

SINGLE-CHIP EDGE MULTIMEDIA

PNX4910 – Mass market EDGE solution with enhanced connectivity and multimedia features

The PNX4910 extends ST-Ericsson's leadership in EDGE through industry-leading single-chip integration. In addition to a proven high-performance telecom pipe, the PNX4910 delivers rich multimedia and connectivity features including 3-Mpixel camera, MPEG-4 QVGA video, high speed USB, stereo Bluetooth and FM.

As the 3rd generation of the single-chip PNX49xx family, the PNX4910 retains proven best-in-class RF performance, longest battery life, lowest cost of ownership and robust security.

The PNX4910 enables EDGE handsets that are low cost yet feature-rich and with exceptional user satisfaction.



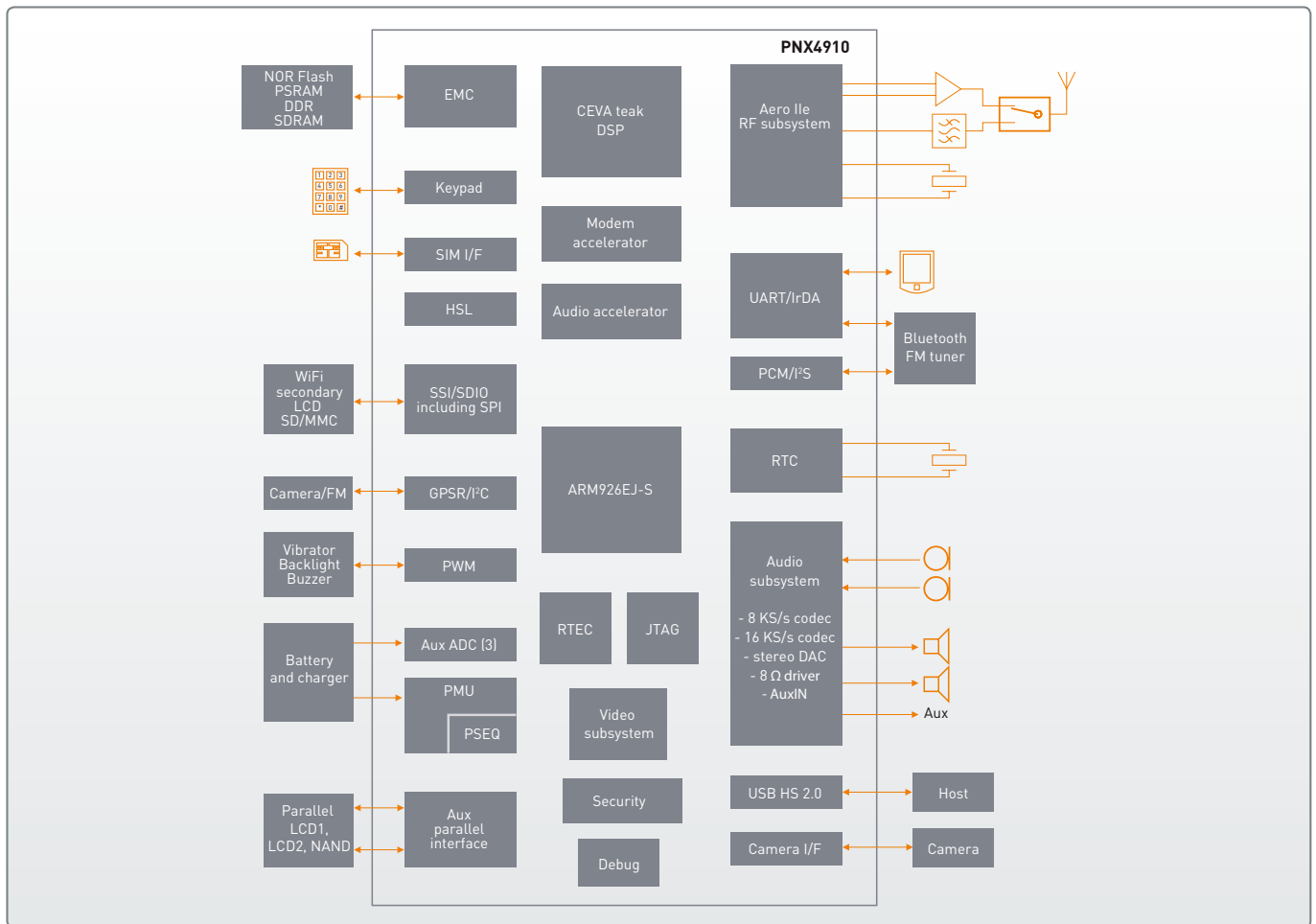
KEY FEATURES

- Complete EDGE solution in a single IC
 - GPRS/EDGE class 10
 - 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
 - Quad-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
 - 64-voice MIDI ringtones
 - Stereo MP3, AAC+, WMA playback and MP3, AAC record
 - Microphone amplifier with 2 different inputs
 - 3 audio output amplifiers, including a high-performance 8 Ω driver
 - Speakerphone with echo cancellation and noise suppression
 - Integrated stereo DAC
- Hardware security based on 2048-bit RSA
 - Robust yet flexible SIM/Flash lock, DRM
 - HW accelerated AES, SHA2, 3DES
 - Secure RTC, true RNG
- Integrated multimedia and connectivity
 - 3-Mpixel camera interface
 - Bluetooth 2.0 with A2DP, AVRCP, BIP, SAP, HSP, HFP, DUN, SYNC, OPP
 - Stereo FM playback and record

- HW accelerated MPEG-4/QVGA decoder
- USB-2.0 HS CEA936-A
- 4-bit SD/MMC support
- I²C-bus, SPI, two UARTs, PCM, PWM
- Touchscreen support
- 1.8/3 V SIM card interface
- Color LCD up to 320 x 240 pixels, 262 k colors
- Standard RoHS-compliant package
- 384-ball PBGA (12 x 12 mm, 0.5 mm pitch)

KEY BENEFITS

- Mature and proven platform
 - Tested worldwide across 50 operator networks
- Lowest current consumption
 - Cheaper, smaller batteries
 - Extended battery life
- Lowest total BOM cost
 - 2x to 3x fewer components than multi-chip designs
- Best-in-class RF performance
 - Exceptional call quality and lowest dropped calls resulting in enhanced user experience
