

Using 0.13 μ technology, Infineon's software-configurable VDSL5100i delivers a series of industry breakthroughs for QAM VDSL DSLAM linecards and CPEs.

The VDSL5100i MoC (Modem-on-Chip) incorporates the digital transceiver, the analog front end, and the line driver, into a single 14mm x 14mm package. Advanced Adaptive Hybrid technology eliminates the need for band plan-specific linecards so a single design can be used in multi-regional DSLAM/Switches.

All together, the VDSL5100i delivers smaller footprints and lower BOMs, significantly reducing overall VDSL system costs.

With Infineon's VDSL5100i, system vendors can shorten their design cycles for a wide variety of Ethernet over VDSL and MDU/MTU networking applications.



VDSL5100i

Applications

- Customer Premises Equipment (CPE)
- DSLAM linecards
- Multiple Dwelling/Tenant Units (MDU / MTU) networking
- Ethernet-over-VDSL for first/last mile access solutions
- Fiber and broadband wireless extensions
- LAN extensions up to 1,200 meters (4,000 ft.)
- Upgrades of HDSL, SDSL and ADSL systems

Features

- Extremely small 14mm x 14mm footprint
- Low power consumption
- Versatile and completely flexible 2, 3, or 4-band operation
- LR-VDSL mode for extended VDSL range
- Adaptive Hybrid technology allows highly compact DSLAM designs

- T1E1.4, ETSI, CTSI and ITU-T compliant high speed VDSL PHY applications
- Supports draft IETF MIBs for VDSL
- Frequency Division Multiplexing (FDM)
- Dual latency support with built-in interleaver memory
- Implements Power Back Off
- Embedded crystal oscillator (DCXO) for timing recovery
- Spectral allocation allows noise-free operation with xDSL, ISDN, TCM-ISDN and digital PBX

Performance

- Asymmetric DS/US data rates of 70/40 Mbit/s and symmetric data rates up to 50 Mbit/s
- LR-VDSL data rates of 4 Mbit/s DS and 0.6 Mbit/s US up to 4 km (13,200 ft.)

Interfaces

- MII/SMII/SS-SMII/RMII compliant with the 802.3 Ethernet specification
- MII serial management interface to access all internal registers
- External parallel host port
- Serial UART interface to a standard serial terminal
- EEPROM interface via IIC
- IEEE 1149.1 JTAG test port

Power Consumption

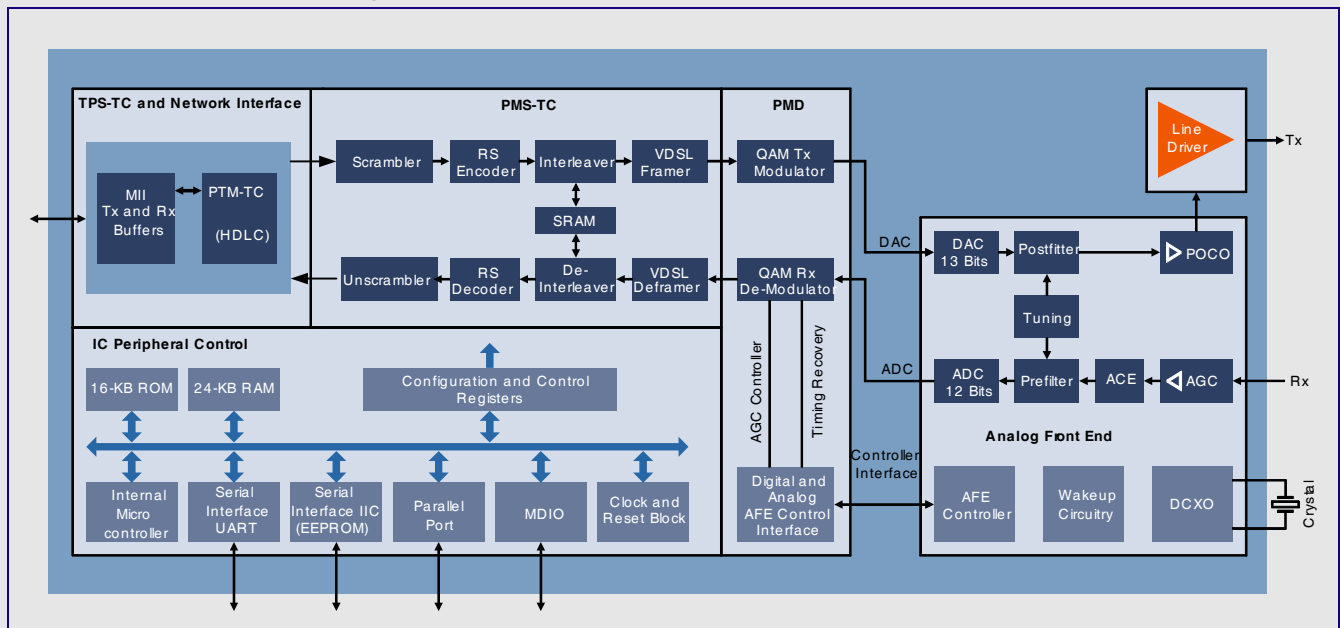
- Typical power consumption is 0.95 W
- Maximum power consumption is 1.1 W

VDSL5100i

Integrated Single-port VDSL Modem-on-Chip
PEF 22817



VDSL5100i Block Diagram



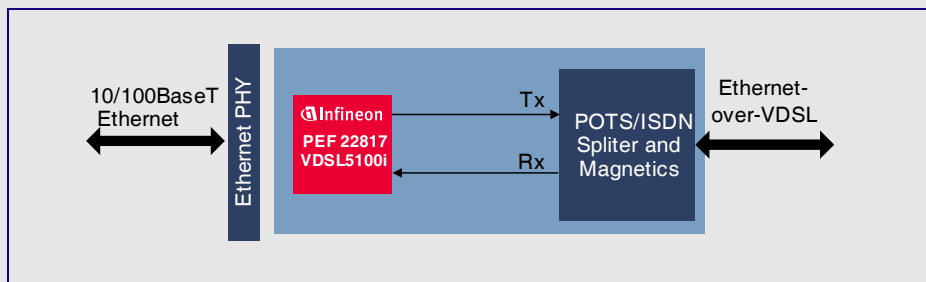
Ordering Information

VDSL5100i IC

Product	Sales Code	Description	Package
VDSL5100i	PEF 22817	Integrated Modem-on-Chip for Ethernet-over-VDSL applications	PG-LFBGA-225-1

VDSL5100i Design Tools

Product Sales Code	Description	Package
VDSL5100i-E	Evaluation/Demo Kit for Ethernet over VDSL or LR-VDSL applications.	VDSL5100i-E CO and CPE, filters, standard VDSL mode kit, complete software package and documentation.
VDSL5100i-E (AH)	Evaluation/Demo Kit for Ethernet over VDSL using Adaptive Hybrid technology.	VDSL5100i-E (AH) CO and VDSL5100i-E CPE, filters, complete software package and documentation.



Ethernet over VDSL CPE Application Example

Note: The VDSL500i appears in actual size.

How to reach us:

<http://www.infineon.com>

Published by
Infineon Technologies AG,
St. Martin-Strasse 53,
D-81669 München

© Infineon Technologies AG 2003. All Rights Reserved.

Template: pb_tmplt.fm/3/2003-07-01

yb_rev4

Attention please!

The information herein is given to describe certain components and shall not be considered as a guarantee of 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.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office.

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.