

Infineon® TWINPASS-VE

VoIP Network Processor System-on-Chip (SoC)
PSB 4010



The Infineon® TWINPASS-VE is a highly integrated VoIP processor SoC for wired and wireless VoIP router applications. TWINPASS-VE employs two powerful 333 MHz CPUs. One CPU is used for management and network processing while the other CPU is directly connected to the analogue line module for high quality voice processing. The DDR memory controller can operate at 167 MHz interfacing with a 16-bit DDR-333 memory module.

Building on advanced Infineon VoIP technology such as VINETIC™ codec, DSP and SLIC™ chipset; the TWINPASS-VE enables the most effective and scalable implementation of VoIP CPE applications. This advanced functionality is now combined with Infineon's powerful network processor technology for a complete VoIP SoC solution.

The optimised design can be combined with other Infineon products such as VoIP, DECT and VDSL2 technologies as well as Ethernet Switches. The Infineon software support enables quick implementation and customisation of additional functions while significantly reducing design cycles and slashing time to market.

Applications

- Gigabit Ethernet VoIP Router
- Wireless (802.11n) VoIP Router
- VDSL2 IAD
- xPON IAD
- WiMAX Gateways

VoIP Features

- Embedded Voice-over-IP from the market leading Infineon VINETIC family
- Two integrated codecs (combined with Infineon SLIC family solutions)
- Integrated voice processing engine supporting multiple voice channels
- Integrated DTMF receiver, Caller-ID generator/detector
- Integrated Voice compression supports G.711, G.729A/B, G.723.1, G.726, G.722, G.722.1, iLBC
- Flexible and high quality Voice Coders performed by dedicated MIPS® processors
- Line Echo Cancellation (LEC) supports Near and Far-End-Echo
- T.38 Fax Relay support

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Product Interfaces

- 1st MIPS®24KEc™, 333 MHz for rich application features (11n, firewall & more)
- 2nd MIPS®24KEc™, 333 MHz for VoIP coder
- Protocol Processor for flexible routing acceleration
- Hardware Encryption/ Decryption accelerator
- Turbo MII interface for 200Mbps in each Tx/ Rx
- PCI (32bit @33/60MHz) interface
- Memory Copy accelerator

Physical Interfaces

- Two Analog SLIC interfaces
- Two 10/ 100/ 200 MII/ Reverse MII/ TMII interfaces
- 16-bit SDR/ DDR DRAM
- 16/8-bit NOR/ NAND Flash memory interface
- 32-bit PCI 2.2 bus supports PCI, Mini PCI and CardBus interfaces
- Multi Media Card Interface (SD/ MMC)
- USB 2.0 host/device
- TDM (with PCM, IOM-2, AC97 capability)
- UART for RS-232, UART with HW Flow Control
- 32 GPIOs, 24-bit serial LED controller
- SPI

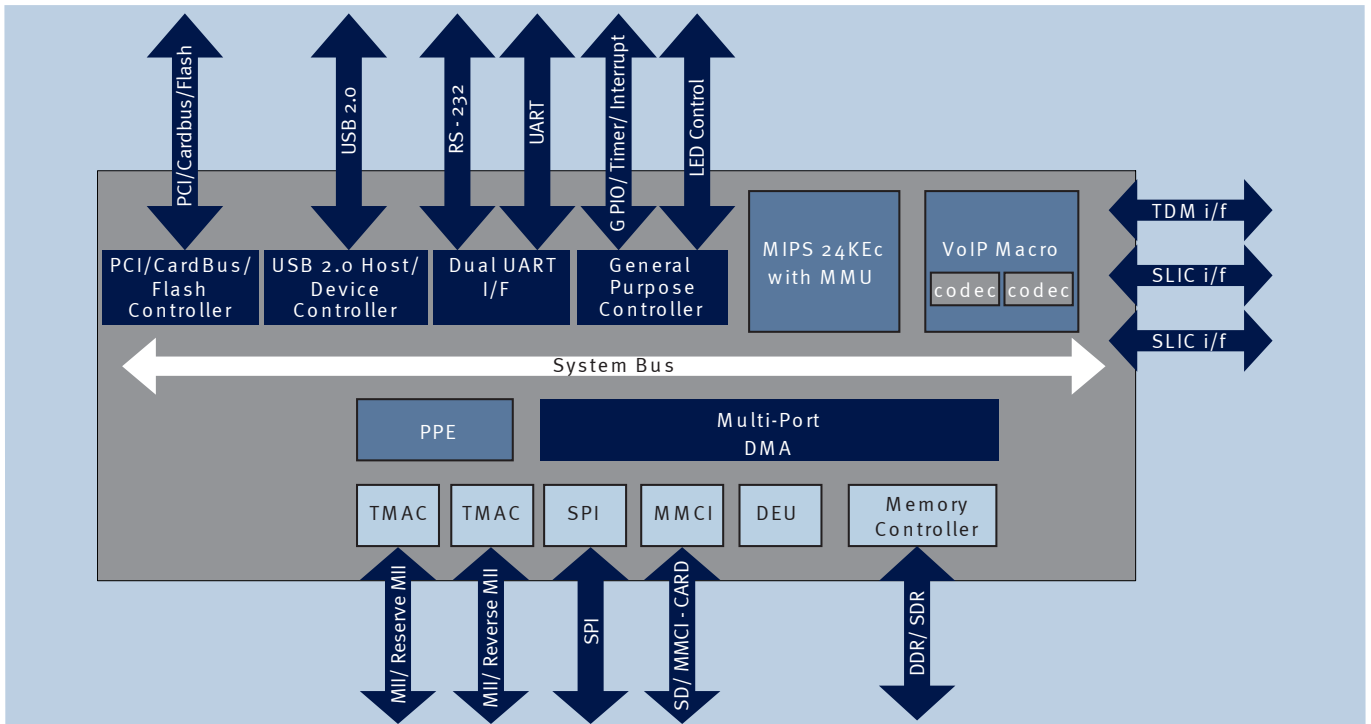
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Communication Solutions



