The LiDrAFE chip is a highly integrated solution that incorporates the Analog Front-End, Line Driver and other peripheral components into a single chip for ADSL CPE applications. It is the result of Infineon's leading edge mixed signal technology combined with advanced CMOS fabrication process.

LiDrAFE offers multiple interface options to allow easy connection to different ADSL datapumps. Its smart architecture and high integration makes it an extremely cost efficient solution requiring minimal external components. It uses high performance multi-bit sigma-delta ADC and DAC and advanced proprietary signal processing techniques to offer very low noise and distortion signal path from the tip/ring to the ADSL datapump

Flexibility, best of class performance and cost effectiveness makes LiDrAFE an ideal front-end solution for the highly competitive ADSL marketplace.

ADSL

Applications

- Internal / external ADSL modems (datapump or host software based)
- Routers / IADs / Smart NTs

Features

- Supports G.992.1 (ITU G.dmt), G.992.2 (G.Lite), DTS 06006 (ETSI ADSL over ISDN) for ADSL CPE applications
- Power dissipation 800mW (Issue 2 mode including Line Driver)
- Flexible power down mode
- Integrated wake up function
- Various test loops supported
- Integrated functions provide analog echocancelling
- Integrated digitally controlled XO for modem timing recovery
- Versatile data interface to ADSL datapump with the following modes
  - 4 bit nibble (to PEB22713/4)
  - 1 bit serial
  - 16 bit parallel
  - 14/12 bit parallel
- 4 pin serial control interface for register access
- 4 general purpose I/O pins
- 3.3 V supply for AFE and interfaces
- Single +12 V supply for Line Driver

Transmit Path

- High resolution multibit Sigma Delta DAC (14 bit)
- Integrated Line Driver capable to drive +13 DBm onto the line using a 1:1.8 transformer
- Very low noise and distortion
- Maximum signal level at Line Driver output: 16 V peak-to-peak differential
- Anti-imaging filter with programmable cutoff frequency (150kHz /300kHz) and on-chip tuning
- Up to 15 dB programmable gain for power cutback

Receive Path

- 2 step Automatic Gain Control (AGC) up to 36 dB dynamic range
- Programmable Analog Channel Equalizer (ACE)
- High resolution multibit Sigma Delta ADC (14 bit)
- Very low noise and distortion

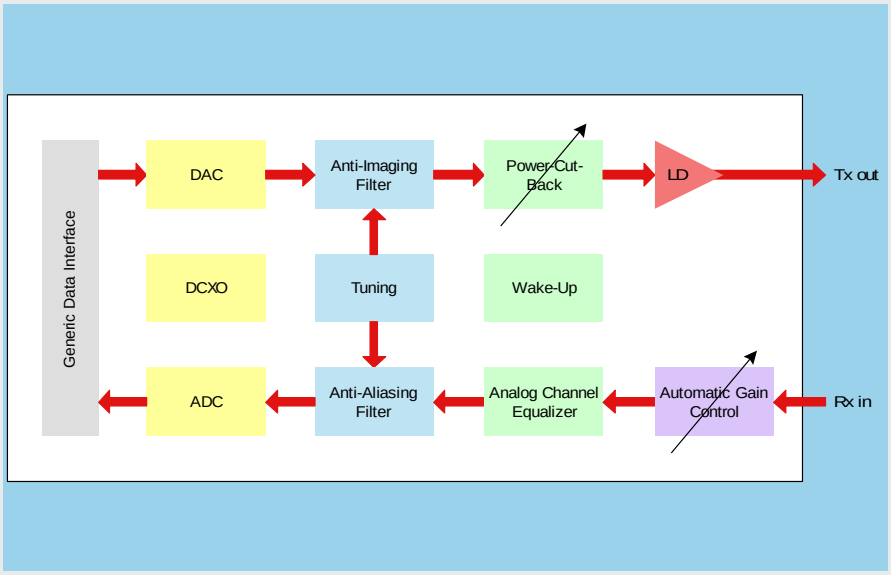
LiDrAFE

Integrated Analog Frontend & Linedriver for ADSL Full Rate & Lite

Infineon technologies

Never stop thinking.

Block Diagram

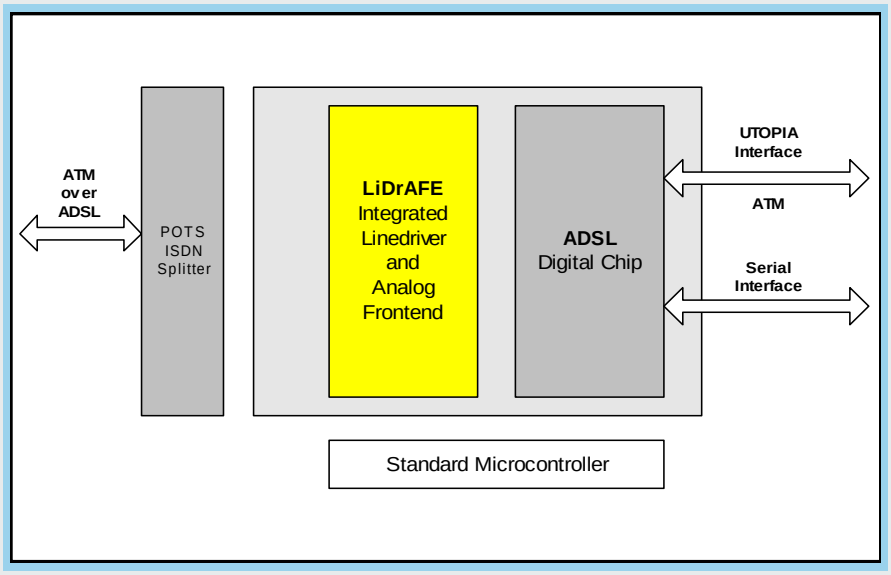


Development and Support Tools

SMART22715 Evaluation Board

Type	Sales Code	Package
LiDrAFE	PEB22715 V1.0	P-MQFP-80-1

Application Example



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