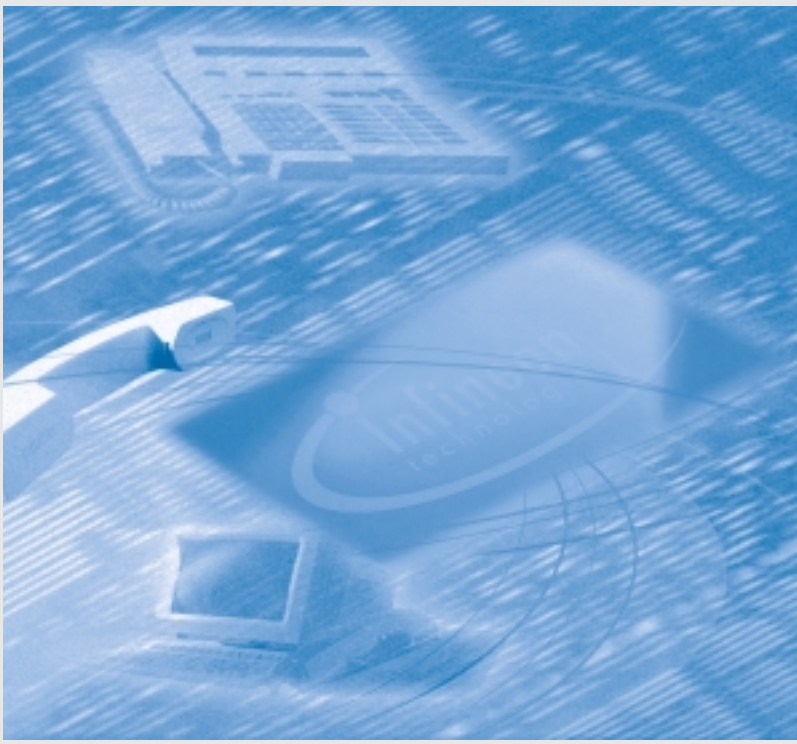
The INCA-P, PSB 21493, integrates in a single clip, all the functions required for a high feature PBX phone.

The line transceiver of the INCA-P implements the subscriber access functions for a digital PBX terminal to be connected to a two-wire U_{PN} Interface. The chip provides complete Layer-1 and basic Layer-2 functions for digital terminals.

Different interfaces allow connection to a variety of devices including a full-speed USB interface for PC host communications.

The INCA-P is typically used in applications for terminal equipment in which the microphone, loudspeaker, headset, and handset can be directly connected to the Analog Front End (AFE).

The AFE and the integrated fixpoint DSP perform signal processing tasks such as encoding, decoding, filtering functions, and tone generation (ringing, audible feedback tones, and DTMF signal). A full-duplex echo cancellation mechanism provides high quality speakerphone functionality.



INCA-P

Applications

- PBX Feature Phone with full-duplex, hands-free operation, including USB interface

Features

- Two-wire transceiver with AMI coded 2B+D channels
- C166 based 16-bit CPU
- Bootstrap Loader Function
- On-Chip General Purpose SRAM (4 KBytes)
- On-Chip Debug System OCDS (Level 1)
- Both Power-on-Reset and Under Voltage Detection provided
- Terminal-specific Functions, including Keypad Scanner, LED Matrix Control, and two Pulse Width Modulation units
- 12 Mbit/s Full-Speed Mode complies with USB Specification V1.1
- 15 SW-configurable Endpoints, as well as the bi-directional Control Endpoint 0
- Full-duplex echo cancellation with noise reduction
- Two transducer correction filters
- Tone Generator
- DTMF Receiver
- Three differential inputs for the handset microphone, speakerphone, and the headset
- Three differential outputs for a handset ear piece (200 Ω), a headset (200 Ω), and a loudspeaker (100 mW @ 20 Ω)
- PCM A-Law/µ-Law (ITU-T G.711) and 8/16-bit linear data
- PCM Codec is fully compatible with the ITU-T G.712 and ETSI (NET33) specification

