

# CELLULAR SYSTEM SOLUTION 5209

The fastest time to market for high-performance, fully mature EDGE data applications



February 2009

This mature, fully customizable, and highly cost-effective ARM9-based GSM/GPRS/EDGE solution is a dedicated data modem that supports pure data applications (PCMCIA cards, M2M) as well as modem applications for smartphone solutions requiring EDGE data transmission. It is a complete hardware/software design for entry-level EDGE modem applications. Supplied with all the pre-validated hardware and software for a finished design, it enables rapid capitalization in today's fast-growing markets.

Offering full quad-band GSM/GPRS/EDGE operation, cellular system solution 5209 is a cost-effective solution that addresses the full EDGE modem market, including GPRS/EDGE class 10, for use with PCMCIA cards, USB dongles, PDAs, M2M, and more.

#### KEY FEATURES

- Small, compact and proven EDGE stack
- Complete quad-band GSM/GPRS/EDGE operation
- ARM946-based architecture, optimized for high multimedia performance
- CC/CV charge method
- USB charging with support for single connector

#### KEY BENEFITS

- Best-in-class performance with leading standby and talk times
- Less than three months to market for mature, complete phones and modules
- Compliant with Release 99 Modem and passes latest GCF and PTCRB tests
- Fully validated interoperability testing (IOT)

#### TARGETED APPLICATIONS

- Entry-level EDGE modem applications

#### BOOST PRODUCTIVITY AND SIMPLIFY DESIGN

The core components include a high-performance baseband, a power management unit (PMU) with fully integrated battery charger, and a complete four-band transceiver.

High integration, along with optimized processing power, keeps power consumption low and delivers industry-leading standby and talk times.

The design is fully GCF/PTCRB tested and pre-validated, so you can bring new solutions to market quickly, with a level of maturity and easy customization.

#### PROVEN TECHNOLOGY

We have brought more than 350 million system solutions to market to date, making these some of the most extensively proven designs available. Furthermore, one in two EDGE data modules shipped in Greater China contains our EDGE system solutions.

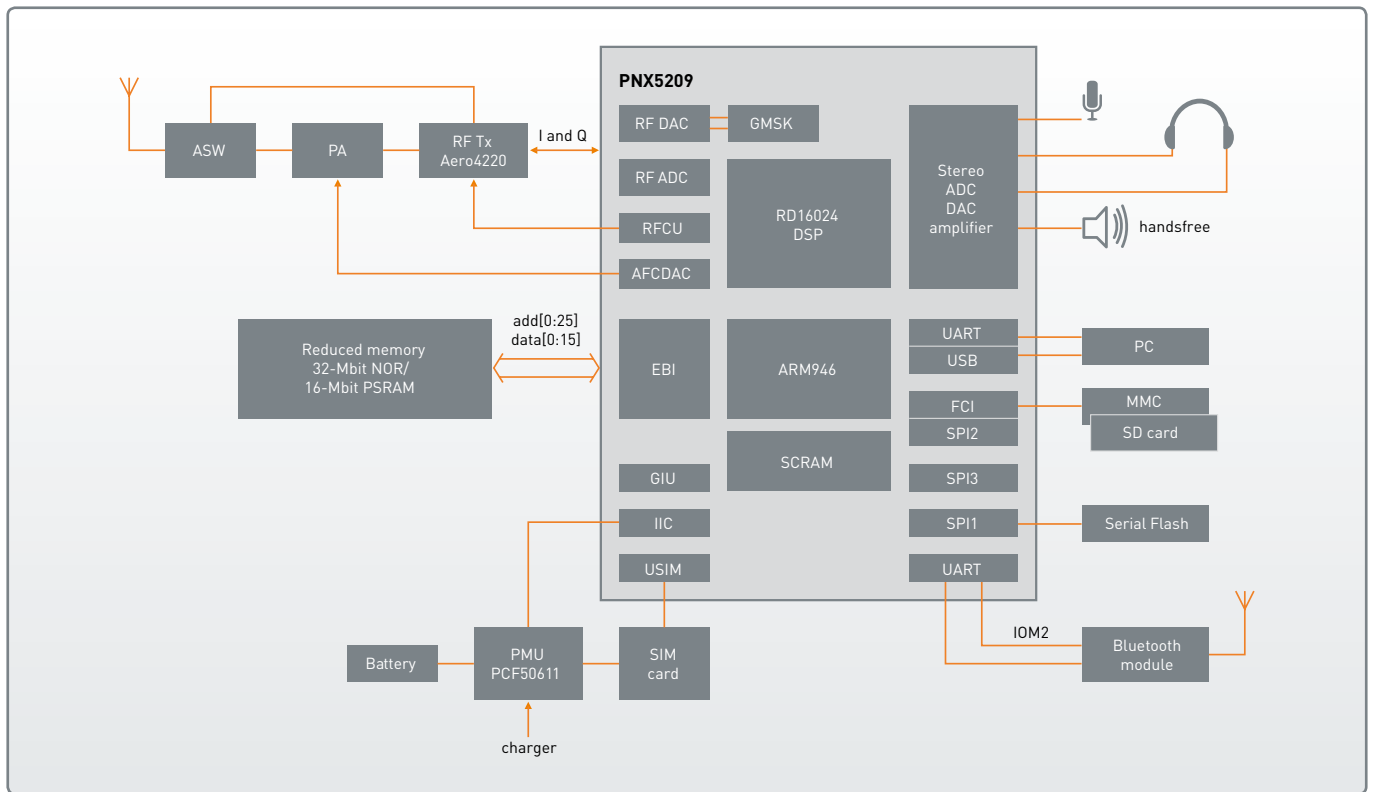
By using mature technology available in production volumes, the system solution 5209 ensures reliability and the fastest possible time-to-market for handset makers.

