Lantiq™ VINETIC™-xT

Next Generation Voice Access Solution

Main Features

- Fully compliant with all world-wide analog telephony standards (e.g. ITU-T Q.552, Telcordia GR-57-CORE, ...)
- Software programmable to worldwide analog characteristics (AC, DC, ringing)
- PCM interface G.711 A-law/µ-law or 16-bit linear
- 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)
- DC and AC Ring Trip detection
- Fast Ring Trip detection
- Ringing with DC offset
- Loop start signaling
- Ground 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

The Lantiq™ VINETIC™-xT family is the latest addition to Lantiq´s mature and field-proven Voice product line. This family of pin- and software-compatible devices has been developed to address next-generation high-density Voice linecards, as well as small PBX and MDU designs.
The VINETIC™-xT family is based on a 4-, 8- and 16-channel CODEC/SLIC™ architecture. A slim digital SLIC™ interface (3 pins for 2 channels) simplifies the circuit board layout while optimizing component density.
Combining a VINETIC™-xT16 with Lantiq's two-channel Smart SLIC™ can reduce the overall bill of materials by up to 40% and can shrink the line interface unit footprint by up to 30% when compared to current solutions on the market.
The VINETIC™-xT family of products fully supports wideband voice (16 kHz sampling and wideband analog filters). It is 100% compatible with legacy POTS equipment and services, and offers advanced integrated line testing with test head (MLT) accuracy.
The unique architecture of the VINETIC™-xT family enables customers to minimize their development time, reduce their bill of materials and create products that are seamlessly scalable and upgradable at minimal cost.

Applications

- Access Networks, Central Office, DLC, DSLAMs, WLL
- FTTx (MxU/SxU), (IP)-PBX, Voice and IVD linecards

Product Highlights

- 4/8/16 ch. Codec/SLIC™ architecture offers highest density at low cost
- 3-pin digital SLIC™ interface simplifies PCB design
- Full wideband support (16-bit/16 kHz)
- On-chip integrated line testing with test head accurancy (no external line test processor)
- 100% compatibility with legacy POTS equipment and 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
- 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
- 16 channels evaluation board including board support package
- WinEASY software for fast hardware bring-up
- High-level API software package (TAPI)
- Coefficient calculation tool (XTCOS)

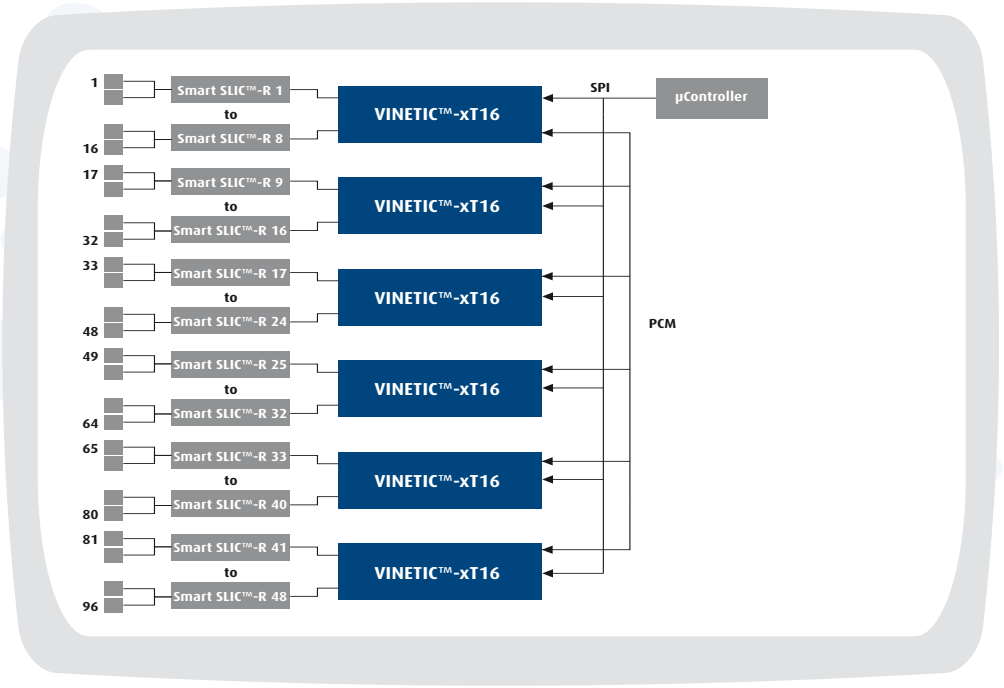
Lantiq™ VINETIC™-xT

Next Generation Voice Access Solution

Fully flexible, scalable & upgradable

- One Voice/VoIP system concept for all access technologies (POTS, IVD)
- 4-, 8- and 16-channel CODEC/SLIC™ architecture with slim digital SLIC™ interfaces for optimized density (6-layer design, 96 channels)
- Full wideband support

VINETIC™-xT Application Diagram



Product Summary

Sales Code	PEF 33016	PEF 33008	PEF 33004
Product name	VINETIC™-xT16	VINETIC™-xT8	VINETIC™-xT4
Package	PG-LQFP-100		
Analog channels	16	8	4
PCM interface	2		
A-law/µ-law/16-bit linear	yes/yes/yes		
CID on/off-hook state machine	yes		
Hook state machine	yes		
Tone generation	yes		
DTMF generator/detector	yes		
Howler tone generation	yes		
Message Waiting	yes		
Supply voltages	1.5/3.3 V		
Meets all relevant worldwide legacy POTS specifications	yes		
Metering 12/16 kHz	5 V_{RMS}		
Wideband support	yes		
Integrated line testing	CO-grade with test head accurancy		

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
Maximum 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 (negativ/positive)	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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