

DSP Group™ offers the innovative dual-core XpandR™ II wireless multimedia processor chipset for wireless communications. Integrating Wi-Fi and DECT, XpandR II enables the development of a wide range of always-on portable, connected multimedia products, particularly cutting-edge multimedia handsets featuring an intuitive interface, user-friendly touch screen and virtual keyboard. Equipped with software packages, XpandR II is utilized for full system implementation, including the base and handheld devices, to support diverse applications such as multimedia streaming, web browsing, communication services and voice.

Suitable for all Wi-Fi and DECT-based products, XpandR II is a comprehensive solution that includes a dual-core wireless multimedia and DECT baseband processor, an analog front end and power management unit, Wi-Fi and cordless RF chips, and comprehensive multimedia peripherals. The state-of-the-art chipset complies with international IEEE 802.11 Wi-Fi and cordless standards, while supporting GAP, CAT-iq, DECT6.0, and ETSI.

Featuring an ARM9™ and a DSP core, the highly integrated XpandR II chipset enables manufacturers to meet consumer-market price targets. And by integrating the open-source Android™ framework, XpandR II leads to not only increased freedom of choice, but also an enhanced user experience, by facilitating greater and immediate access to a wide range of information, applications and widgets.

XpandR II is part of DSP Group's new-generation XpandR family of multimedia chipset solutions. Comprised of hardware and software development kits, the XpandR family integrates voice, data and video, reduces system bill of materials (BOM), and is suitable for mass-market adoption, while ensuring fast time to market.

Features

Processors

- ARM926EJ-S™ @ 240MHz processor
- 16-bit TeakLite™ DSP core for voice/audio/video processing functions at up to 160 MHz

Interfaces

External

- USB2.0 OTG, USB 1.1 (slave), SD/MMC/MS, MII, SPI
- Memory interfaces: SDRAM, NOR Flash, NAND Flash
- Keypad, LCD interfaces (support up to XGA display)

Other

- 60 interrupt sources
- Fast interrupt request (FIQ) support for urgent interrupt requests

System Boot Options

- Multiple boot options (ROM, NAND Flash, USB, SPI)
- Low power consumption

Display and Multimedia Co-Processing

- TFT LCD (digital RGB), 24-bit display
- STN LCD panel support: 4-bit single scan, 8-bit single scan display type
- Multi-screen size support: up to XGA
- Hardware JPEG codec with picture scaling and OSD mixer
 - Image and video resize in hardware
 - Alpha blending and color space conversion
 - Video/graphics combining two planes plus hardware cursor
- Utilization of DSP core for video decoding

Software

- Comprehensive Linux SDK support, including XpandR II board support package
- Android framework and Qtopia Home Edition support
 - Android web browser and other Android applications
 - Personal information management: calendar, to-do list, notes, calculator, alarm clock, timer and stopwatch
- Remote management via web-based interface

Communications Standards

Wi-Fi

- 802.11abg MAC/BB processing
 - Security: IEEE 802.1X, WEP, WPA, WPA2, TKIP and AES hardware acceleration, IEEE 802.11i
 - QoS and low power: WMM and WMM-PS for improved battery life of Wi-Fi devices
 - Maximal-ratio combining (MRC) operation for increased range and sensitivity
 - WPS for easy set-up and configuration

