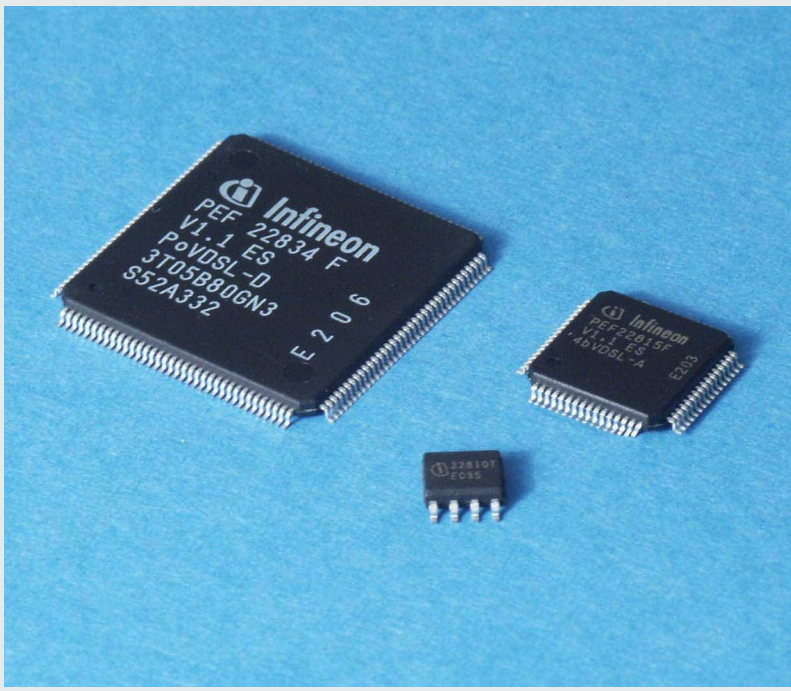
Infineon's standard Packet over VDSL (PoVDSL) provides Ethernet transport over standard QAM VDSL. The chipset provides an xMII interface allowing "plug and play" connectivity for Switch/ Line cards and CPE applications.

VDSL is a robust, fully standardized Very-high bit-rate DSL technology. Infineon's packet based VDSL system solution delivers high-performance symmetric 16 Mbps or asymmetric 26/3 Mbps broadband service at a distance of up to 5000 ft (1500 m) over existing copper wire infrastructure. Higher rates are possible with reduced ranges.

Infineon's PoVDSL chipset implements QAM modulation, as defined in the VDSL standards. Its spectral allocation enables coexistence with voice and ISDN services on the same line, and with other xDSL technologies in the same bundle.

Packet over VDSL provides fully integrated copper access technology with high resolution video, high-speed internet and advanced telephony services over a single twisted pair.



Features

- Ethernet packet transmission over standard VDSL
- FTTC/Cab and broadband extension over copper wire
- Quadrature Amplitude Modulation (QAM)
- Frequency Division Duplexing (FDD)
- 4, 3 or 2 - band operation
- High speed VDSL PHY applications according to ANSI, ETSI and ITU-T specifications
- Transmission of packets over VDSL using standard PTM-TC according to the ITU-T G993.1 VDSL Standard
- Dual latency support with built-in interleaver memory
- IEEE 1149.1 JTAG test access port
- Power Backoff
- Embedded crystal oscillator (DCXO) for timing recovery
- Full backward compatibility with the Infineon First Generation 2-band chipset

Performance

- Versatile and completely flexible band frequency allocation
- Standard data rates up to 16 Mbps for symmetric profiles and 26 Mbps for asymmetric profiles
- Robust operation under poor conditions
- Full spectral compatibility with amateur radio
- Blind timing recovery and equalization algorithms
- RS-FEC coding with up to eight bytes per code word correction
- Near end and far end digital loopback capability

Interfaces

- 10/100BaseT Ethernet interfaces
- MII in both MAC and PHY modes
- Reduced MII for MAC and PHY
- Serial MII
- 2 Mbps Pulse Code Modulation (PCM) interface on the non-interleaved (fast) channel
- External host parallel port
- Serial UART interface to a standard serial terminal
- EEPROM interface (I^2C)

Internal Processor Support

- Modem initialization and monitoring
- Standalone cold start up
- Firmware upgrades
- Remote modem configuration and management

Power

- 1.8 volt core with 3.3 volt I/O
- Power Save modes
- Power Down with fast warm start
- Low power consumption (1.5 W for minimal operation)
- Sleep mode and Wake Up
- Remote Wake Up

