



Fact Sheet

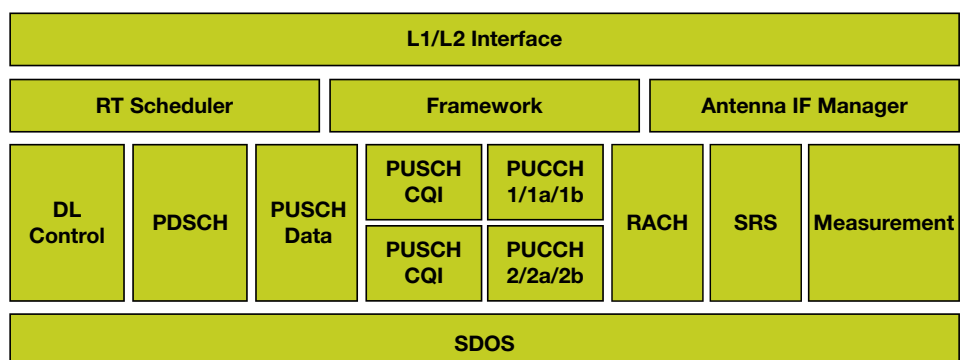
VortiQa Layer 1 Baseband Software for Small Cell Base Stations

Overview

Jump start your small cell design with a commercial grade Layer 1 (L1) baseband software stack, fully tested with RF and L2/3 stacks and tightly coupled with QorIQ Qonverge processors for maximum performance. This comprehensive solution is designed to reduce development time, risk and cost, enabling you to focus on value-add features.

Commercial grade LTE-FDD and LTE-TDD VortiQa L1 baseband software is designed for use with QorIQ Qonverge BSC9130 and BSC9131 processors for home femto base stations, the BSC9132 processor for enterprise femto/outdoor pico base stations, and plans for future femto/pico/metro processor solutions. VortiQa L1 software is 3GPP R8-compliant for LTE femto access points using the BSC9131 system-on-chip (SoC). This L1 software stack has been integrated with partner L2/L3 stacks and VortiQa IPsec, and is tested in an end-to-end environment using test/commercial LTE UEs and EPC simulators. Freescale is continuing development efforts of LTE-TDD L1 software for small cell base stations and plans to enhance LTE-FDD/TDD L1 software according to 3GPP future releases as well as continued support for future small cell base station SoCs.

VortiQa Layer 1 Baseband Software Block Diagram

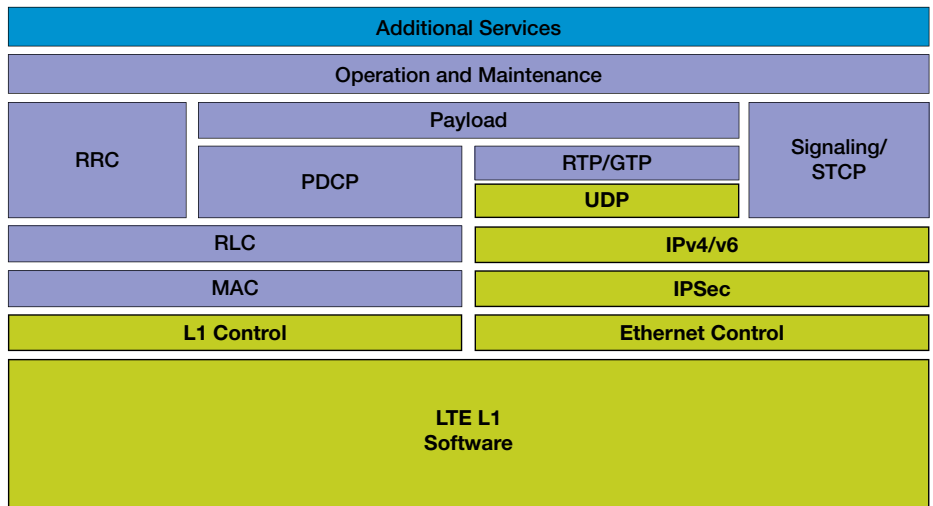


Features

The VortiQa L1 baseband software supports the following features for small cell LTE base stations using QorIQ Qonverge BSC9130/1 SoCs. (Note that several of these features are already available and remaining features will be available soon. Please contact Freescale for a roadmap of LTE-FDD/TDD L1 software for BSC913x family.)

- LTE-FDD and LTE-TDD modes
- All UL and DL control and data channels according to 3GPP TS36.211 and TS36.212
- L1 procedures according to 3GPP TS36.213 for femto solution
- L1 measurements according to 3GPP TS36.214 for femto solution
- Support for 5, 10, 15 and 20 MHz bandwidth
- L1-L2 API according to Femto Forum's LTE eNB L1 API definition V1.1
- Smart DSP operating system (SDOS) on StarCore SC3850 core(s) of the BSC913x
- L1 integrated partner L2/L3 stacks and VortiQa IPsec
- End-to-end testing with Signation test UE, commercial UEs and commercial-grade EPS simulator for call setup and UL/DL data flow

Femto/Pico Base Station Software



■ Freescale Supplied
 ■ Operator/OEM Supplied
 ■ Software Partner Supplied

- Tested for intra-LTE handover with partner L2/L3 stacks
- 100 DL/50 UL Mbps for 20 MHz, 2x2 DL MIMO and 1x2 UL for BSC9131 SoC
- LTE/WCDMA cell search feature
- Support for 3GPP R8 PHY specs (TS 36.211, 36.212, 36.213 and 36.214 for LTE-FDD femto features)
- Upgrades planned for future 3GPP releases
- L1 conformance (TS 36.104/36.141 planning phase)

Freescale provides development support for the QorIQ Qonverge BSC913x processors through the CodeWarrior tool suites for Power Architecture® and StarCore technologies. Refer to freescale.com/CodeWarrior for more information on features supported by CodeWarrior tools.

Pricing

Please contact your Freescale sales representative for pricing on the VortiQa Layer 1 baseband software for small cells.

For more information, visit freescale.com/VortiQa