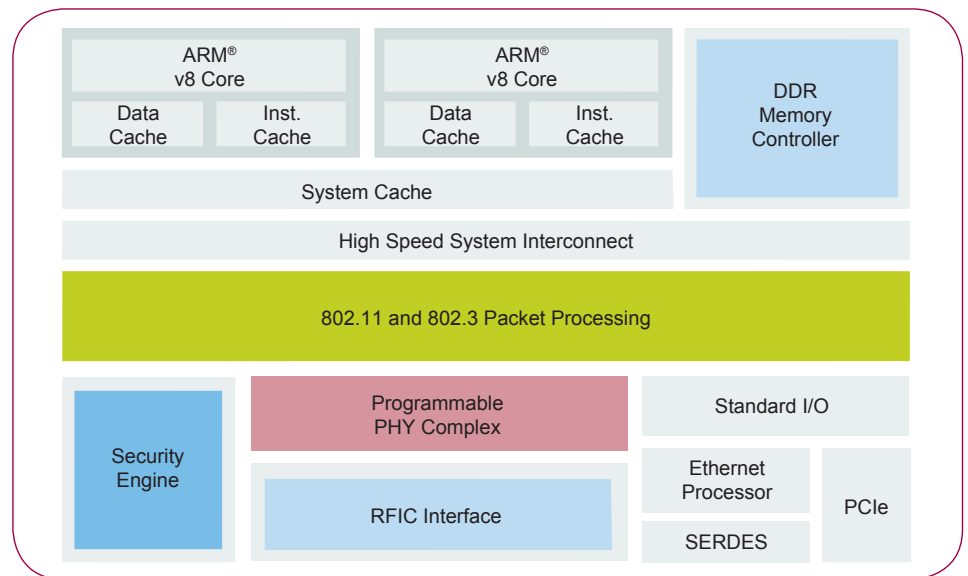
## FEATURES

- ▶ Multicore ARM v8 Processors for value added applications
- ▶ Fully programmable multi-protocol physical layer processors for baseband processing
- ▶ Programmable low latency MAC layer processing engines
- ▶ Programmable high performance packet processing engines to over 10 Gbps
- ▶ Configurable cryptographic offload engines
- ▶ Multiple Ethernet interfaces including 10Gbps
- ▶ DDR4 with ECC
- ▶ PCIe gen 3.0
- ▶ Integrated Trust architecture
- ▶ Single source clocking

## RELATED SOFTWARE

- ▶ Linux® SDK for QorIQ® Processors
- ▶ Linux® SDK for QorIQ® Processors CodeWarrior Development Software for ARM® v8 64-bit based QorIQ Series Processors

## LAYERSCAPE LA1575 PROCESSOR BLOCK DIAGRAM



[www.nxp.com/LA1575](http://www.nxp.com/LA1575)

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