Packet Over VDSL

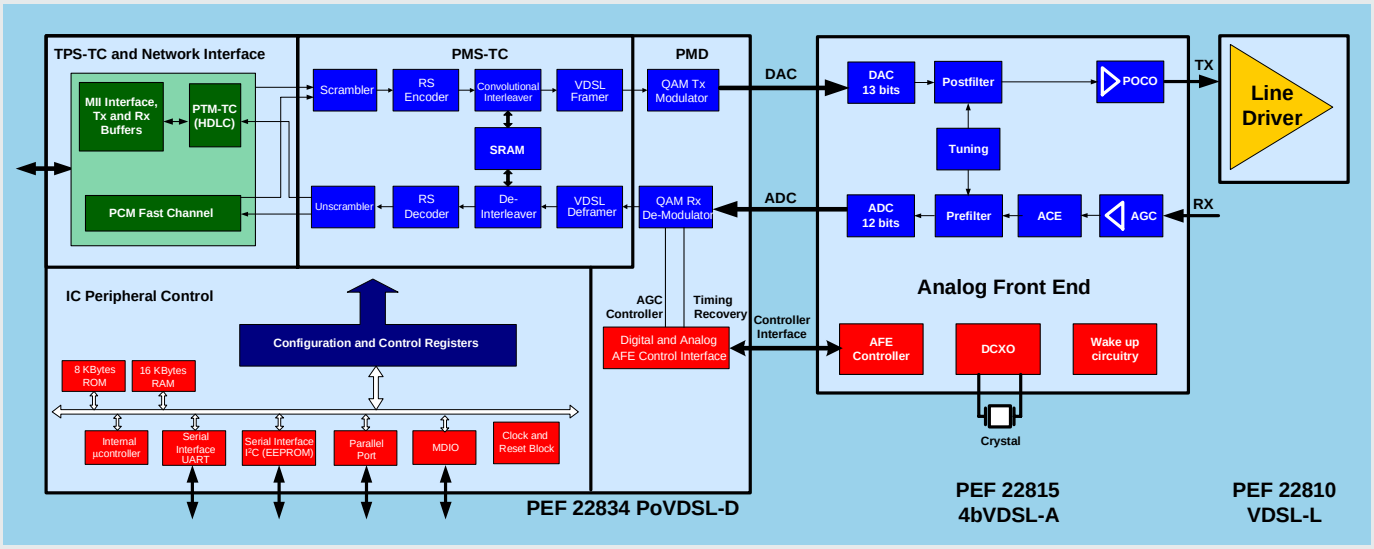
Packet over Standard VDSL Chipset

PEF 22810 (VDSL-L)
PEF 22815 (4bVDSL-A)
PEF 22834 (PoVDSL-D)

Never stop thinking.

Infineon technologies

PoVDSL Chipset Block Diagram



Ordering Information

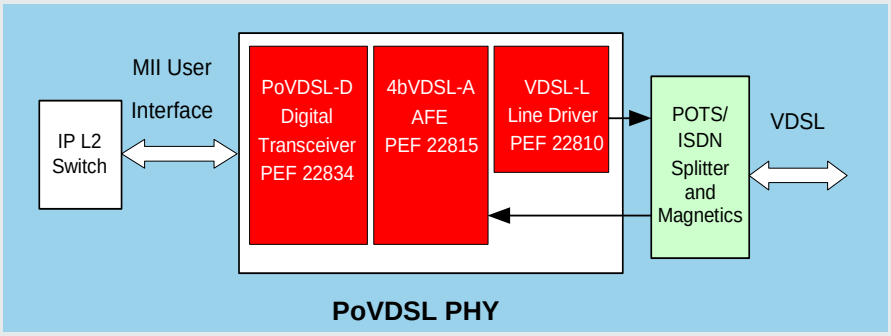
Design Tool:

Product Name	Sales Code	Package	Description
PoVDSL Demo Kit	PoVDSL 22834	Two boards	Packet over VDSL LT and NT evaluation/demo boards

Chipset:

Product Name	Sales Code	Package	Description
VDSL-L	PEF 22810 V2.1	P-DSO-8	VDSL Line Driver chip
4bVDSL-A	PEF 22815 V1.1	P-TQFP-64	4-band VDSL AFE chip
PoVDSL-D	PEF 22834 V1.1	P-TQFP-144	Packet Over VDSL Digital Transceiver

PoVDSL Modem Application Example



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

Published by
Infineon Technologies AG,
Bereich Kommunikation,
St.-Martin-Strasse 53,
D-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.

Ordering No. B000-H0000-X-X-7600
Printed in Germany
PS 02003. NB

Published by Infineon Technologies AG