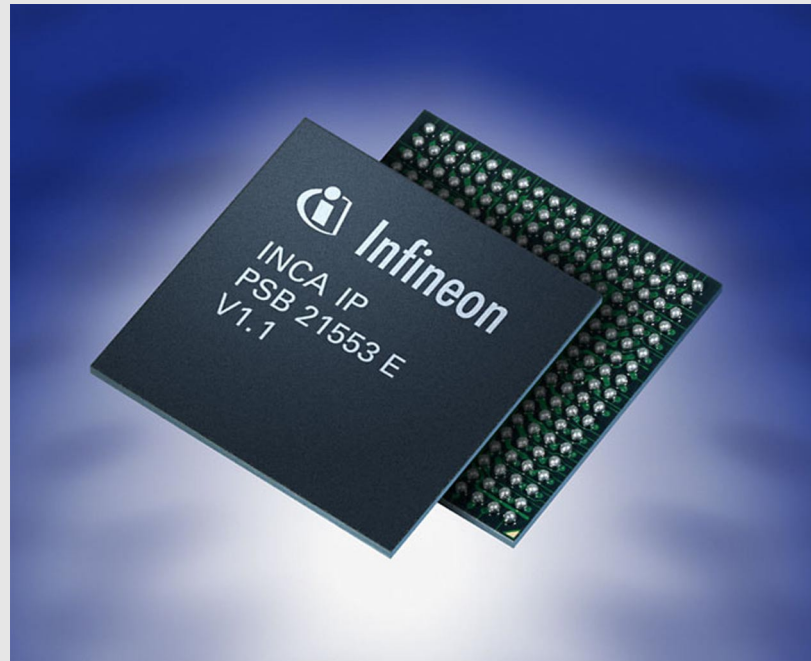


The INCA-IP is the newest member of Infineon's advanced telephony family of products for digital telephones. This single-chip solution is cost-optimized for VoIP terminals featuring conferencing and hands-free functionality with high-quality audio performance. The INCA-IP offers advanced features such as integrated voice codecs, conferencing functionality, advanced echo-cancellation, as well as a full-featured telephony analog front end (AFE). These voice features are complemented by a full-fledged 3-port Ethernet switch with packet prioritization for Quality of Service.

Additional features include an integrated switch, 10/100BaseT Ethernet PHYs, support for power over LAN, AFE, and DSP. The INCA-IP also offers advanced security and supports the DES/3DES/AES standards.

Designed for terminal systems with microphone, loudspeaker, handset and headset inputs, the INCA-IP offers a comprehensive single-chip IP telephony solution.



INCA-IP

Applications

- VoIP Telephone

Voice Processing DSP Features

- Voice coding supports G.711, G.723.1, G.729A/B, and G.722 standards
- Advanced voice capabilities with full duplex hands-free functions, including noise suppression and Acoustic and Handset Echo Suppression
- Silence compression (transmit)
- Voice Activity Detection (transmit)
- Comfort noise generation (receive)
- Speech Recognition
- Tone Generation for ringing and DTMF
- 3-party conferencing with trans-coding
- Integrated Analog front end with 100 mW driver for external speaker
- 100 MHz OAK subsystem with 116 Kbytes RAM and 108 Kbytes ROM

CPU Features

- Powerful 150 MHz MIPS32™ 4Kc™ RISC CPU
- Hardware accelerator for encryption (DES/3DES/AES standards)
- SDRAM and cache controller
- Separate I-Cache and D-Cache integrated on chip
- MMU with 16 entry TLB
- 5-channel DMA controller
- Clock generation unit and power management

Ethernet MAC and PHY Features

- Two 10/100BaseT Ethernet ports with integrated MAC and PHY
- Wire speed Ethernet switch with embedded packet buffer and MAC address table
- Fully IEEE 802.1Q and IEEE 802.1p compliant
- IEEE 802.3x full and half-duplex flow-control compliant
- Supports full 4kByte range of VLAN IDs

- Class of Service determined by frame VLAN tag or TOS field
- Configurable output scheduling mechanism for Quality of Service
- Supports 16 VLAN multicast groups

Interfaces / Ports

- Keypad up to 91 keys can be directly connected
- EJTAG, PCM/IOM-2, GPIO
- 2x SSC supports SSI, SPI
- Asynchronous Serial Interface Controller
- RMII interface for external transceiver
- PWM1 and PWM2

