



Lantiq™ VINETIC™-SVIP

Next Generation VoIP Access Solution

Main Features

- VoIP DSP
 - Full VoIP encapsulation (RTP, UDP, IP) using G.711, G.726, G.729A/B, G.723.1, iLBC, AMR, G.722, G.722.1, G.722.2, G.729.1, UEMCLIP vocoders and T.38 fax relay
 - Up to 32 VoIP channels (VINETIC™-SVIP16)
 - Data Encryption Unit (DEU)
 - Daisy chaining of VINETIC™-SVIPs for any number of VoIP ports
 - Carrier-class LEC and tone unit for best-in-class voice quality
 - Full conferencing support (up to 32 participants)
- Analog POTS
 - Fully compliant with all worldwide analog telephony standards (ITU-T Q.552 and Telcordia GR-57-core)
 - Software programmable to worldwide analog characteristics (AC, DC, ringing)
 - Full wideband support
 - Integrated and external ringing support
 - On-hook transmission
 - Caller-ID type I - III transmission support
 - Integrated DTMF generator and receiver
 - Teletax metering up to 5 V_{RMS}
 - Universal tone detector
 - Howler tone generation (high amplitude)
 - Ground/Loop start signaling
 - Ground key indication
 - Polarity reversal (hard/soft)
 - Message waiting
 - Integrated Test and Diagnostic Function, replacing MELT test heads
 - Board production tests

Interfaces

- SPI, PCM, GPIO, 2x Gigabit-Ethernet (GMII) SPI, UART, 16-bit parallel clock/crystal, DRAM interface (DDR2), multiple PCM interfaces

The Lantiq™ VINETIC™-SVIP family of devices is the most feature-rich solution within Lantiq's comprehensive Voice/VoIP product portfolio. This family of software-compatible 4-, 8- and 16-channel devices addresses next-generation high-density VoIP access applications, as well as smaller business gateway, MDU and SBU designs.

Featuring up to 16 FXS ports and 32 voice codec channels, a linecard controller and a GbE Switch, the VINETIC™-SVIP family provides the highest level of integration for VoIP linecards. A 3-pin digital interface between the VINETIC™-SVIP and Lantiq's 2-channel integrated ringing Smart SLIC™ simplifies circuit board layout while optimizing component density.

Together with Lantiq's telephony API software suite (TAPI), a fast system start-up can be ensured.

Applications

- Access Networks, Central Office, DLC, DSLAMs, WLL
- FTTx (MxU/SxU), VoIP and IVD Linecards, IP-PBX, Business Gateway, ISDN over IP

Product Highlights

- One VoIP system concept for all access technologies
- Integrated LC controller
- Flexible architecture with sufficient processing power to support additional features beyond current requirements
- 4-/8-/16-channel codec/SLIC™ architecture
- 3-pin digital SLIC™ interface simplifies PCB design
- Full wideband support (16-bit/16 kHz)
- On-chip integrated line testing with test head accuracy (no external line test processor)
- 100% compatibility with legacy POTS equipment & services
- Integrated ringing (100 V_{RMS})
- Extended automatic modes to reduce processor load (caller-ID, pulse dialing, ringing, ground start etc.)
- Tone generators (2 per channel), DTMF sender and detection, caller-ID sender
- Robust design complying with severe EMC requirements (10 V conduct immunity)
- External, unbalanced ringing support

Design-In & System Package

- Data sheets, hardware design guide (including reference schematics and LOM), user's manual system description, user's manual programmer's reference
- Modular 48-evaluation board including board support package (Linux®* and VxWorks®*)
- WinEASY software for fast hardware bring-up
- High-level API software package (TAPI)
- Coefficient calculation tool (XTCOS)

