

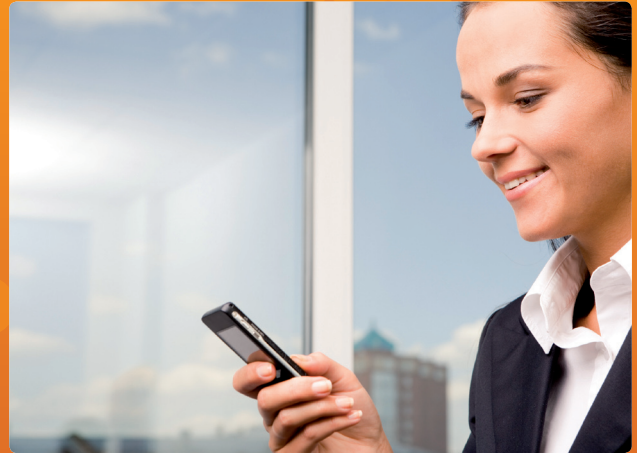
SINGLE-CHIP GSM/SMS FOR ULC

PNX4900 - ultra low cost solution for cost-optimized voice-centric phones

The PNX4900 is part of ST-Ericsson's groundbreaking PNX49xx 2G single-chip family. It offers a feature set optimized for voice-centric phones. Beyond GSM/SMS, the PNX4900 provides attractive value-added features such as support for a large color LCD, 40-voice polyphony and MP3 ringtones.

The PNX4900 enables cost-optimized designs while delivering exceptional RF performance, battery life, call quality and security.

Handset manufacturers can create affordable yet attractive phones targeting millions more consumers in both emerging and developed markets.

