Product Brief

Never stop thinking

XPOSYS™

Leading-Edge A-GPS true Single-Chip Receiver

XPOSYS™ IS THE eXcellent POsitioning SYStem that brings Infineon's single-chip A-GPS family to the next level of integration, based on 65nm technology node.

XPOSYS™ integrates a high performance A-GPS baseband processor and a best-in-class GPS RF front end onto a single CMOS die.

XPOSYS™ delivers world class performance enabling high performance positioning and even pedestrian navigation in urban canyon environment.

The small form factor as well as an unsurpassed low bill of material thereby creates highest customer value and differentiation in the market.

Infineon's single-chip solutions enable handset manufacturers to differentiate in the market by providing the best performing solutions at lowest system cost.

Key Features and Benefits

- 65nm SoC includes real time hardware correlation engine, RF receiver, mixed signal, power management, CPU and RAM/ROM memory in a single-chip
- Optimized for lowest system costs
- Highest integration in 2.8 x 2.9mm WLB lead free package
- Optimized for lowest power consumption
- Minimum board space (< 26mm² PCB area for complete A-GPS solution)
- Advanced low-power 65nm RFCMOS technology with smart power management
- -165dBm sensitivity for true indoor and pedestrian navigation
- Built-in voltage regulators supporting single-power supply source
- Excellent power consumption, < 10mW in low power tracking

Key Features and Benefits

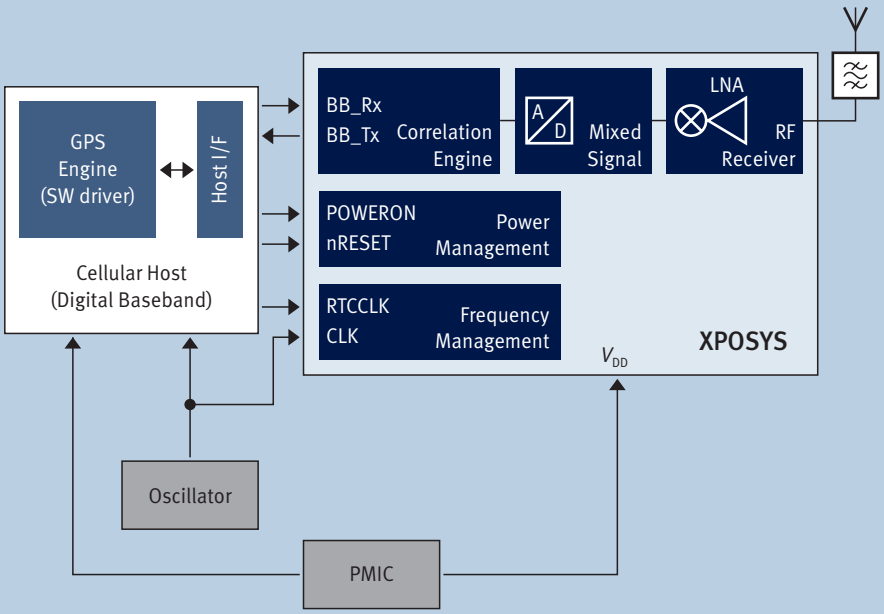
- Multiple-mode operation
  - MS-based (calculation of position in mobile handset)
  - MS-assisted (calculation of position in base station)
  - Autonomous (no assistance from network)
  - Control plane (RRLP & RRC)
  - User plane (SUPL)
  - Standard compliant (exceeds requirements for 2.5G and 3G networks)
- Specification
  - 165dBm sensitivity
  - Time-to-First Fix: 1s
  - Position accuracy: 2m steady state
  - Reference frequencies: 10–52MHz
  - Assistance data standards support
  - UMTS/GSM: 3GPP TS 25.331
  - TS 44.031, and OMA SUPL
  - CDMA: 3GPP2 C.S00
- Devices
  - Mobile phones
  - Smartphones
  - PND (Personal Navigation Devices)
  - PDAs
  - Cameras
- Applications
  - Emergency assistance (E911, E112)
  - Navigation: Point-to-Point, POI
  - Sports tracker
  - Child safety and friend finder
  - Fleet and workforce management
  - Location games
  - Geo tagging for photos

www.infineon.com/wireless

XPOSYS™

Leading-Edge A-GPS true Single-Chip Receiver

Block Diagram Cellular Phone Application



XPOSYS™ is highly optimized for

- Lowest component count
  (GPS < 10 additional components)
- Lowest PCB area (< 26mm²)
- Lowest power consumption
- Host interfaces: (UART, I²C or SPI)
- Reuse of system reference clock
- High sensitivity enabling scalability of GPS system to power consumption and cost

Advantages

XPOSYS™ is based on EPSON's IP and state-of-the-art Infineon RF CMOS IP and process technology. This new generation's chip is the key for enabling location-based services such as emergency assistance and pedestrian navigation in deep urban canyons, in moving vehicles, and indoors. XPOSYS™ uses the host-based architecture as the best fit for mobile devices, mass market proven. The host-based architecture leverages some of the resources already existing in the mobile device without imposing big CPU load or any real time requirements. XPOSYS™ uses standard serial communication interfaces (less than 115kbps). The Host-based architecture yields the lowest system cost solution as well as the smallest footprint together with excellent performance.

Actual Size

How to reach us:
http://www.infineon.com

Published by
Infineon Technologies AG
81726 Munich, Germany

Published by Infineon Technologies AG

Order Number: B153-H9355-X-X-7600
NB09-1007