#### EASY TO USE, FOR FAST DEPLOYMENT

System solution 5209 comes with a set of tools, so you can modify the PCB layout. The result is a development cycle that moves from prototype to mass production in record time, with dedicated support for industrial partners.

#### EXTENSIVE SUPPORT NETWORK

To help you design the right products quickly, we offer an extensive support network of software engineers and cellular experts working in locations around the world, with a particularly strong presence in Asia. We combine this field support with regularly held training sessions, for hands-on learning. We also provide online support through our website, so you can get questions answered faster than ever.

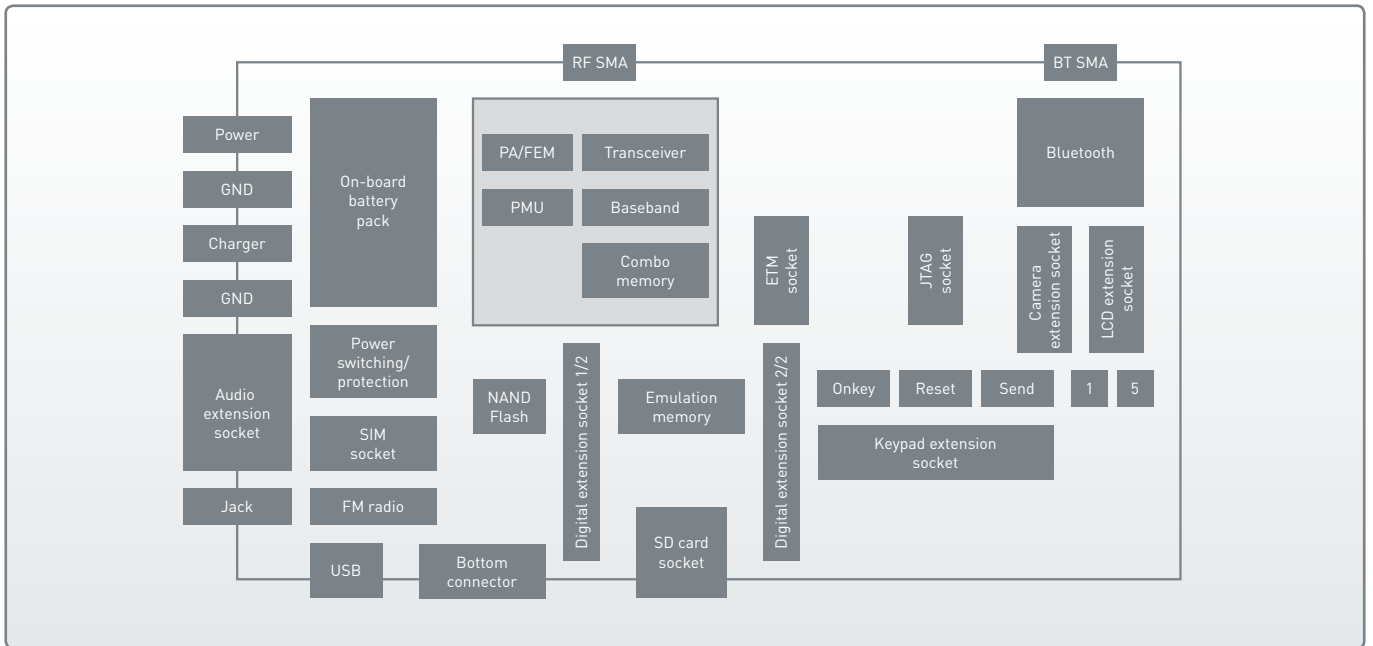


ST-Ericsson cellular system solution 5209 block diagram

Core components	
Type number/description	Package/footprint
<b>Multimedia baseband PNX5209</b> Quad-band (850/900/1800/1900) baseband with class 12 EGPRS capability including A5/3 and GEA3. Architecture combines an ARM9 CPU with a 16-bit DSP to deliver usable rates of up to 300 Kbit/s. The lowered core supply of 1.2 V significantly reduces overall system power consumption.	LFBGA280 11 x 11 mm lead-free
<b>GSM/GPRS/EDGE RF SiP AERO4220</b> Highly integrated, market-proven transceiver uses a standard CMOS RF process to provide excellent GSM/GPRS/EDGE performance and requires as little as 1.4 cm <sup>2</sup> to implement an entire quad-band radio.	36-pin LGA 5 x 6 mm lead-free
<b>Power management unit (PMU) PCF50611</b> Highly integrated PMU with DC-DC converter for high-efficiency core supply. Features a 32-kHz oscillator with real-time clock and alarm, 256-step automatic backlight dimming, well-coordinated set of linear regulators with sophisticated on/off control, and complete main and backup battery charger, and eliminates the need for an external FET / bipolar / USIM card interface.	HVQFN52 6.4 x 6.4 mm lead-free

Multimedia features and options
Security features: A5/3 and GEA3, plus Flash integrity check and security
Full-speed USB
File system NAND, NOR, Flash
Multi TA 07.10

Development tools
Multi-threaded downloader
Tuning and trace tools
Web-based FAQs
Online customer support and web-based tools



Block diagram of development kit, showing core module with stackable extension boards and optional connectivity

LET'S CREATE IT

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