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SOCRATES-16Bis

SDC-16i, PEF 24625 E
SDFE-4, PEF 24624 E

The SOCRATES-16Bis is a member of Infineon's 2nd generation SOCRATES™ family of SHDSL transceivers and is designed for high-density DSLAM and DLC applications.
Featuring full compliance with the ETSI TS 101524 and the ITU G.991.2 (G.SHDSL/G.SHDSL.bis) standards, SOCRATES-16Bis is a comprehensive and flexible five member chip set.
New 16-channel system functionality and cost saving features continue to provide significant low BOM advantages in the SOCRATES tradition.
Combining an unprecedented power consumption of only 550 mW per channel, together with a very small footprint, the SOCRATES-16Bis now makes very high density linecards a reality.
SOCRATES-16Bis extends Infineon's custom-tailored line of telecommunication ICs, and provides a wide range of narrow and broadband access solutions.

Applications

- DSLAMs (IP/ATM)
- DLC
- MSAP
- CO line cards
- Remote DSLAM/DLC uplink
- EFM (Ethernet First Mile) Equipment

General Features

- 16-channel chip set consists of a single SDC-16i (Symmetric DSL Controller) and four SDFE-4s (Symmetric DSL Front End)
- Only external passive components required
- Only 3.3 V and 1.8 V power supplies required
- Supports all symmetric DSL protocols, including advanced SHDSL up to 6 Mbit/s, Packet TC, and M-pair mode (G.SHDSL.bis)
- Supports ATM, Ethernet/Packet, and TDM backplanes
- Various channel bundling technologies for ATM, TDM, Ethernet and Packet-based applications such as IMA
- Programmable channel bundling and transceiver via a single API and micro controller interface

PHY Features

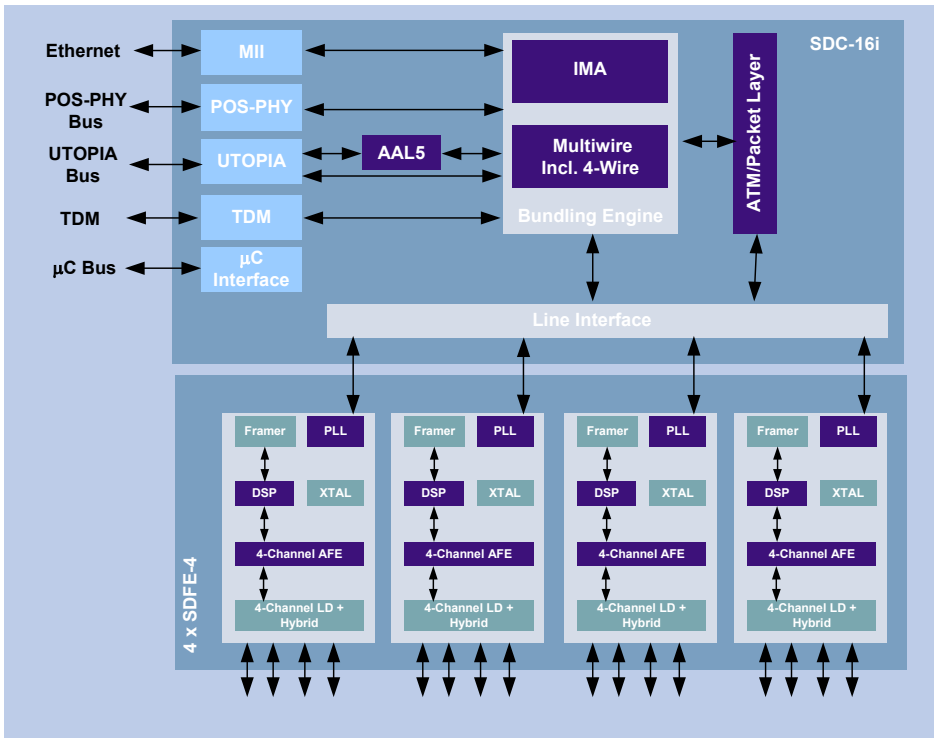
- The SDFE-4 is a fully integrated four-channel SHDSL transceiver
- Completely integrated transceiver includes the DSP, micro controller, AFE, line driver, and memory
- Tunable hybrid for optimal loop adaptation and reach
- Flexible TDM interface

TC Features

- SDC-16i offers various interfaces and bundling technologies
- Provides UTOPIA, POS PHY, MII, and 16 TDM interfaces
- 8 kbit/s payload granularity for unstructured leased line over ATM
- AAL5 block provides UTOPIA/ Packet modem interoperability
- Supports ATM and Packet TC layer
- No external RAM or controller required for channel bundling

Power Consumption

- Power Consumption is 550 mW per channel at full speed, including IMA



SOCRATES-16Bis PHY Block Diagram

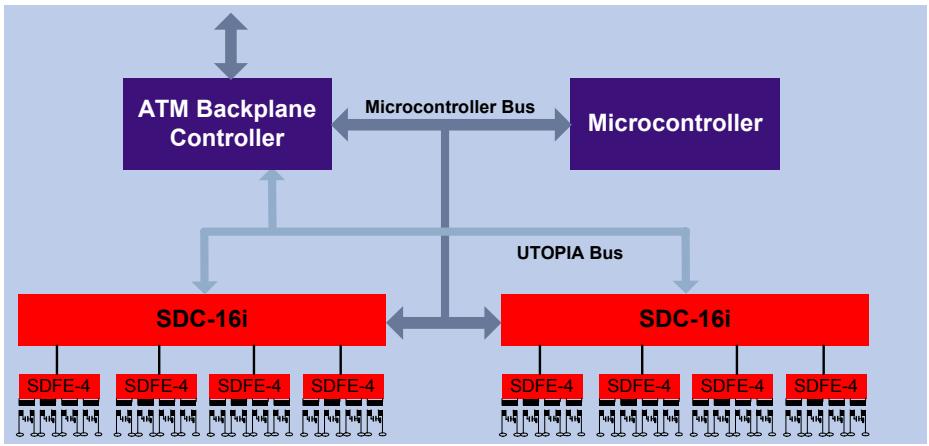
Ordering Information

SOCRATES-16Bis Chip Set

Product Sales Code	Product	Description	Package
PEF 24625 E	SDC-16i,	16-Channel Symmetric DSL Controller	P-BGA-484
PEF 24624 E	SDFE-4	4-Channel Symmetric DSL Front End	P-LBGA-324

SOCRATES-16Bis Design Tool

Product Sales Code	Description	Package
EASY 24624	EASY Evaluation System for the SOCRATES-16Bis	EASY 24624 board and software



SOCRATES-16Bis Application Example

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Information
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