ENVISIONING • EMPOWERING • EXCELLING

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   The "MaxLinear Confidential" statement will be removed from the document upon its next revision
2. **Document has non-MaxLinear branding**
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Direct any questions and product support requests to your MaxLinear sales contact, MaxLinear Sales Representative or Distributor, or login to your myMxL account and create a new support ticket.

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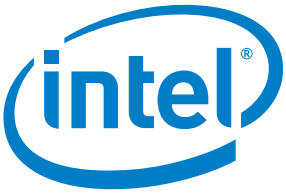

Attention

The table below lists discontinued brand names that have now been replaced with **new Intel names**.

The discontinued brand names in this document originate from Lantiq Beteiligungs-GmbH & Co. KG or one of its predecessor companies, Infineon Technologies AG or Siemens AG.

Lantiq became part of the Intel Corporation on April 15th 2015.

Discontinued Name	New Intel Name	Category
DUSLIC™ XS	Intel® Telephony Chipset for CPE, DXS Series	Family
DUSLIC™ XS1	DXS101	Device
DUSLIC™ XS2	DXS102	Device

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PRODUCT BRIEF

DUSLIC™ XS

The Next Generation Voice CPE Solution

The DUSLIC™ XS1 and DUSLIC™ XS2 line interface solutions combine a CMOS codec and high-voltage SLICs in a single package. This reduced footprint provides the unrivaled flexibility and performance that is required to implement cost-optimized Voice CPE (Customer Premises Equipment) applications of superior design.

DUSLIC™ XS complements Intel´s established and field-proven Voice CPE product line and blends optimally with Home Gateways (DSL, PON, Cable, Ethernet) as well as small and medium-sized Enterprise solutions. Its pin-to-pin compatible 1 and 2-channel solutions empower customers to produce a single hardware design implementing a 2-layer PCB. In comparison to the other devices that are available, DUSLIC™ XS offers full transmission performance for Central Office (CO) compliance (for ringing, feeding, DTMF generation & detection, and Caller ID) over the entire industrial temperature range.
DUSLIC™ XS also supports industry standard (GR-909) line testing and unique tests such as Capacitance Measurement, AC Level Meter, Make-and-Break Dial Tone and Universal Tone Detection.

The best-in-class Bill of Material (BOM) for dual-line termination is achieved through optimal on-board integration and elimination of duplicated external components, augmented by the device's 2-layer PCB capability.

Now, CPE system manufacturers can offer voice telephony with CO-grade performance and full wideband support (16 kHz/16 bit) at optimized system cost.

The low power consumption of the DUSLIC™ XS (measured under all operating conditions) is the industry benchmark for manufacturers who need to meet exacting Code of Conduct on Energy Consumption of Broadband Equipment Version 5.0 requirements for power efficiency, while integrating a smaller power supply to further enhance the design and cost of the system. Its combined DC/DC mode means that only one single power converter is required to supply two voice lines – with no compromise on power efficiency and voice quality.

Hardware Highlights:

- Pin-to-pin compatible 1 and 2-channel solutions
- Industrial temperature range (-40°C to +85°C)
- Exceptional power efficiency
- Low pin count SoC interface (CSI)
- CO-grade transmission performance including:
  - 142 V peak ringing voltage
  - automatic ring current regulation
  - Caller ID generation
  - DTMF generation & detection
- Conducted Immunity: 10 V disturber without Common Mode Choke
- Advanced integrated line testing (exceeding GR-909)

Software Highlights:

- New High-Level API in Linux* user space with:
  - generic Linux* SPI driver
  - no proprietary kernel space driver required
  - intuitive functional interface
  - low demand on memory/ resources
  - easy porting to other operating systems

Design Highlights:

- Best-in-class BOM
  - with combined DC/DC converter for 2-channel
  - and only a single 3.3 V supply for 1-channel solution
- Dedicated schematics and LOM for various applications
- Complete design-in package
  - with development kit, DUSLIC™ XS reference boards including on-board DC/DC converters
  - plus full-feature API functions
  - and documentation

