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
- 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.500
- 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.

Legal Disclaimer
The information given in this Product Brief shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

Information
For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office (www.infineon.com).

Warnings
Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Order Number: B153-H9555-X-X-7600
NB09-1007