

VDSL6100i

Integrated LR EoVDSL Modem-on-Chip
PEF 22827

Using Infineon's Adaptive Hybrid technology, advanced VDSL Line Driver, and configurable software, the VDSL6100i delivers a series of industry breakthroughs for QAM-VDSL DSLAM linecards. The VDSL6100i boosts Ethernet over VDSL reach to more than 4 km (13,000 ft).

The VDSL6100i Modem-on-Chip (MoC) incorporates the digital transceiver, the analog front end, and the line driver into a single 13 mm x 13 mm 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.

With Infineon's VDSL6100i, system vendors can shorten their design cycles for a wide variety of Ethernet over VDSL and MDU/MTU networking applications.

All together, the VDSL6100i delivers smaller footprints and lower BOMs, significantly reducing overall VDSL system costs.

Applications

- IP-DSLAM linecards
- Multiple Dwelling/Tenant Units (MDU / MTU) networking
- Ethernet-over-VDSL for first/last mile access solutions
- Fiber, broadband wireless and satellite extensions
- LAN extensions up to 4 km (13,000 ft.)

Features

- LR-VDSL mode for extended VDSL range (up to -40 dBm/Hz)
- Versatile and completely flexible 2, 3, or 4-band operation
- Adaptive Hybrid technology for highly compact IP-DSLAM and Ethernet switch designs
- T1E1.4, ETSI, CTSI and ITU-T compliant
- Extremely small 13 mm x 13 mm footprint
- High speed VDSL PHY applications
- Low power consumption
- Supports draft IETF MIBs for VDSL

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Wireline Communications



- Frequency Division Multiplexing (FDM)
- 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

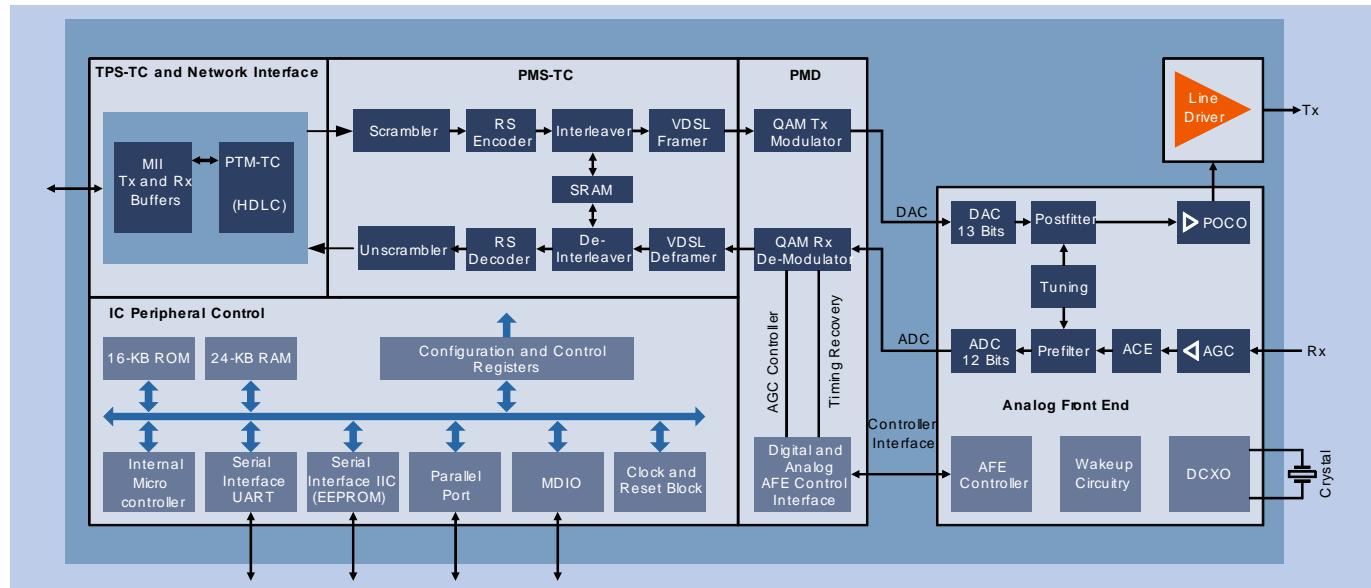
- Asymmetric DS/US data rates of 70/40 Mbit/s and symmetric data rates up to 50 Mbit/s
- LR-VDSL data rates over 4 Mbit/s DS at 4 km with an overall operating range greater than 4 km.

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



VDSL6100i Block Diagram



Product Summary

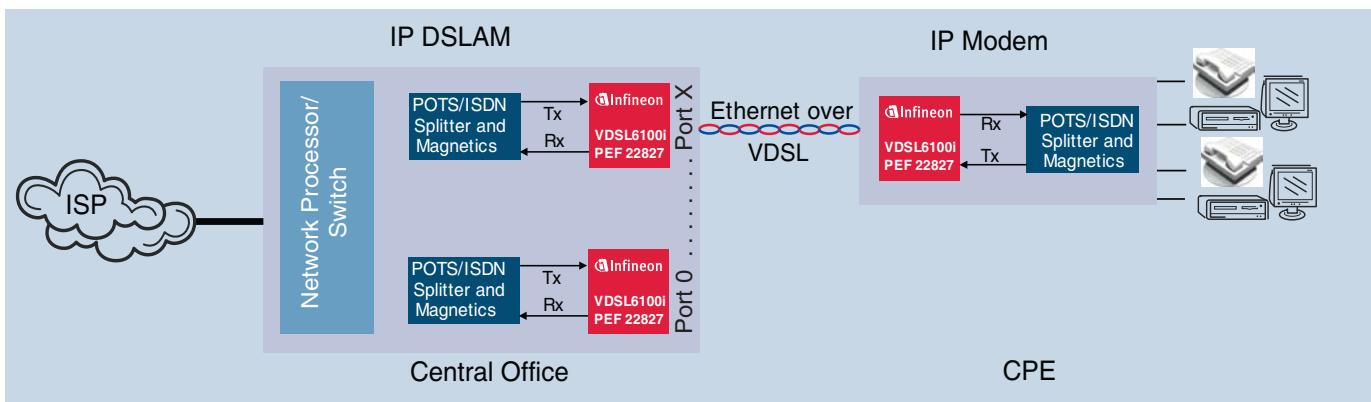
VDSL6100i IC

| Product | Sales Code | Description | Package |
|----------|------------|--|----------------|
| PEF22827 | | VDSL6100i integrated Modem-on-Chip for Ethernet-over-VDSL applications | PG-LFBGA-225-1 |

VDSL6100i Design Tool

| Product Sales Code | Description | Package |
|--------------------|--|--|
| VDSL6100i-E | Evaluation/Demo Kit for Ethernet-over-VDSL and LR-VDSL applications. | EoVDSL kit including CO and CPE side boards, software package and documentation. |

VDSL6100i Application Example for Triple Play System



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