

MXC300



Overview

Freescale Semiconductor's leadership in 3G continues with the MXC300-30 platform. Based on the revolutionary Mobile eXtreme Convergence architecture, MXC300-30 provides a total platform solution that speeds time to market by simplifying development for manufacturers. By reducing component count and cost, MXC300-30 ultimately enables consumers to have handsets that are slim, sleek and stylish. Integrated world-class power amplifier and power management technology helps reduce dropped calls and extend battery life. Advanced packaging techniques put the MXC architecture in a package the size of a postage stamp, literally providing more room to innovate.

First 3G Single Core Modem

Freescale's latest 3G platform, the MXC300-30, is the first platform with a 3G single core modem. The single core processor at the heart of the MXC300-30 combines a StarCore™ SC140e digital signal processor (DSP) operating at up to 250 MHz and an ARM1136™ applications processor core operating at up to 532 MHz. The single core modem handles all the signaling protocol layers (L1, L2 and L3) for 2.5G, 2.75G and 3G standards including Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS), Enhanced Data for GSM Evolution (EDGE) class 12 and wideband code division multiple access (WCDMA).

The applications processing technology is integrated into the chip with a shared memory system and shared peripherals, eliminating the need for an external additional applications processor, thus reducing cost. This shared memory approach enables more efficient interprocessor communication, resulting in higher performance, exceptional power management and reduced complexity.

Despite their integration, there is a strict separation between the communications and applications processing. This clean separation of modem and applications processing dramatically reduces complexity and simplifies software development. It helps to reduce part count, size and system costs, while enhancing multimedia and communications processing performance. This separation also gives manufacturers comprehensive scalability and flexibility across their portfolios; making it possible to increase functionality, decrease development time and free up critical engineering resources.

Benefits

- > Lower Power
- > More Cost Effective
- > Higher Performance
- > Reduced Development Time and Effort

Wireless Connectivity

'BlueCore™ Cellular Connectivity Platform' or BCCP by CSR combines industry leading BlueCore™ devices, such as BlueCore4-ROM or BlueCore5-FM and CSR's BlueCore host software (BCHS) packages. BCCP is offered in four alternative editions which match together optimum device and software options for particular handset products and market segments.

For smartphones CSR offers BCCP Windows Mobile™ Edition which builds on Windows Mobile platform to provide additional Bluetooth™ profiles on top of the existing Microsoft® protocol stack or BCCP Linux® Edition provides a full range of Bluetooth profiles (26 currently) in Linux. Includes both kernel mode and user mode operation to integrate Bluetooth into existing network services.

For TV/music phones CSR offers BCCP-Media Edition, which provides optimized AV streaming capability with a minimum of host processor intervention, thus lowering power consumption and host processor resources required in a range of digital TV and music phones by Korean customers.

For feature phones CSR offers BCCP-Feature Phone Edition, optimized for a wide range of embedded O/S platforms. Currently, 26 profiles are supported. The latest release includes Video Distribution Profile and Hands Free Profile v1.5 (supports eSCO).



Learn More: For more information about Freescale products, please visit www.freescale.com/mxc.

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Document Number: CSRMXC300COFS
REV 0



Changing the way the world designs for cellular

BlueCore™4-ROM

Features

- Bluetooth v2.0 + EDR
- Smallest package available
- Conditional page scan
- Full WiFi co-existence support
- TXCO wake-up
- VFBGA and CSP packages



Overview

BlueCore™4, the world's 1st Enhanced Data Rate (EDR) single-chip radio and baseband IC for Bluetooth solutions has now been upgraded with several cellular features to help increase battery life.

Building on the success of previous Bluetooth hardware and software solutions BlueCore™4-ROM offers significant reductions in power, and size. CSR continues to lead the way in Bluetooth design to reduce the number of external components required and to ensure that production costs are minimised.

BlueCore™ incorporates many unique features:

- *Bluetooth v2.0* – delivering Enhanced Data Rate (EDR) performance benefits of 2Mbps and 3Mbps modulation modes
- *BlueCore Host Software* – BCHS is available with over 26 profiles to complete the Bluetooth design and has been ported to Linux, WinCE and Nucleus
- *TCXO wake up* – allows BlueCore to turn on the system clock without waking the baseband processor
- *Transports* – many interfaces including Hi-Speed USB, UART, BCSP™, PCM, I²C and WiFi coexistence as standard
- *Self-test* – Built-In Self-Test (BIST) and auto-calibration routines reduce the development, type approval and production test burden

What's more the VFBGA package is pin-compatible with its predecessor, the hugely successful, BlueCore3-ROM.

This ultra small yet powerful ROM device has been created specifically to cope with highly demanding cellular environments where less power, less size and less cost, wins! CSR has added several new features to help further reduce power consumption in cellular designs such as conditional page scan.