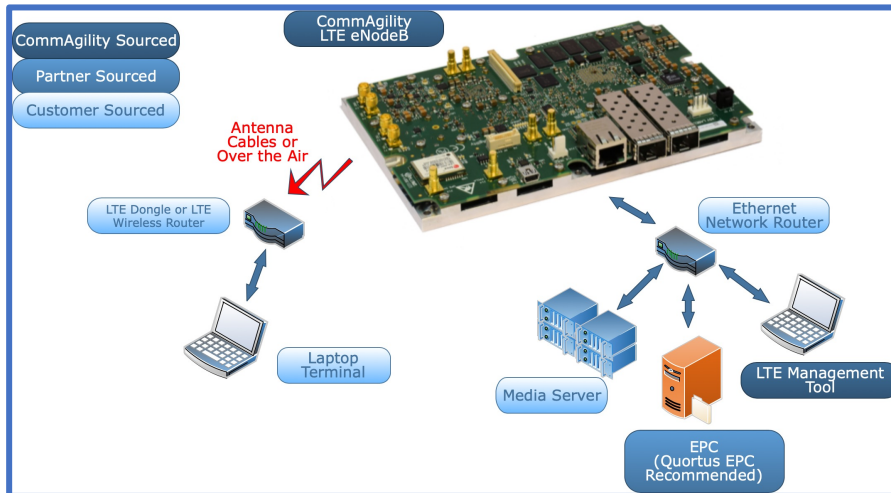# LTE Reference eNodeB
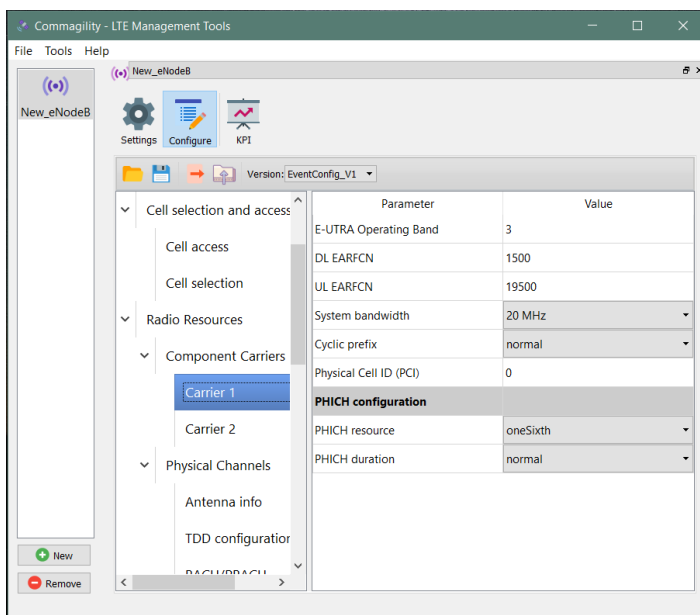## *Flexible, customer-configurable eNodeB for R&D*

The LTE Reference eNodeB is a pre-integrated system, including both hardware and software.

The reference design will be useful to UE product developers, 4G/5G researchers and LTE network engineers. The software and hardware are fully integrated and tested, saving time and reducing risk.

The environment gives engineers access to internal eNodeB parameters and allows modification of configuration parameters.
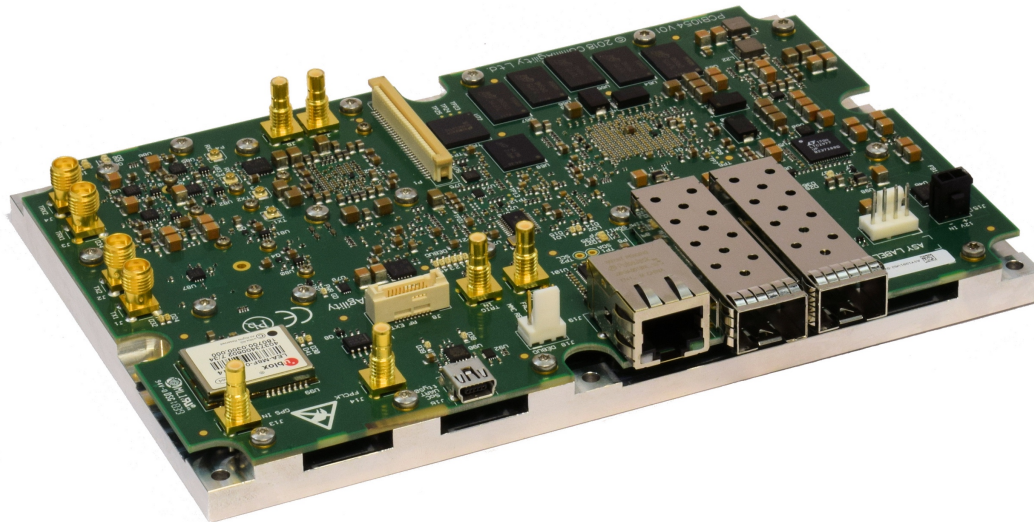
For specialized applications, CommAgility can also provide customization services, source code and test vectors/test cases, as well as integrated applications. Initial support is included in the purchase price.

Easy Configurability

CommAgility's engineers, based on years of product and project experience, have developed an LTE Management Tool for use with CommAgility's LTE Protocol Stack or Reference eNodeB products, that demonstrably saves effort, time and cost.

This provides an easy to use graphical interface for managing and manipulating the hundreds of configuration parameters that are loaded by the LTE Protocol Stack on eNodeB start-up. It also monitors multiple parameters during operation of the eNodeB.

Reference eNodeB Hardware: CA-K2L-RF2

The CA-K2L-RF2 is a stand-alone, high performance ARM/DSP-based processing card which includes two integrated wideband RF transceiver channels.

It can support wireless baseband processing and a 2x2 MIMO air interface in radio test systems, small cells, and UEs for standard or specialised LTE and LTE-Advanced systems up to and beyond Release 10. The main processor is the TCI6630K2L KeyStone™ II DSP/ARM SoC, with four C66x+ DSP cores, and two ARM Cortex™-A15 cores for higher layer processing. A TI AFE7500 analog front end provides flexible, high quality RF capabilities.

The product is also optionally available based on CommAgility's AMC-K2L-RF2, instead of the CA-K2L-RF2. This is a similar board, but based on the AMC standard.

Product Package

The standard product includes:

Software
- Binary PHY + Stack
- Several example configurations for setting up a data/voice call
- LTE Management Tool software - Configuration, Asset management, KPIs, logs for both Windows and Linux
- Wireshark for both Windows and Linux

Hardware
- CA-K2L-RF2 processing card (see separate datasheet for more details)

Recommended EPC is Quortus ECXCORE-500, which is a standalone EPC on an embedded module. Alternative is Quortus' EPC for Linux, running concurrently on the O&M Linux PC.

Over the Air operation is only allowed with proper spectrum license.

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