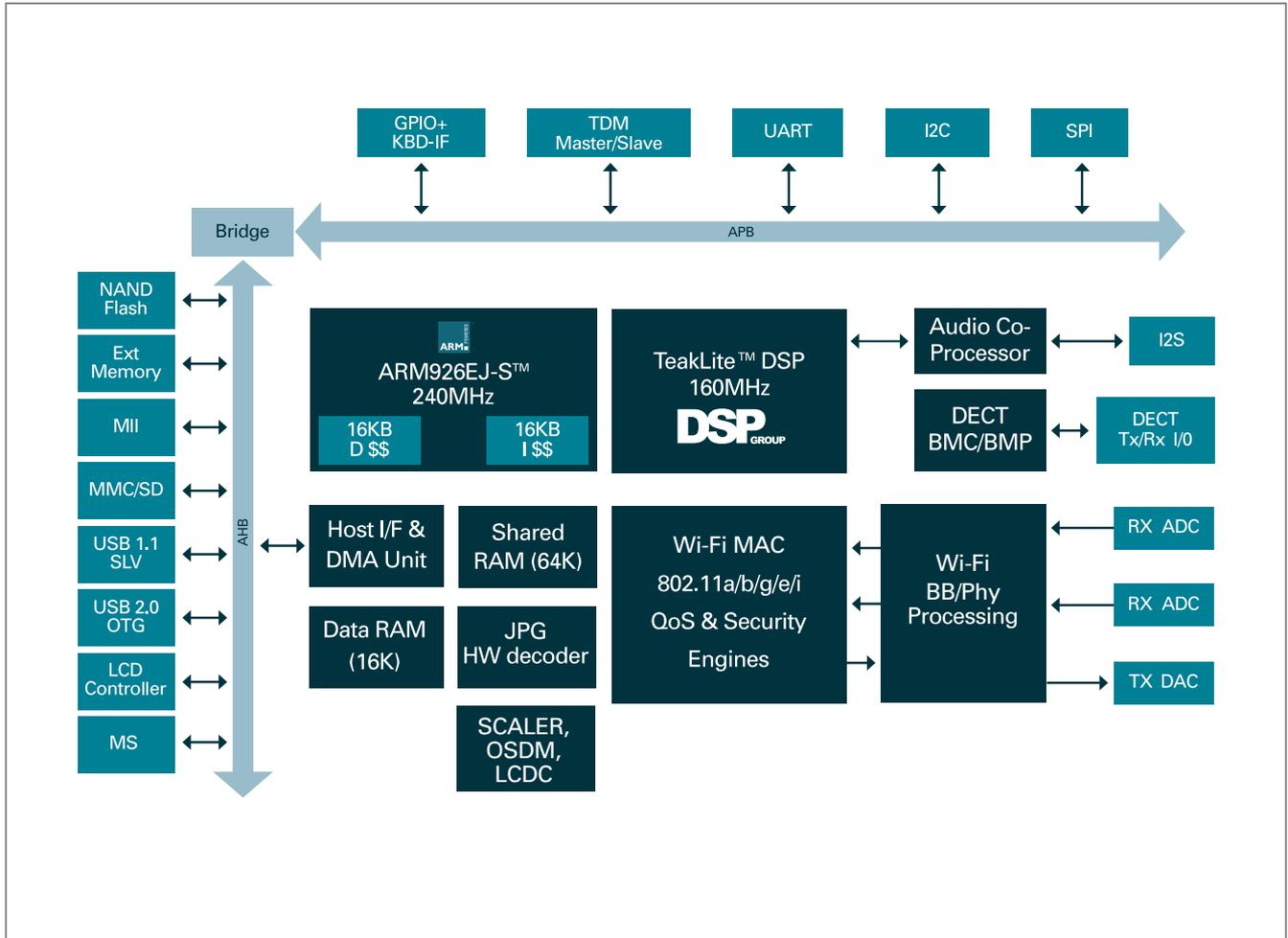
DECT

- Complete DECT operation using 1.7GHz, 1.8GHz, or 1.9GHz band, TDMA; GAP-compliance; full CAT-iq support; multi-line, multi-handset (up to 6) support
- Rich set of telephony, advanced voice/audio processing and call management features
 - DTMF, CAS, and tone detection and generation
- Messaging features including presence, email, instant messaging, visual/audio message waiting indication (VMWI), voice mail (central/local TAD)

VoIP Software Suite

- Narrowband vocoders: G.711, G.723.1, G.729, G.729a
- Wideband vocoders: G.722
- Echo canceller, packet loss concealment
- SIP call signaling

Block Diagram



DSP Group, Inc. (NASDAQ: DSPG) is a leading global provider of wireless chipset solutions for converged communications at home. Delivering system solutions that combine semiconductors and software with reference designs, DSP Group enables consumer electronics (CE) manufacturers to cost-effectively develop new revenue-generating applications with fast time to market. At the forefront of semiconductor innovation and operational excellence for over two decades, and with a growing share of the wireless home telephony market, DSP Group provides a broad portfolio of wireless chipsets integrating DECT, Wi-Fi, PSTN and VoIP technologies with state-of-the-art application processors. Enabling converged voice, audio, video and data connectivity across diverse consumer products – from cordless and VoIP phones to home gateways and connected multimedia screens – DSP Group proactively partners with CE manufacturers to shape the future of converged communications at home.

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