Key Applications:

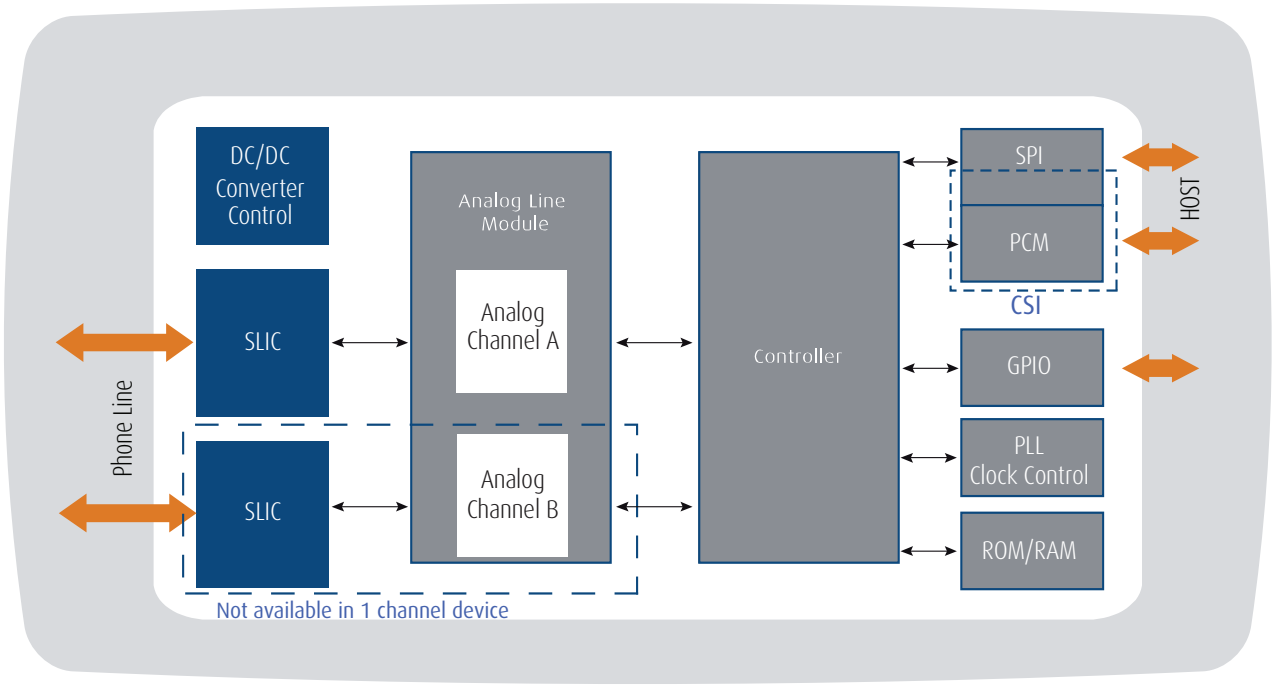
- Analog Terminal Adapters
- Cable eMTA and Set-Top Boxes
- DSL Integrated Access Devices
- PBX and Business Gateways
- VoIP terminals
- xPON Single Family Units and Home Gateway Units

Hardware Features:

