

# VINETIC®-CPE

Voice over IP Processor for Customer Premises Equipment



The VINETIC®-CPE series is a new member of Infineon's VINETIC® family. With the system solution (DSP firmware and software device driver) provided by Infineon, it is optimized for VoIP Customer Premises Equipment (CPE) as well as Small and Medium Enterprise (SME) VoIP applications.

Featuring single or double channel analog codecs, the VINETIC®-CPE offers system providers a wide range of flexible VoIP solutions from DECT VoIP Basestations to VoIP Routers and SOHO IP-PBX.

With up to four low-bitrate VoIP coders, VINETIC®-CPE enables IP based conferencing call simultaneously on two analog channels. The iLBC vocoder is also implemented for innovative VoIP application.

Scalable versions of VINETIC®-2CPE/-1CPE, VINETIC®-2ATA/-1ATA and VINETIC®-CL share the same package and software.

## Applications

- Residential Gateways, VoIP Routers
- VoIP DECT Basestation and ATAs
- Integrated Access Devices (IAD)
- VoIP xPON
- VoIP Cable Modems, eMTAs, SMTAs
- VoIP-PBX

## VoIP Features

- RTP packetization including fixed and adaptive Jitter Buffer up to 200 ms for optimum voice quality
- Integrated Voice Compression supports G.711, G.723.1, G.726 ADPCM (32, 16, 24, 40 kbit/s), G.729 A/B/E, and iLBC royalty free vocoder
- Patent indemnification for complex vocoder algorithms G.723.1 and G.729 A/B/E available
- T.38 Fax Relay Support including V.17/V.21/V.27ter/V.29
- Line Echo Cancelation (LEC) supports the elimination of Far-End and Near-End line echo up to 128 ms, and exceeds G.165 / G.168 / G.168-2000 / G.168-2002

- Encapsulated Voice Processing takes care of all real-time-critical tasks and no external memory required

## Hardware Interface

- Parallel and SPI interface to Host
- PCM highway with free programmable time slots
- JTAG interface

## CODEC/SLIC Features

- Fully programmable 1 or 2-channel CODEC with voice processing DSP
- SLIC interface to SLIC-DC V1.2 and SLIC-E V2.1 from Infineon's SLIC family
- Hardware and software compatible for one and two-channel version
- Specification according to ITU-T Q.552
- FXO operation on analog voice channel or through VINETIC® PCM interface via additional CODEC device
- Enhanced Power Management

## Development Tools and Documentation

- DECT VoIP WLAN Router reference design
- ADSL VoIP Gateway reference design
- VINETIC®-CPE System Package
  - VINETIC® Firmware, VINETIC® Device Driver for Linux, Coefficient Calculation Software VINETICOS
  - System Package Release Note, Data Sheet, User's Manual Driver and API Description, User's Manual System Description, Hardware Design Guide, Device Driver Porting and Integration Guide

[www.infineon.com/vinetic](http://www.infineon.com/vinetic)

