



# 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<sub>RMS</sub>
  - 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<sub>RMS</sub>)
- 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)

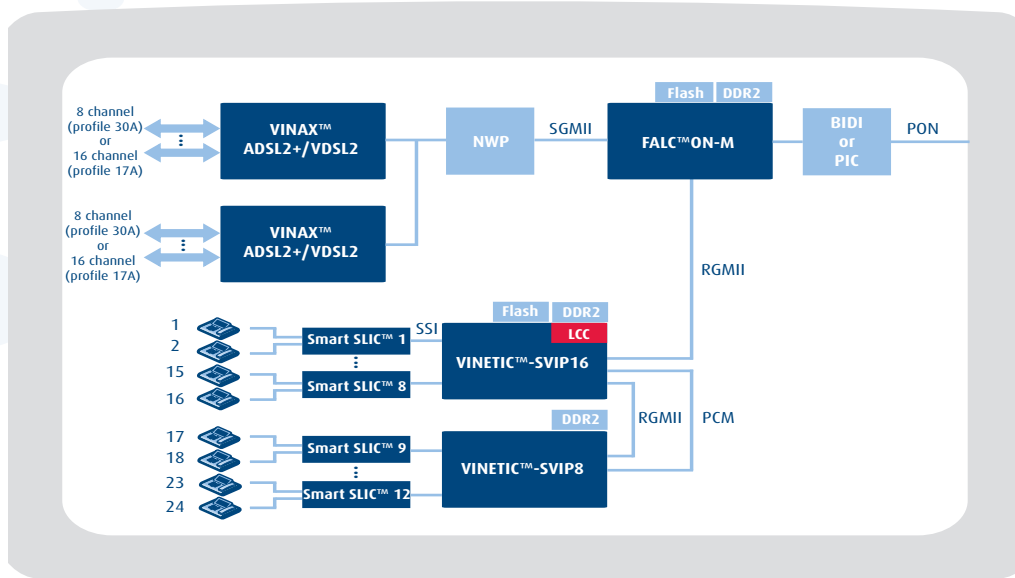
# Lantiq™ VINETIC™-SVIP

## 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™-SVIP0
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, GMI, 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 <sub>RMS</sub>	85 V <sub>RMS</sub>	85 V <sub>RMS</sub>	85 V <sub>RMS</sub>	70 V <sub>RMS</sub>
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

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



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