Never stop thinking

TWINPASS-VE Block Diagram

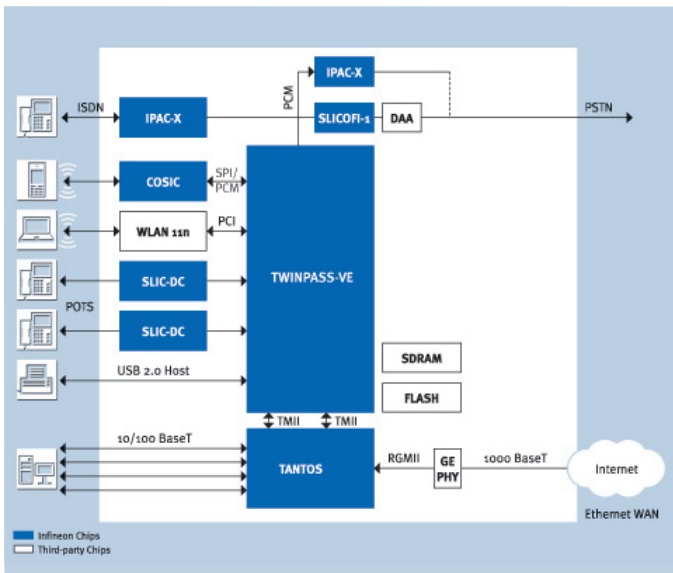


Product Summary

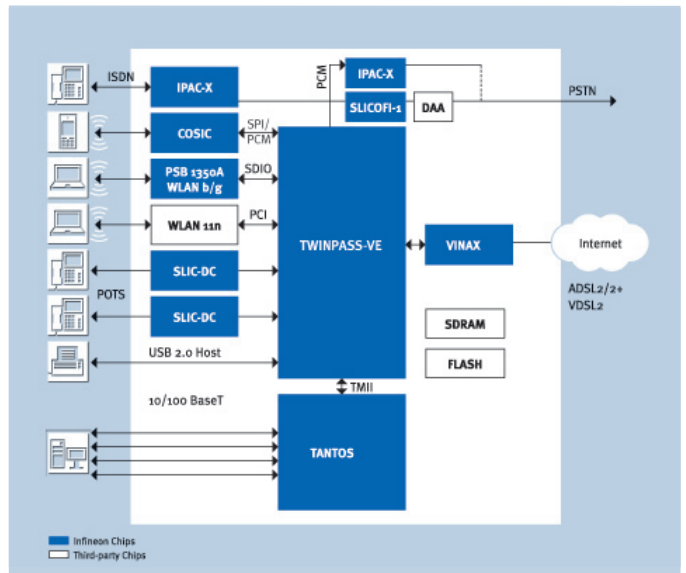
Sales Code	Description	Package
PSB 4010	VoIP Network Processor	PG-LBGA 256-1

TWINPASS-VE Application Examples

VoIP Router with DECT



VDSL2 Integrated Access Device



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