



PMB 7850

E-GOLD+ V3

GSM/GPRS Single Chip Baseband IC

E-GOLD+ V3 is a GSM/GPRS single chip mixed signal baseband IC. It combines the analog and digital functionality of a cellular radio together with 2 Mbit on-chip SRAM. It is designed in Infineon Technologies' proven 0.18 μm 1.8 V technology. E-GOLD+ V3 perfectly meets the ever increasing demands of the GSM cellular subscriber market for low/mid-range devices with data-enabled terminals at low costs.

Due to its flexible interfaces E-GOLD+ V3 can be set up easily to control a wide variety of RF architectures. In combination with the Infineon Technologies' SMARTi RF solution a system approach is achieved, which results in an extremely compact implementation, very low power consumption and cost effective system performance.

Applications

- GSM/GPRS/HSCSD Mobile Phones and Data Modems

Key Features

- C166S MCU core, 52 MHz
- OakDSPCore[®], 78 MHz
- 2 Mbit on-chip SRAM
- GPRS cipher units GEA1, GEA2
- I²C bus interface (eg. PMB 6810)
- I²S PCM digital audio Interface
- Multimedia Card interface
- 2nd SIM card interface
- Ringer support for PWM output to earpiece
- 2 IrDA compatible UARTs
- Logic port signal arranger
- General Purpose IOs
- Advanced dynamic power management
- External memory interface to 1.8 V and 3 V devices
- Page Mode Flash interface
- JTAG IEEE 1149.1 Boundary scan and debug interface
- OCDS level 1 debug support

Technology

- Based on proven Infineon mixed signal 0.18 μm technology
- 1.8 V - 3.3 V digital IOs
- 1.8 V internal operating voltage for digital parts
- 2.5 V internal operating voltage for analog parts
- P-LFBGA-208 package,
- 12 x 12 mm, 0.65 mm ball pitch

Firmware

- FR, HR, EFR, AMR
- GPRS class 12, CS 1-4
- HSCSD class 10
- Echo cancellation
- Noise reduction
- Voice memo support
- MP3 decoding support
- Polyphonic Ringer support
- Speech recognition support optional

Documentation/Development and Support Tools

- Product Overview
- Specification
- Application Note
- Evaluation Board
- CD-ROM Support Package

Software

- Complete software solution ranging from layer 1 up to MMI for GSM phase 2+ incl. HSCSD, GPRS and many additional features offered by Comneon
- Java

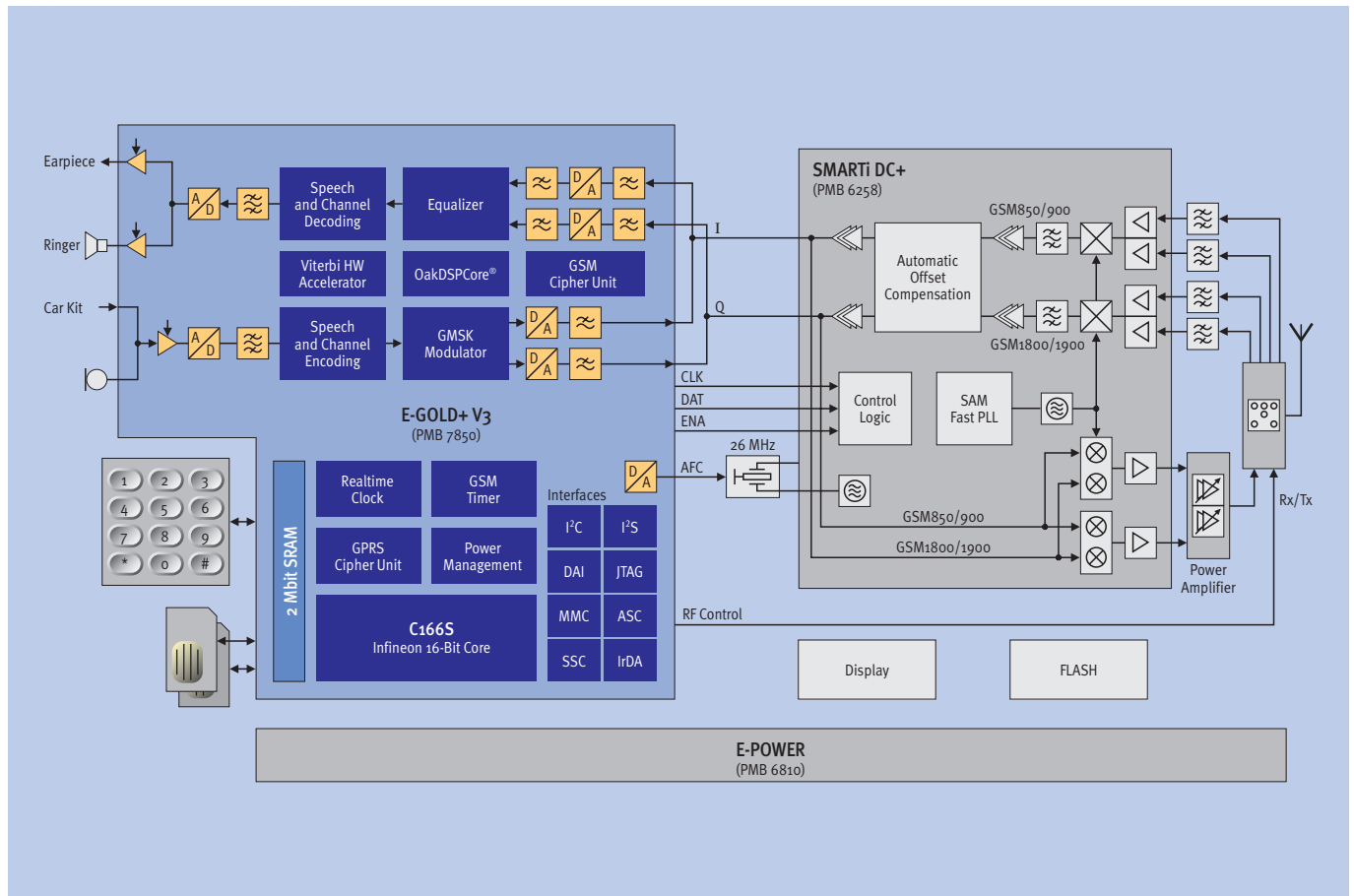
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Application Example GSM/GPRS Terminal



Heading to the Future

Based on GPRS and HSCSD new exciting applications will create new opportunities in mobile communications. Infineon Technologies' enables the customers to benefit from such a tremendous market opportunity. E-GOLD+ V3 provides both, analog functions, like analog baseband filters, ADCs, DACs, and digital signal processing power. To provide the MCU/DSP capabilities, E-GOLD+ V3 makes use of a combination of Infineon's well proven and established C166 architecture and an OakDSPCore®.

It's E-GOLD+ V3 solution for the highly integrated baseband as a system-on-chip is a result of the corporation's successful initiative from a mere silicon vendor to a system solution provider. With its system level know-how in the area of GSM, GPRS, EDGE, and UMTS Infineon Technologies leads the way in providing complete system solutions for wireless communication offering a complete semiconductor product range to cover all low- to high-end terminals.

This includes Baseband ICs, RF products, Power Management ICs, Power Amplifier, Bluetooth™ modules, GPS, and many more. Infineon Technologies system solutions are jointly developed with its system integration house, Danish Wireless Design A/S in Denmark and its wireless software development house Comneon, with its headquarter in Nuremberg, Germany.

Note: OakDSPCore® is a registered trademark of ParthusCeva, Inc.

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For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office.

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