

General Description

The GOLD Signal Processor (GOLD-SP) is part of a chip set, which covers all functions of a mobile radio provided for the **G**lobal **S**ystem for **M**obile communications, GSM.

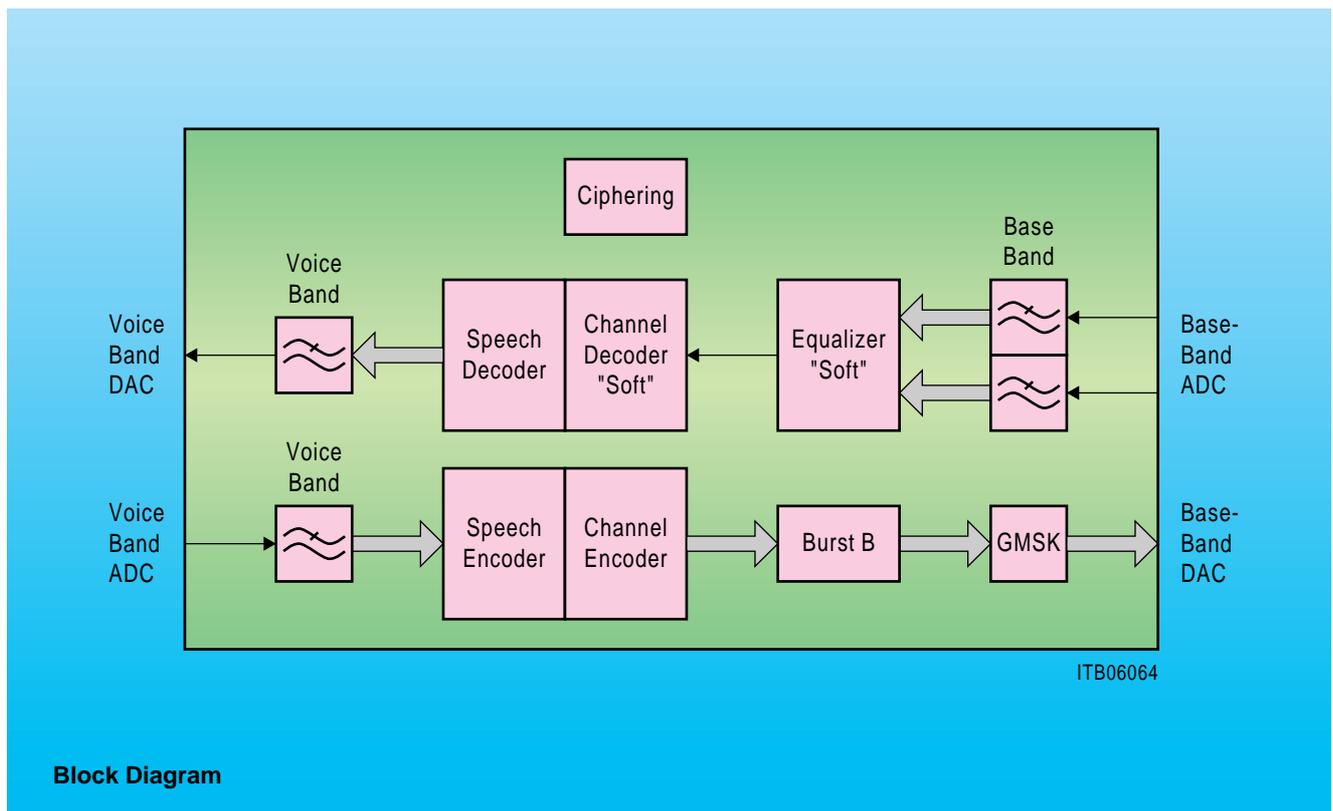
A mobile terminal which contains this chip set will meet all performance requirements set down in the GSM recommendations speech and data services.

GOLD-SP contains a fullrate speech codec, a channel codec with soft-decision decoding and a complex Viterbi equalizer, all as DSP firmware. Moreover all digital filtering needed for baseband and voiceband processing, and also GMSK modulation is performed on this chip.

Type	Package
PMB 2707-F	P-TQFP-100-1 (SMD)

Features

- Two parallel DSP cores type SPC each with high performance (26 MIPS @ 2.7 V), low current consumption (< 1 mA/MIPS), all memory needed for fullrate operation on chip, shared access to complete controller memory
- GSM functions realized as DSP firmware
 - Complex soft-output equalizer
 - Frequency correction burst handling
 - Full duplex handsfree
 - Channel coding
 - Soft-decision decoding (bit-by-bit)
 - Speech coding and decoding (RPE-LTP)
- Digital baseband filter
Automatic amplitude calculation
Automatic amplitude offset measurement
- Ciphering with A51/A52
- Digital voiceband filters (receive, transmit)
- GMSK modulator
- PLL-based system clock generation
- Package: P-TQFP-100, 14 × 14 mm, 0.50 mm pitch
- 3-V supply voltage (± 10 %)



Block Diagram