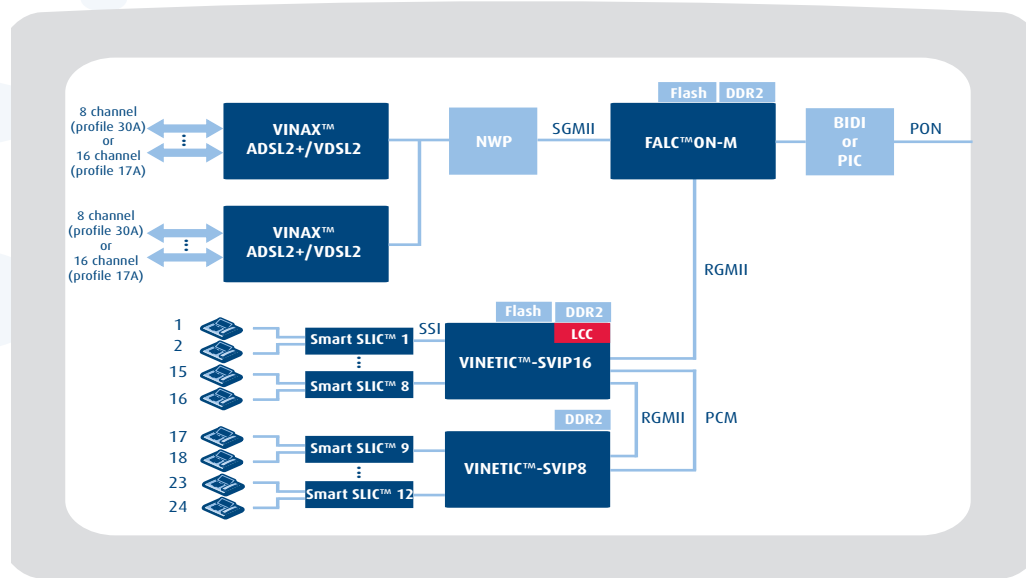
Lantiq™ VINETIC™-SVIP

Next Generation VoIP Access Solution

Fully flexible, scalable & upgradable

- One VoIP system concept for all access technologies (POTS, ISDN, IVD)
- 4-, 8- and 16-channel CODEC/SLIC architecture with slim digital interfaces for optimized density (6-8 layer design, 96 channels)
- Integration of network processor allows for highest density designs and optimum flow of VoIP packets
- Integrated linecard controller
- No internal memory limitation for future feature upgrades
- Full wideband support
- High availability with any coder at any time

24ch GPON MDU (VOICE + DSL)



Product Summary

Sales Code	PEF 33616	PEF 33608	PEF 33604	PEF 33600
Product name	VINETIC™-SVIP16	VINETIC™-SVIP8	VINETIC™-SVIP4	VINETIC™-SVIPO
Package	PG-FCLBGA-323			
Integrated LCC	boot option			
VoIP channels (G.729A/B)	16	8	4	16
VoIP channels (G.711)	32	16	8	32
VoIP channels (G.722)	16	8	4	16
Analog channels	16	8	4	0
PCM interface	multiple			
VoIP interface	MII, GMII, RGMII			
Coders	G.711, G.726, G.729A/B, G.723.1, G.722, G.722.1, G.722.2, G.729.1, UEMCLIP, iLBC, AMR, T.38			
Supply voltage	1.5/1.8/3.3 V			
Signal processing	Carrier-class LEC, tone generation and detection of all required network tones, RFC 2833/4733/4743			
Security	AES, DES, 3DES, SHA-1, MD-5, HW acceleration			
Integrated line testing	CO-grade with test head accuracy (including board production tests)			

Sales Code	PEF 42065	PEF 42065-2	PEF 42066	PEF 42066-2	PEF 42064
Product name	Smart SLIC™-R	Smart SLIC™-R2	Smart SLIC™-P	Smart SLIC™-P2	Smart SLIC™-S
Package	PG-LQFP-64				
	pin-to-pin compatible		pin-to-pin compatible		
DC feeding	50 mA	50 mA	50 mA	50 mA	50 mA
Max. battery supply	+/- 85 V	+/- 85 V	-150 V	-150 V	-125 V
Balanced ringing	85 V _{RMS}	85 V _{RMS}	85 V _{RMS}	85 V _{RMS}	70 V _{RMS}
Unbalanced ringing	internal/external	internal/external	internal/external	internal/external	internal
External ringing support	yes	yes	yes	yes	no
Longitudinal balance	53 dB	60 dB	53 dB	60 dB	53 dB
On-hook transmission	yes	yes	yes	yes	yes
Battery rails (neg./pos.)	2(+1ext)/1	2(+1ext)/1	3(+1ext)/0	3(+1ext)/0	2+1on-hook/0
Supply voltages	1.5/ 3.3 V	1.5/ 3.3 V	1.5/ 3.3 V	1.5/ 3.3 V	1.5/ 3.3 V
Make & break dial-tone test	yes	yes	yes	yes	no
Stand-by low power mode	yes	yes	yes	yes	yes
Wideband support	yes	yes	yes	yes	yes
DSL friendly	yes	yes	yes	yes	yes
Integrated line testing	yes	yes	yes	yes	yes

* Linux® is the registered trademark of Linus Torvalds.

* VxWorks® is a registered trademark of Windriver Systems, Inc.



How to reach us: <http://www.Lantiq.com>

Published by Lantiq
85579 Neubiberg, Germany

© 2011 Lantiq. All Rights Reserved.

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, Lantiq 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 Lantiq Office (www.Lantiq.com).

Warnings Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Lantiq Office. Lantiq components may be used in life-support devices or systems only with the express written approval of Lantiq, 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: PB-e-0049-v2