PEB 35512 (GEMINAX-V)
PEB 55508 (GEMINAX-D)
PEB 3558 (GEMINAX-A)
PEB 4561 (GEMINAX-S)
PEB 22716 (GEMINAX-L2)
PEB 4565 (GEMINAX-SL)

Global Enhanced Multiport Integrated ADSL Transceiver


GEMINAX

**Applications**

- Splitterless multirate ADSL data transmission combined with POTS voice for CO, Access Network, MSAP and DLC

**Features**

- Combined voice and G.dmt/G.lite chipset (IVD) for 8 channels
- No additional POTS splitter required for ATU-C side
- Compliant to ITU-T G.992.1 (G.dmt), G.992.2 (G.lite), and G.994.1 (G.hs)
- Compliant to ANSI T1.413 I2
- Performance measurements according to ITU-T G.996.1 (G.test)
- Compliant to ITU-T Q.552 Z Interface, LSSGR TR57/507 for voice transmission
- ATM UTOPIA-2 interface
- 8-bit parallel host interface
- PCM or IOM-2 interface
- All memory on-chip, no external memory required for GEMINAX
- Future proof due to software upgrade options
- Programmable digital filters for country specific settings like:
  - Impedance matching
  - Transhybrid balancing
  - Frequency response
  - Gain
- Fully programmable DC characteristics
- Programmable teletax injection and filtering
- Polarity reversal (soft/hard) for payphones
- Integrated ringing
  - Programmable ring amplitude (up to 85 Vrms)
  - Automatic DC ring trip detection with programmable threshold
  - Ring generation with zero crossing injection
  - No ring relays required
- External ringing supported
- Programmable thresholds for on-hook, off-hook and ring trip detection
- Integrated DCXO for synchronization of PCM voice and ADSL data subsystems
- Support of software controlled Integrated Test & Diagnostic Functions (ITDF):
  - Integrated line testing
  - Loops for Integrated Board/
  - Circuit Testing
- Dr.DSL(TM) firmware running on GEMINAX-D for ADSL pre-qualification and maintenance
- < 1 W power dissipation per channel (20 dBm line level, on-hook)
- -40°C to +85°C operating range