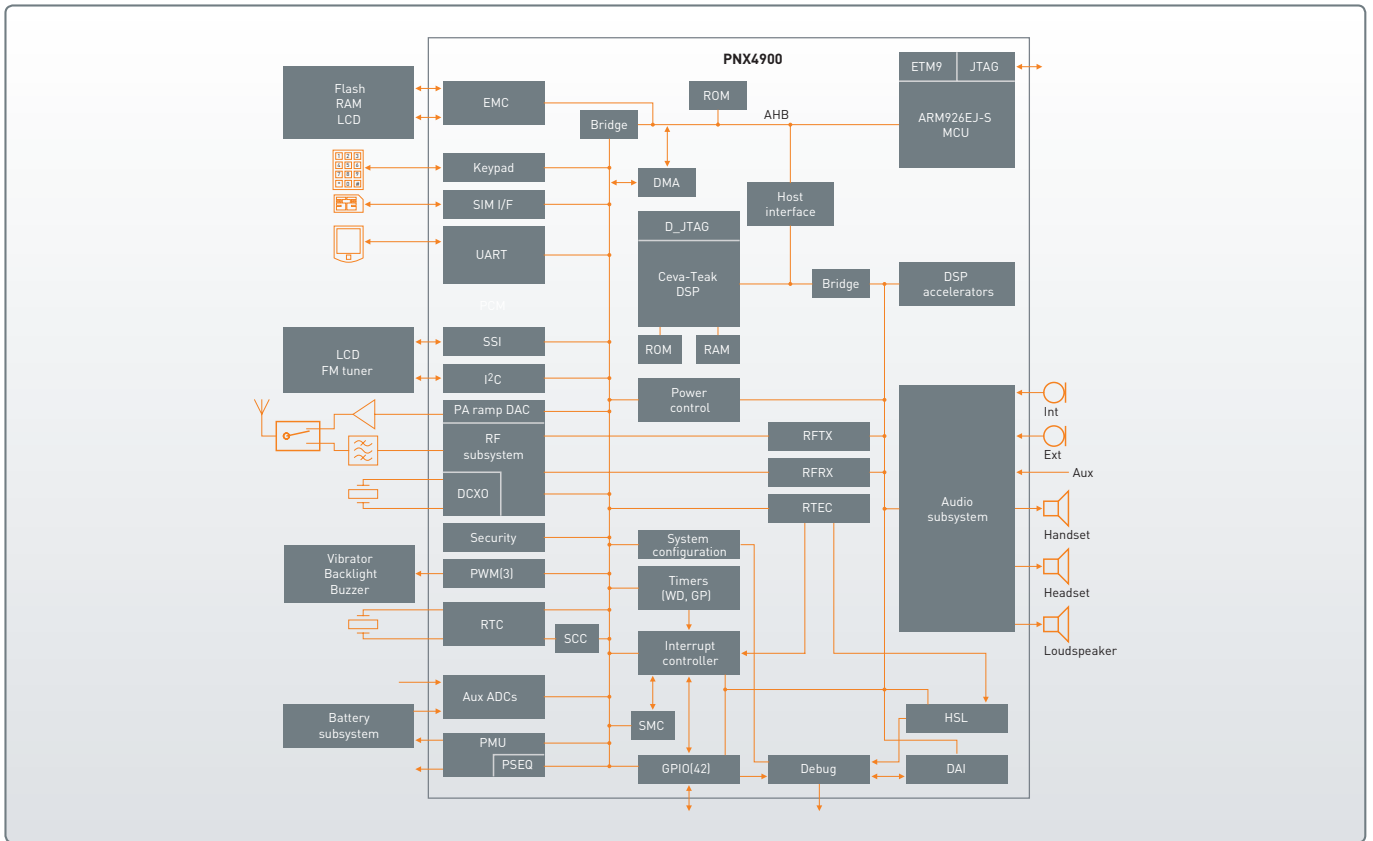


KEY FEATURES

- Complete GSM/SMS solution in a single monolithic IC
 - SAIC for increased network capacity
 - A5/1, A5/2, A5/3 encryption
 - TTY/CTM support
 - R99 protocol stack, mature and field-tested worldwide
- Completely integrated RF transceiver
 - Dual-band
 - Proven, industry-leading Aero transceiver core
- Complete PMU subsystem
 - Integrated battery-charging circuitry and all voltage regulators (LDO and DC-DC)
- Integrated audio subsystem
 - 40-voice MIDI + MP3 ringtones
 - Microphone amplifier with 2 different inputs
 - 3 audio output amplifiers, including a high-performance 8 Ω driver
 - Speakerphone with echo cancellation and noise suppression
- Hardware security based on 128-bit RSA
 - Robust yet flexible SIM/Flash lock
- Integrated connectivity and peripheral support
 - I²C-bus, SPI, UART
 - SD/MMC interface
 - 1.8/3 V SIM card interface
 - Color LCD up to 176 x 220 pixels, 65k colors
- Standard RoHS-compliant package
 - 273-ball PBGA (10 x 10 mm, 0.5 mm pitch)

KEY BENEFITS

- Mature and proven platform
 - Tested worldwide across 50 operator networks
- Lowest total BOM cost
 - 2X to 3X fewer external components than for multi-chip designs
- Best-in-class RF performance
 - Exceptional call quality and lowest dropped calls resulting in enhanced user experience
- Lowest current consumption
 - Cheaper, smaller batteries
 - Extended battery life
- Robust security
 - Reliable protection against hacking
- Best-in-class audio performance
 - Loud and clear voice calls and ringtones



PNX4900 block diagram

LOWEST COST OF OWNERSHIP

The very high level of integration achieved by the PNX4900 enables the smallest solution footprint with the minimum number of external components. A complete dual-band GSM/SMS modem can be implemented in 500 mm² with just 53 external components on an inexpensive 4-layer PCB. The only external ICs needed for the modem are a PA and memory.

A BETTER END-USER EXPERIENCE

Having a cost-optimized solution for voice-centric phones does not mean sacrificing features and quality. In addition to GSM/SMS, the PNX4900 offers attractive features such as support for QCIF+ color screens, 40-voice polyphony and MP3 ringtones.

The PNX4900 also offers exceptional RF, audio and power performance that translates into a better end-user experience.

Leveraging the Aero transceiver core, proven in over 500 million handsets worldwide, the PNX4900 provides

significant margin to key GSM specifications across commonly encountered stress conditions in the field (such as extreme temperature and low battery voltage). Coupled with a mature telecom protocol stack tested across 50 operator networks, this enables excellent call quality in remote areas with sparse network coverage as well as congested urban environments. The SAIC feature boosts network capacity further. Advanced echo cancellation, noise suppression and loudness boost algorithms make every call clearer, even in noisy public spaces.

Industry-lowest power consumption ensures that the battery lasts longer. With a small, inexpensive 600 mAh battery, 5 hours of talk time and over 420 hours of standby time are possible.

The PNX4900 is in mass production at leading global OEMs and ODMs. For fastest possible time-to-market, the PNX4900 hardware reference design is accompanied by a flexible, pre-integrated and fully validated software solution that also reduces R&D expenses.

LET'S CREATE IT

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