



Espresso® 300 Phone Platform

The Espresso® 300 phone platform delivers the world's first software defined reference design for a high performance slim-modem, designed to work alongside leading cellular applications processors, for the fast growing class of HSPA Smartphone devices.

Based on the Icera Livanto® ICE8040 chipset, the Espresso® 300 phone platform is delivered with Adaptive Wireless™ VOICE firmware plus an Icera Adaptive Wireless™ firmware solution to allow manufacturers to develop multiple products with different performance levels, all from a common platform.

ADAPTIVE WIRELESS™ VOICE

- All major voice codecs
- Advanced noise suppression and speakerphone technology
- Drivers and integration software for leading cellular applications processors
- Support for all major mobile operating systems

ADAPTIVE WIRELESS™ HSPA-ADVANCED

- GSM, GPRS, EDGE – 2.5G
- WCDMA – 3G
- HSDPA Category 8 (7.2Mbps peak downlink performance)

BENEFITS

- Industry leading HSDPA and HSUPA performance for the best mobile broadband experience
- Optional: 3GPP Type 3 Advanced Receivers with dual antenna Receive Diversity and equalizer for the highest speed data across the cell
- 2G/3G support (GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA) and compressed mode handover between 2G and 3G networks
- Triple band 3G and quad band EDGE for worldwide coverage

- HSUPA Category 6 (5.8Mbps peak uplink concurrent performance, with 2msec TTI)
- Optional: Type 3 Advanced Receiver with Receive Diversity
- Further performance upgrades and enhancements delivered in software

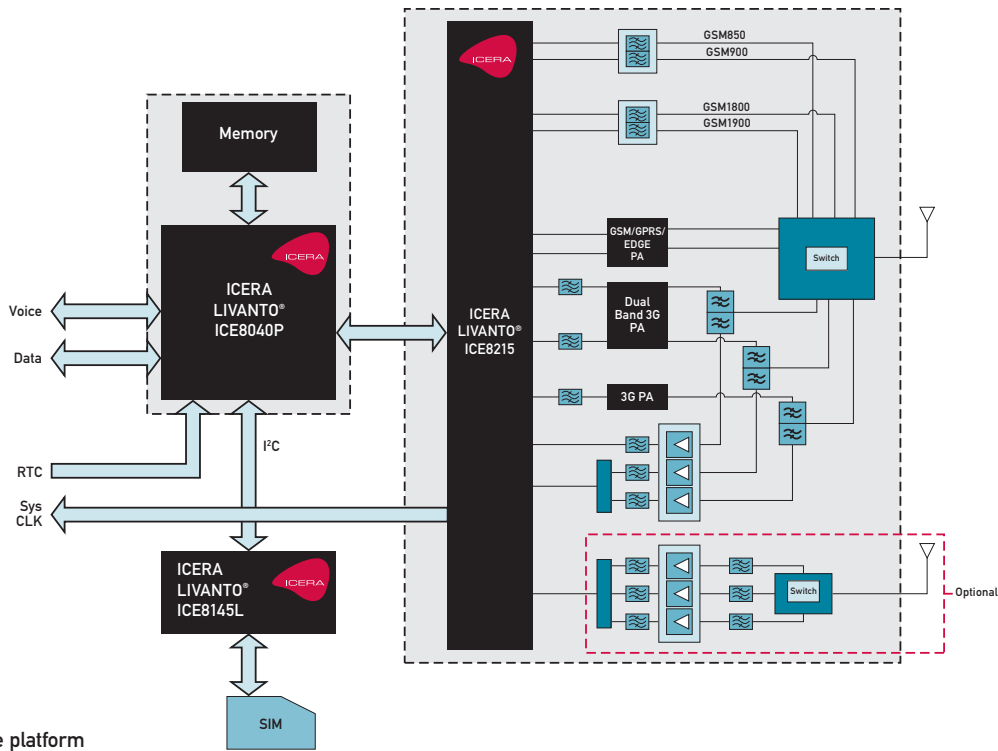
ADAPTIVE WIRELESS™ HSPA-STANDARD

- GSM, GPRS, EDGE – 2.5G
- WCDMA – 3G
- HSDPA Category 8 (7.2Mbps peak downlink performance)
- HSUPA Category 5 (2.0Mbps peak uplink concurrent performance, with 10msec TTI)
- Optional: Type 3 Advanced Receiver with Receive Diversity

ADAPTIVE WIRELESS™ HSPA-LITE

- GSM, GPRS, EDGE – 2.5G
- WCDMA – 3G
- HSDPA Category 6 (3.6Mbps peak downlink performance)
- HSUPA Category 3 (1.4Mbps peak uplink concurrent performance, with 10msec TTI)
- Optional: Type 3 Advanced Receiver with Receive Diversity

- Reference product with complete validation, network interoperability certified testing and GCF/PTCRB certification to speed development of new products
- Low power optimization
- Small form factors and space-saving packaging techniques for ever-smaller mobile devices
- Package of development and testing tools, Software Design Kit (SDK), host software support, drivers, reference PCB layout and component list to minimize time to market



Espresso® 300 phone platform

LIVANTO® ICE8040 SOFT BASEBAND

- Highly integrated multimode soft modem
- Advanced 65nm process technology
- Enabled by Icera Deep eXecution® Processor (DXP®)
- Supports Adaptive Wireless™
 - HSPA-ADVANCED
 - HSPA-STANDARD
 - HSPA-LITE
- USB 2.0 interface
- MIPI-HSI applications processor interface
- Comprehensive memory interface supporting NAND, NOR, SDRAM and mobile DDR
- Highly integrated RF interface
- Two packaging options
 - 10.5x10.5mm thin BGA package
 - 12x12mm Package-on-Package (POP) format allowing Jedec-standard POP memories and multi-chip memories to be soldered directly on top to reduce board area
- On-chip secure boot-ROM and advanced security features
- Supports all carrier security requirements and secure IMEI
- Low power

LIVANTO® ICE8215 RF TRANSCEIVER

- Single chip, multimode CMOS RF transceiver
- 130nm process technology
- Quad-band 2G (GSM, GPRS, EDGE) and tri-band 3G UMTS (WCDMA, HSDPA, HSUPA) with all the major frequency band combinations
- Second multi-band 3G UMTS receive path to support Rx-Diversity
- Low noise, wide-band direct up-/down- conversion architectures and patented CMOS frequency synthesizer design

LIVANTO® ICE8145 PMIC

- Delivers all the power management functions and ancillary mixed signal features required for the Livanto® soft modem
- Two DC/DC converters
- 11 LDO regulators
- USB 2.0 Full speed/High speed Physical interface
- Full featured Audio Codec
- Level shifters for SIM card interfacing
- Interfaces for I2C power control, for PCM audio data, and a ULPI interface for USB 2.0 data
- Support for power on reset, LED output and temperature monitoring

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