Type	Sales Code	Package
INCA-P	PSB 21493	P-TQFP-144

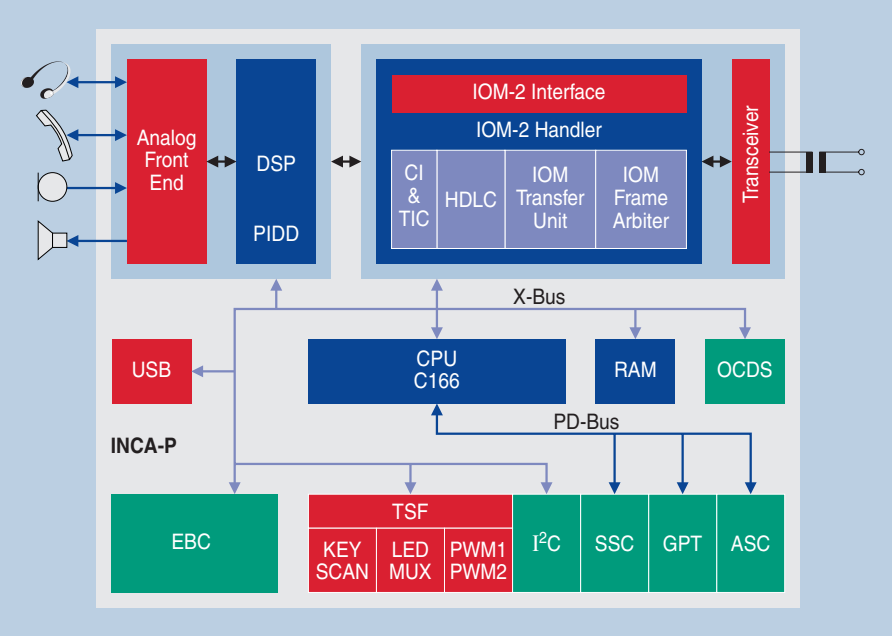
INCA-P

Infineon Codec with U_{PN} Transceiver and Embedded Microcontroller featuring Acoustic Echo Cancellation

PSB 21493

Never stop thinking.

Block Diagram

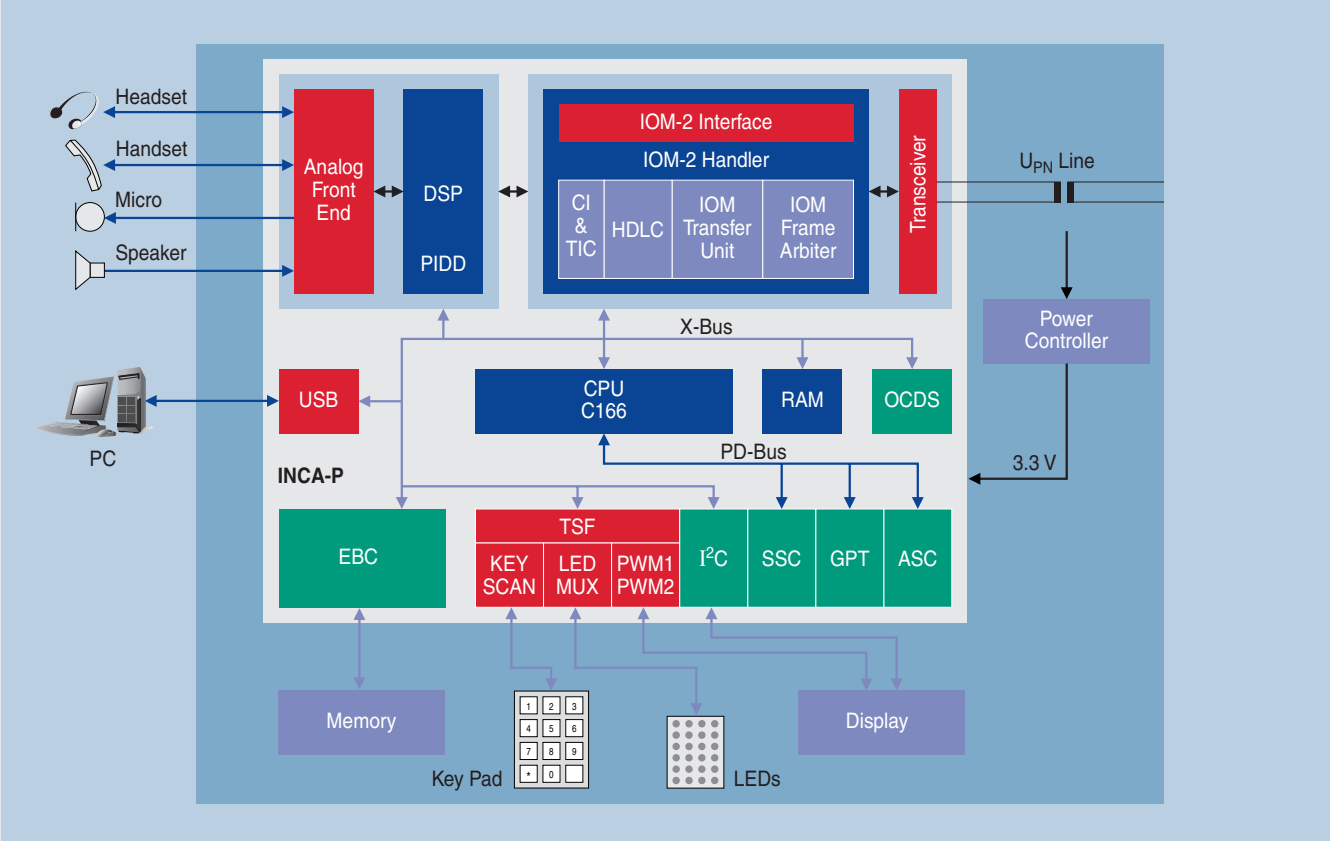


The typical application of the INCA-P is for terminal equipment in which the microphone, loud-speaker, headset, and handset are directly connected to the Analog Front End.

Connection between telephone and PC offers a lot of new features - such as internet telephony, PC dialing and unified messaging - that can be implemented without additional hardware.

The INCA-P can also be used when the line transceiver is disabled but all other functions are available, such as operation in devices where an external interface is also supported.

Application Example High-End Feature Phone



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