

# SOCRATES-16Bis

SDC-16i, PEF 24625 E

SDFE-4, PEF 24624 E



The SOCRATES-16Bis is a member of Infineon's 2<sup>nd</sup> 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

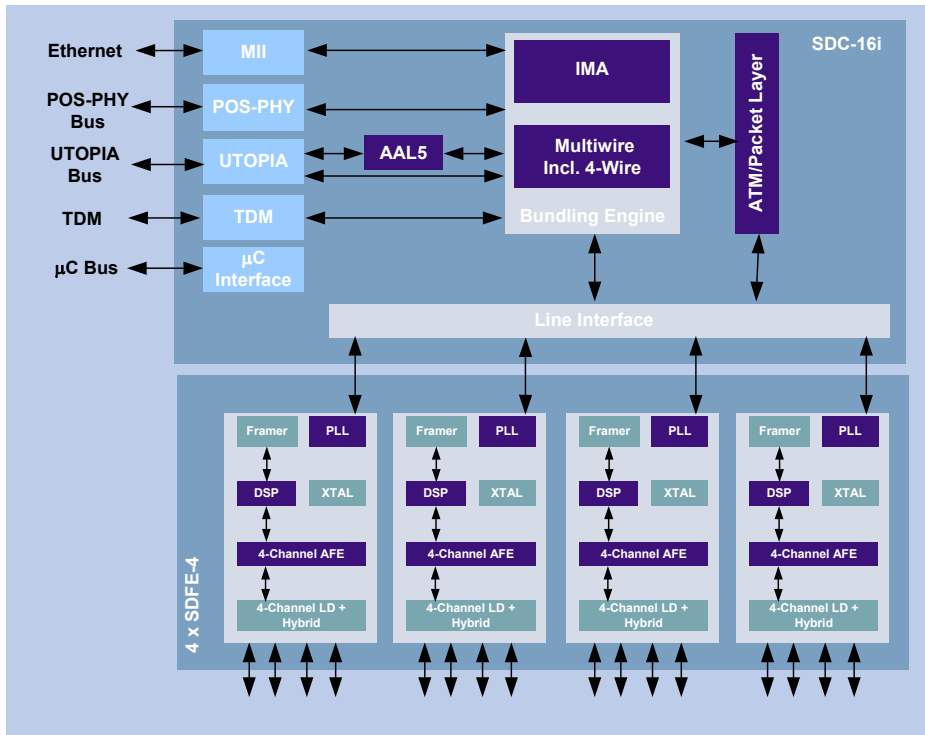
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# Wireline Communications



Never stop thinking.

## SOCRATES-16Bis PHY Block Diagram



## Ordering Information

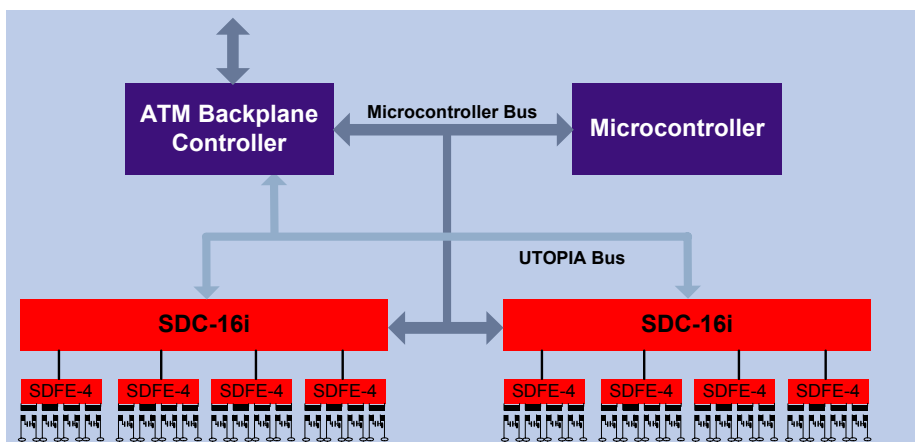
### SOCRATES-16Bis Chip Set

| 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

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.

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