# O-RAN Central Unit and Distributed Unit

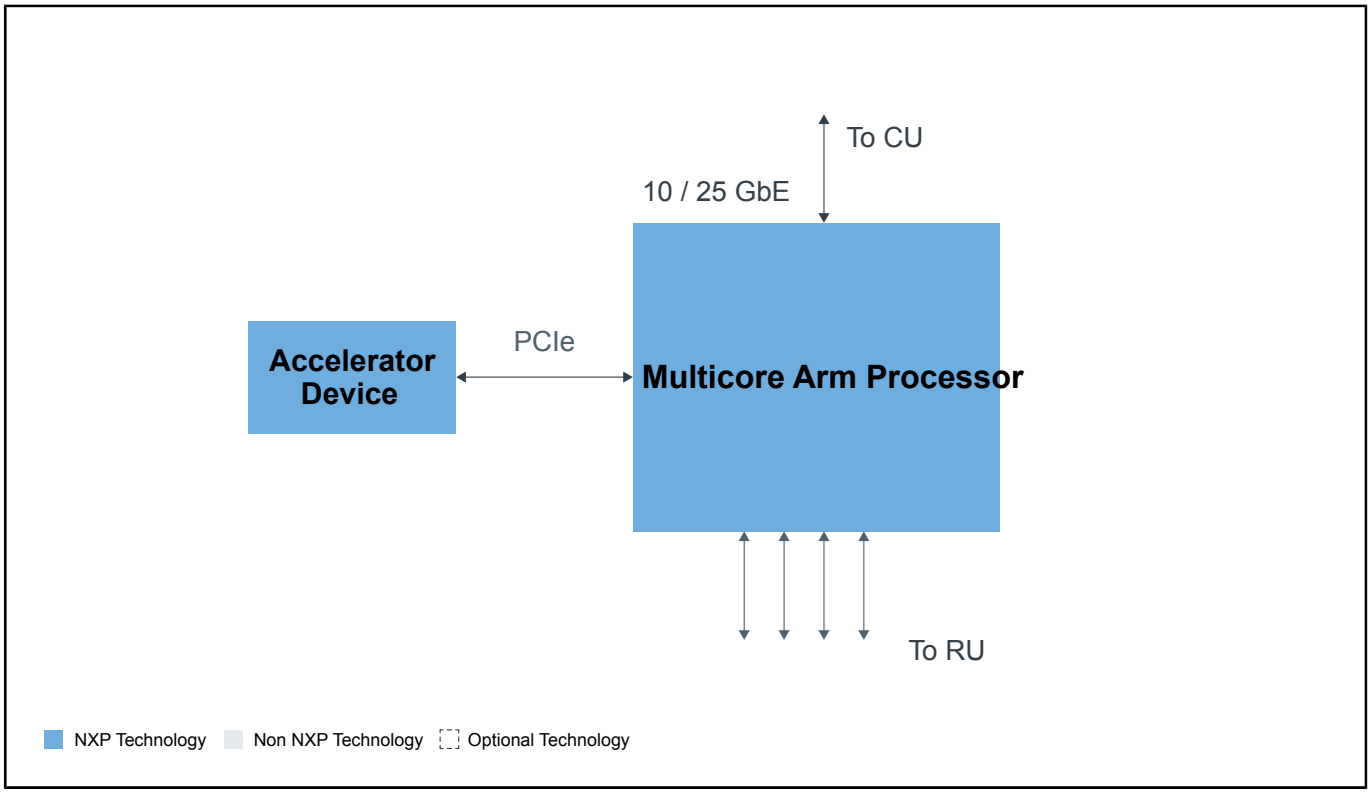
Last Updated: Feb 26, 2025

5G standards allow for deployment options with a flexible, functional split between networking elements. This allows for implementations that are cloud/centralization centric.

O-RAN standards define the central unit as the entity responsible for Transport/S1, PDCP and RRC/Control plane processing in an option 2 split configuration. Deployment options range widely from low-end in-building processing with ≤25-50Gbps capacity to scale-out scenarios supporting multiple Tbps aggregate processing.

The distributed unit is responsible for MAC/RLC and High-PHY processing, implemented as C code on general-purpose (eg Arm) devices. Cost and power are minimized by using optimized (Arm NEON) SIMD kernels and a look-aside accelerator device for forward error correction and DSP processing acceleration.

### O-RAN Block Diagram



| Recommended Products for O-RAN | |
|---|---|
| Multicore Arm Processor | • LX2160A: Layerscape® LX2160A, LX2120A, LX2080A Processors |
| Accelerator Device | • LA12xx: Layerscape® Access LA12xx Programmable Baseband Processor |

View our complete solution for O-RAN Central Unit and Distributed Unit.

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