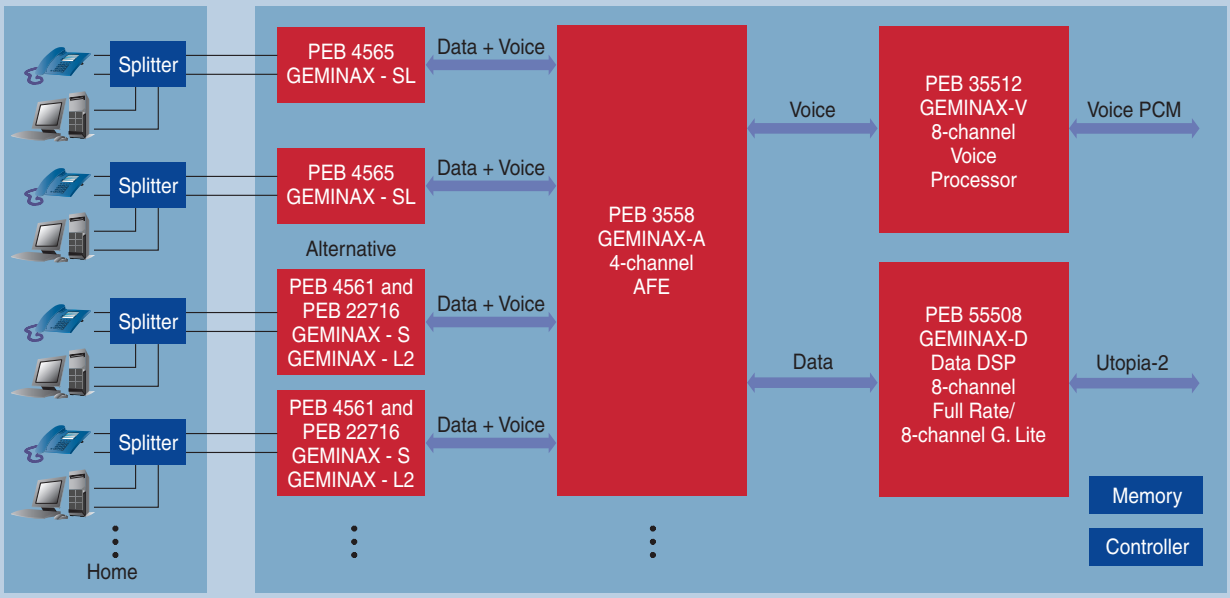
# GEMINAX

## Global Enhanced Multiport Integrated ADSL Transceiver

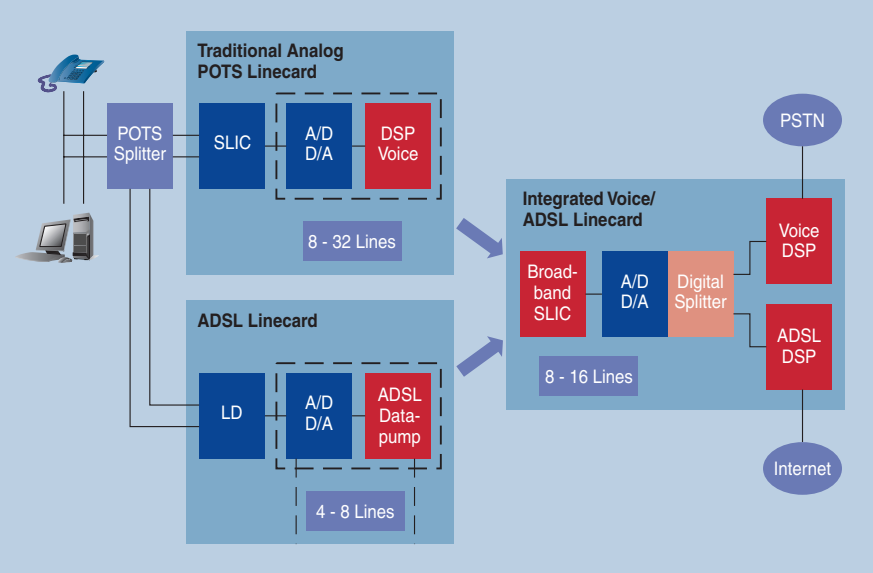
Infineon technologies

Never stop thinking.

## Integrated Voice Data (IVD) Principle




## Splitterless High Integrated Voice & Data Linecard




- Applications for high-density IVD Linecards
- ADSL full-rate or lite operation selectable for each channel
- Support of all analog linecard services and BORSCHT functions
- Only one single linecard without any external POTS splitter required
- POTS and ADSL loop qualification by on-chip firmware, no additional hardware required

**GEMINAX-V**
ADSL Voice DSP, 8 channels, P-MQFP-64 package

**GEMINAX-D**
ADSL Data DSP, 8 channels, P-TQFP-144 or P-LBGA-256 package

**GEMINAX-A**
Analog Front End for ADSL and Voice, 4 channels, P-TQFP-144 or P-LBGA-192 package

**GEMINAX-S**
Broadband SLIC, 1 channel, P-VQFN-64 package

**GEMINAX-L2**
ADSL Dual-Channel Linedriver, 2 channels, P-DSO-36 or P-VQFN-48 package

**GEMINAX-SL**
Broadband SLIC and Linedriver, 1 channel, P-DSO-36 package

How to reach us:
**http://www.infineon.com**

**Published by**
**Infineon Technologies AG,**
**St.-Martin-Strasse 53,**
**81541 München**



**Attention please!**
The information herein is given to describe certain components and shall not be considered as warranted characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Infineon Technologies is an approved CECC manufacturer.

**Information**
For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office in Germany or our Infineon Technologies Representatives worldwide.

**Warnings**
Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, 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.

Published by Infineon Technologies AG

Ordering No. B115-H7821-G1-X-7600
Printed in Germany
PS 1101.5 NB