- Robust hardware-based security
 - Reliable protection against hacking
- Best-in-class audio performance
- High-performance HW accelerated multimedia
 - 3-Mpixel camera with < 1s shot-to-shot delay
 - MPEG-4 30 fps QVGA decode



PNX4910 block diagram

LOWEST COST OF OWNERSHIP

The very high level of integration achieved by the PNX4910 enables the smallest solution footprint with the minimum number of external components. A complete quad band GSM/GPRS/EDGE modem can be implemented in 500 mm² with less than 60 external components. A complete handset with multimedia and connectivity features such as camera, Bluetooth, FM radio, USB, and SD-card can be implemented in 850 mm² with less than 145 external components on an inexpensive 6-layer PCB. The only external ICs needed for a complete multimedia handset are a PA, memory, and a Bluetooth + FM IC.

A BETTER END-USER EXPERIENCE

The PNX4910 offers rich multimedia and connectivity features that translate into a more enjoyable end-user experience. Leveraging the core technology used in our production-proven modem products, the PNX4910 delivers exceptional multimedia and connectivity features including support for 3-Mpixel camera, MPEG-4 QVGA video, high-speed USB,

stereo Bluetooth and FM. The HW-accelerated multimedia in the PNX4910 allows MIPS-intensive tasks to be offloaded from the CPU and delivers required performance with a smaller and more power-efficient design. Robust hardware-based security ensures ample protection against hacking, resulting in more secure designs for the entire value chain. Strong RF performance, coupled with a mature telecom protocol stack tested across 50 operator networks, enables excellent call quality in remote areas with sparse network coverage as well as congested urban environments.

Furthermore, industry-leading power consumption enables extended battery life, thus allowing users to spend more time talking, listening to their favorite MP3 or creating videos between battery recharges.

For the fastest possible time-to-market, the PNX4910 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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