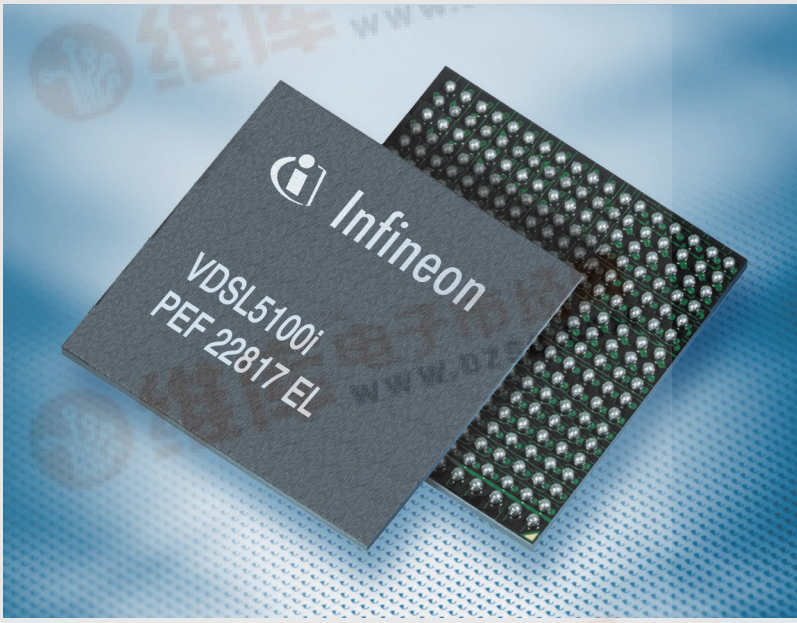
Using 0.13 µ technology, Infineon's software-configurable VDSL5100i delivers a series of industry breakthroughs for QAM VDSL DSLAM linecards and CPEs.

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.



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

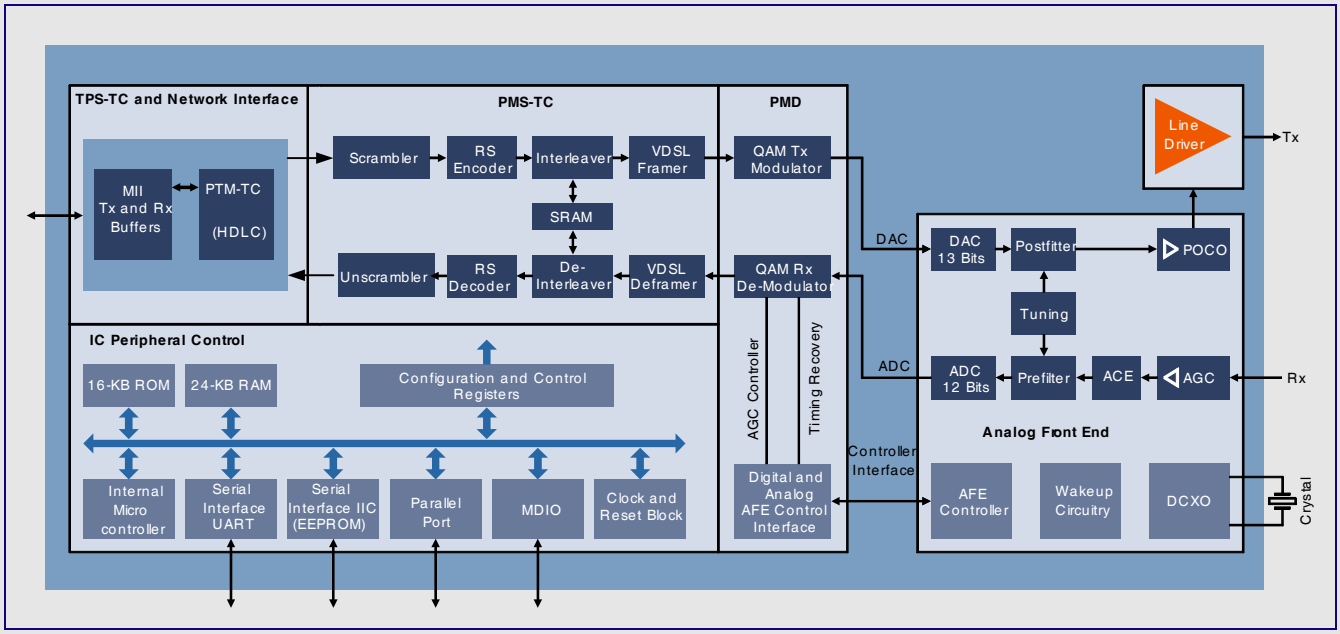
VDSL5100i

Integrated Single-port VDSL Modem-on-Chip

PEF 22817

Infineon technologies

VDSL5100i Block Diagram



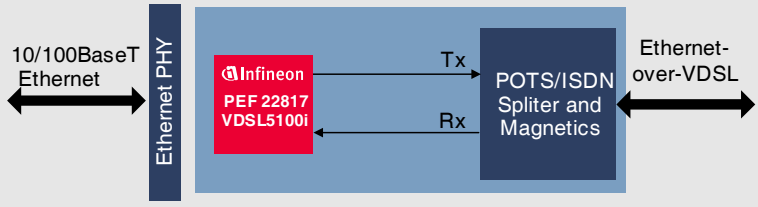
Ordering Information

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.

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