Communication  
Solutions

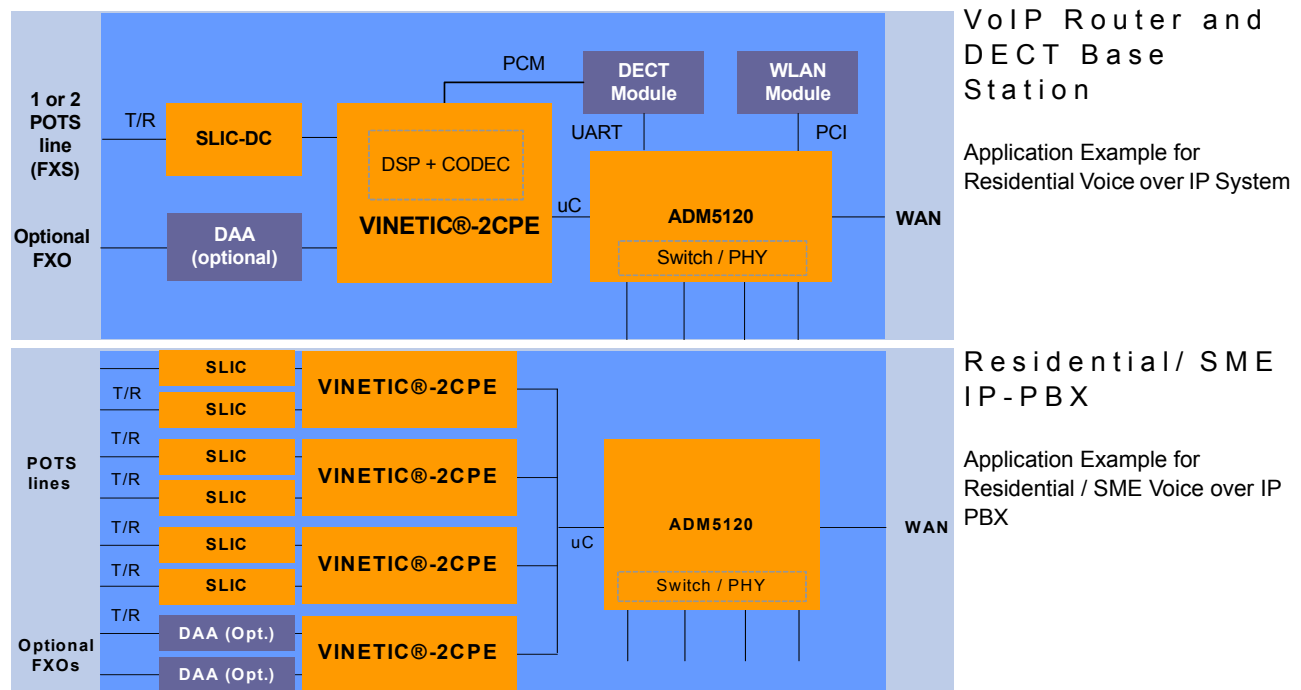


Never stop thinking

## Product Overview

Chip Set <sup>1)</sup>	VINETIC®-2CPE	VINETIC®-1CPE	VINETIC®-2ATA	VINETIC®-1ATA	VINETIC®-CL	VINETIC®-0
Target applications	VoIP Router/xDSL Gateway, VoIP xPON, SOHO IP PBX		Low cost VoIP ATA/Router/xDSL gateway		VoIP DECT base station	VoIP Processor
Sales code	PEB 3332HT PEB 3332 F	PEB 3331 HT PEB 3331 F	PEB 3342 HT PEB 3342 F	PEB 3341 HT PEB 3341 F	PEB 3340 HT PEB 3340 F	PEB 3320 HT PEB 3320 F
Green packages	PG-TQFP-100 or PG-TQFP-64 (without GPIOs and parallel host interface)					
Host interface	Motorola/Intel 8bit Parallel, SPI					
Analog CODECs	2	1	2	1	0	0
Jitter buffer	on each vocoder channel					
Line echo cancellation	Up to 128 ms	Up to 128 ms	Up to 16 ms	Up to 16 ms	n/a	Up to 128 ms
PCM interface	Yes	Yes	Yes.	Yes	Yes	Yes
G.723.1, G.729 A/B/E <sup>2)</sup>	4	2	2	2	2	4
iLBC, G.711, G.726 ADPCM	4	2	2	2	2	4
SLIC support <sup>3)</sup>	SLIC-DC V1.2				n/a	n/a
T.38 Fax Relay	Yes	Yes	Yes	Yes	n/a	Yes
DTMF, Caller-ID send and receive	Yes	Yes	Yes	Yes	Yes	Yes
RTP packetization	Yes	Yes	Yes	Yes	Yes.	Yes
External RAM	Not required	Not required	Not required	Not required	Not required	Not required

- 1) For more members of the VINETIC® family contact Infineon sales for more details. VINETIC® devices offer pin- and SW-compatible versions  
 2) Complex vocoders with patent indemnification available from Infineon  
 3) SLIC-E V2.1 to be supported with VINETIC®-CPE V2.2



How to reach us:

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