

**S-GOLD** is a single chip baseband IC especially designed to enable the upcoming generation of smartphones and multimedia oriented handsets. **S-GOLD**, the first member of Infineon Technologies new multimedia platform combines all digital and analog functions of a GSM/GPRS/EGPRS modem with a high-level of application performance on a single chip. This high level of integration enables designers of multimedia handsets to build highly optimized form factor phones at lowest system cost.

And, the **S-GOLD** has been architected to support the high application performance required for the new generation of wireless multimedia terminals enabling the wireless internet.

In combination with Infineon Technologies SmartiDC+ RF solution and power management IC a three chip solution for a quad band EDGE Terminal is available.



PMB 8870

#### Target Applications

- Feature rich smartphones
- Multimedia oriented terminals
- Data Modules with EGPRS support up to multislot Class 12

#### Key Benefits

- Application enhanced modem processor on one single chip
- Leading edge modem technology
- Proven Turnkey Firmware
- Complete set of software from Layer 1 up to APOXI based applications
- Complete multimedia reference design available

#### Key Features

- ARM 926 based design with cache and TCM
- OAK based DSP Subsystem
- On-chip SRAM
- HiFi stereo voiceband
- A53 / GEA-3 cipher units already supported

- I<sup>2</sup>C bus interface (eg. PMB 6811)
- I<sup>2</sup>S PCM digital audio I/Os
- MMC / SD support
- USB On-the-Go support
- USIM support
- Display interface
- Fast IrDA support
- Touch screen interface
- Interfacel to Bluetooth module
- Advanced static and dynamic power management

#### Firmware

- E-GPRS class 12, MCS 1-9
- GPRS class 12, CS 1-4
- HSCSD class 10
- FR, HR, EFR, and AMR
- Echo cancellation
- Noise reduction
- E-OTD
- GTT / TTY
- MP3 decoder
- Polyphonic ringtones

#### Availability

- S-GOLD available today
- S-GOLD reference design available today

#### Documentation/Development and Support Tools

- Product Specification
- Evaluation Board
- CD-ROM Support Package
- Application Notes
- System Board
- Reference Design

#### Software

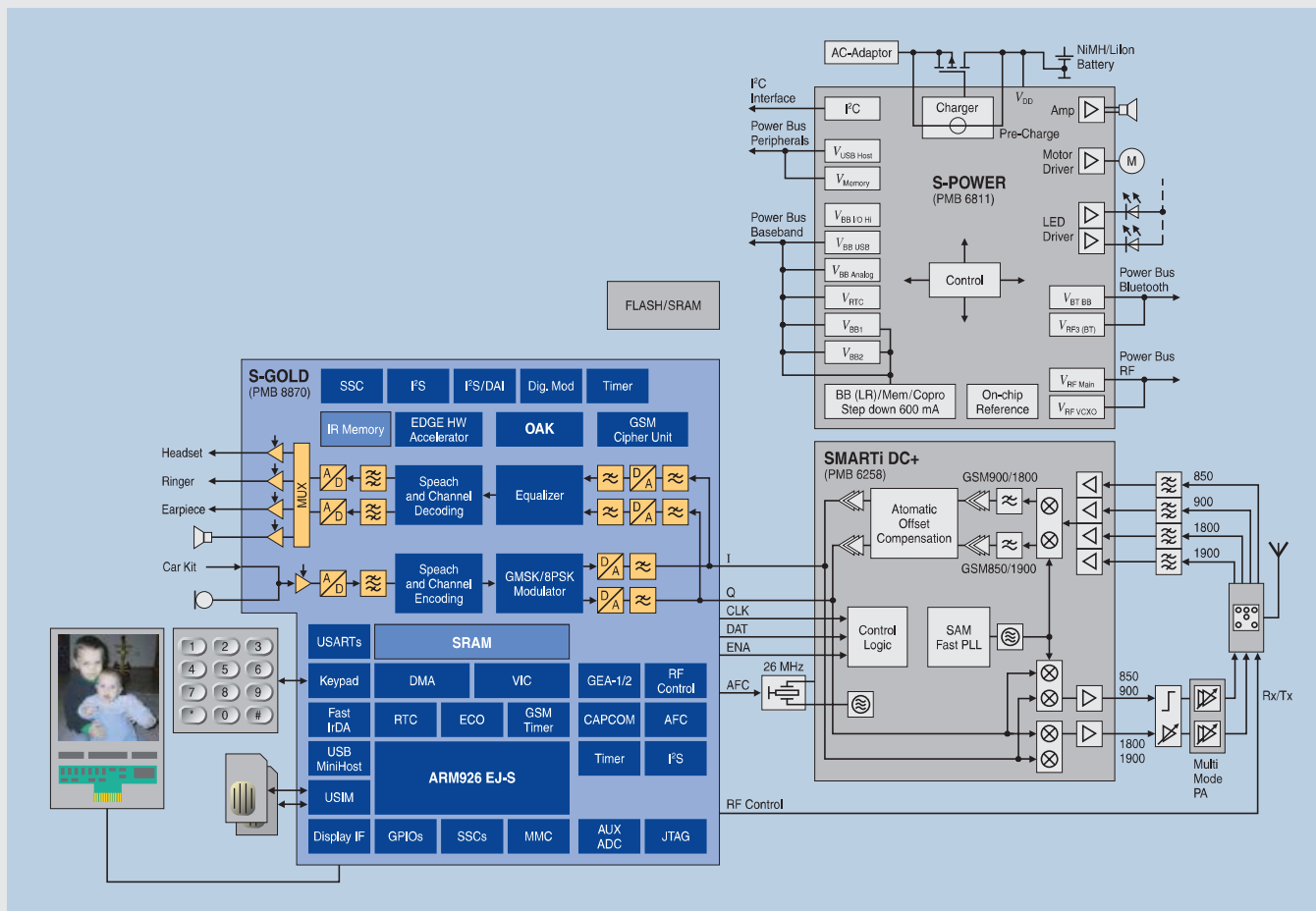
- Complete set of software ranging from Layer 1 and development software up to complete protocol stack for GSM phase 2+ supporting HSCDS, GPRS and EGPRS
- Wide range of 3rd party multimedia applications based on APOXi ready to use

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GSM/E-GPRS Single Chip Baseband IC



## Application Example EDGE Quad Band Terminal



### Heading into the Future

GPRS / EDGE and exciting multimedia applications will create new opportunities in mobile communications. With S-GOLD Infineon Technologies enables customers to benefit from such tremendous market opportunities. S-GOLD provides both, analog functions, like analog baseband filters, ADCs, DACs, stereo CD quality voiceband, and digital signal processing power for modem functionality and applications.

To comply with the increased demand on application performance S-GOLD is based on ARM's latest ARM9 MCU for mobile applications. The ARM926EJ with its DSP extension to speed-up multimedia applications and the Jazelle extension to enable the upcoming wave of Java Games.

S-GOLD enables handset designers to build feature rich smartphones in a leading edge form factor at lowest system cost.

Therefore S-GOLD integrates a wide range of peripheral interfaces as well as a HiFi stereo audio path and a touch screen interface on a single chip.

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 software development house Comneon in Germany.

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Published by  
Infineon Technologies AG,  
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Infineon Technologies is an approved CECC manufacturer.

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