

### General Descriptions

TrendChip's TC3086 is a high-performance CMOS analog front end (AFE) with an integrated line driver for Asymmetrical Digital Subscriber Line Customer Premises Equipment (ADSL CPE) applications. It supports all ADSL standards (ADSL1/2/2+), including Annex A, B, I, J & M. It also supports RE-ADSL2 (Annex L).

The TC3086 features a highly integrated line driver and advanced on chip filters. It also integrates the high-performance analog-to-digital converter (ADC), digital-to-analog converter (DAC), digital control crystal oscillator (DCXO), programmable gain/attenuation amplifiers, filters, and digital interface. A 15/16-bit linear DAC precedes the fully integrated line driver, and low pass filter. The receive path consists of programmable low noise preamplifiers, filters, and a 15/16-bit ADC.

The TC3086 adopts innovative design and provide the CPE manufacturers with a lower-cost and higher performance solution to comply with the DSL Forum TR100 easily.

### Features

- Fully Compliant to all ADSL standards (ADSL1/2/2+), including Annex A, B, I, J & M.
- Support Reach-Extended ADSL2 (Annex L).
- Programmable 15/16-Bit ADC and DAC interface
- Integrated 7V CMOS Line Driver
- Integrated Adaptive Line Termination
- Integrated 12-Bit DCXO
- Tunable TX/RX Out-of-Band Continuous-Time Filters
- 3.3V/7V Analog Power Supplies and a 3.3V Digital Power Supply
- Minimum External Components
- Supporting Co-existence with ISDN
- Support integrated Dying Gasp function
- Support integrated Power on reset function
- 64-Pin QFN Package
- Operation temperature range 0 ~ 70 degree C

### Applications

- External ADSL1/2/2+ Modems
- Soft ADSL1/2/2+ Modems
- ADSL Termination for Network Interface Devices