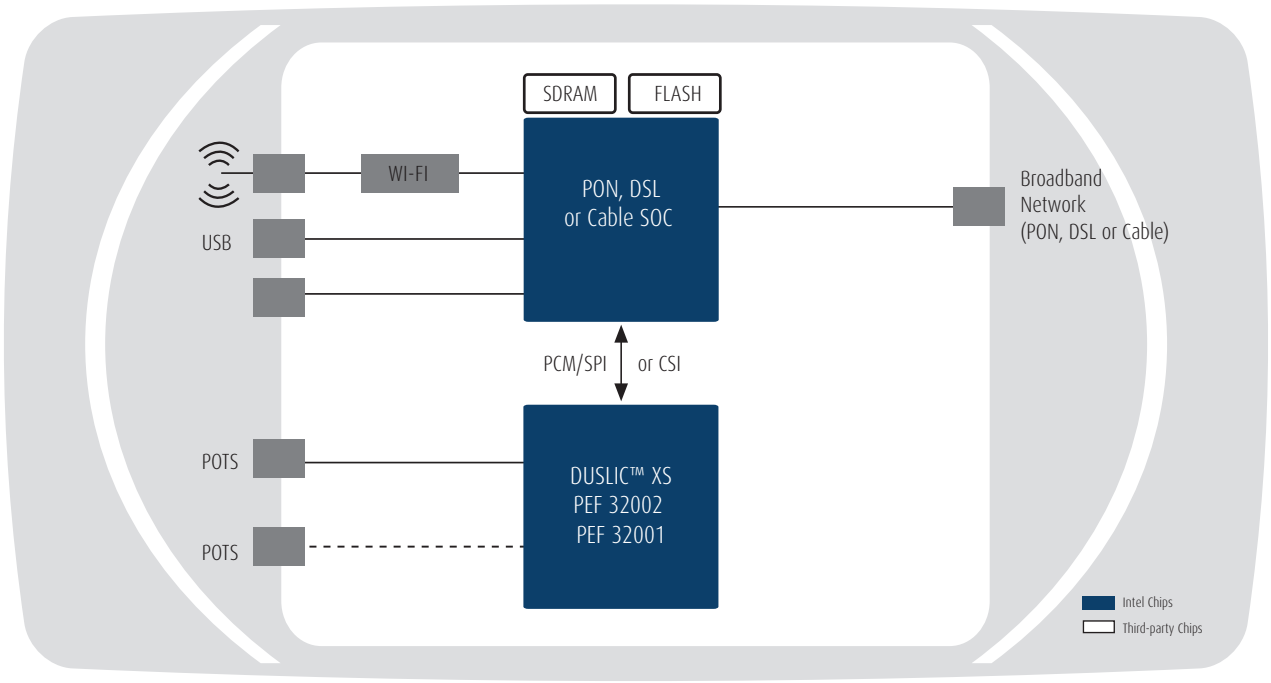
- Balanced (up to 85 Vrms) and unbalanced (up to 50 Vrms) ringing
- Caller ID type 1, 2 transmission support
- DC, AC and fast ring trip detection
- DTMF generator & receiver
- Ground key indication
- Loop Start and Ground Start signaling
- Integrated DC/DC PWM controller
- Integrated test and diagnostic functions
  - GR-909 test sequence
  - capacitance measurements
  - voice quality tests (AC level meter)
- On-hook transmission
- PCM interface G.711 A-law/µ-law or 16-bit linear
- Pulse metering (TTX)
- Serial Peripheral Interface (SPI)
- Combined Serial Inteface (CSI)
- Wideband audio support (16 kHz, 16-bit linear)
- Worldwide programmability for AC transmission performance parameters acc. to ITU-T Q.552 and Telcordia GR-57-CORE

Software Features:

- Linux* driver in source code
- Big and little endian support
- Polling or interrupt driven access
- BSD/GPL License



Block Diagram DUSLIC™ XS



Application Diagram

PRODUCT NAME	PRODUCT TYPE	ORDERING CODE	PACKAGE
DUSLIC™ XS2, 2 channel CODEC/SLIC	PEF 32002 VT V1.2	PEF32002VTV12	PG-VQFN-68
DUSLIC™ XS1, 1 channel CODEC/SLIC (pin-to-pin compatible version)	PEF 32001 VT V1.2	PEF32001VTV12	PG-VQFN-68
DUSLIC™ XS1, 1 channel CODEC/SLIC, single 3.3 V supply voltage	PEF 32001 VS V1.2	PEF32001VSV12	PG-VQFN-44