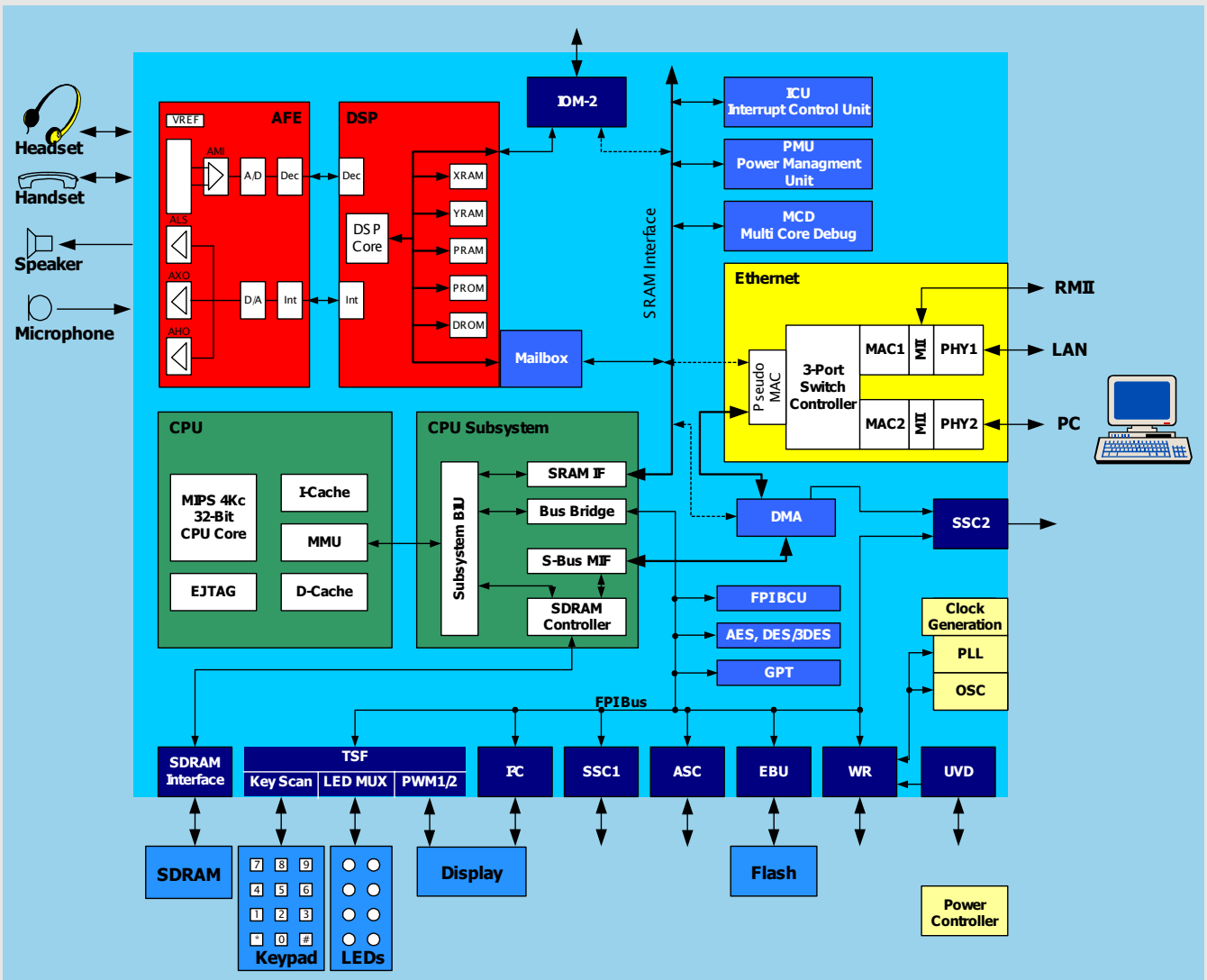
Software

- An extensive software support package is supplied with the EASY 21553 INCA-IP Evaluation system

INCA-IP

VoIP System on a Chip
PSB 21553 E





INCA-IP Block Diagram and System Example

Ordering Information

Design Tool

Type	Sales Code	Package	Description
EASY 21553	Q67230-H1401	–	INCA-IP Evaluation System

INCA-IP

Type	Sales Code	Package	Description
INCA- IP	PSB 21553 E	P-LBGA-324-3	VoIP system on a chip

How to reach us:

<http://www.infineon.com>

**Published by
Infineon Technologies AG,
St.-Martin-Strasse 53,
81541 München**

© Infineon Technologies AG 2002. All Rights Reserved.

Attention please!

The information herein is given to describe certain components and shall not be considered as warranted characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Infinion Technologies is an approved CECC manufacturer.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office in Germany or our Infineon Technologies Representatives worldwide.

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infinion Technologies Components may only be used in life-support devices or systems with the express written approval of Infinion 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.

Ordering No. B000-H0000-X-X-7600
Printed in Germany