

SHDSL One Chip Rate Adaptive Transceiver with Embedded Start-up and Utopia

The SOCRATES™-U chip integrates all analog and digital functions of an SHDSL transceiver channel on one chip including a Utopia interface. It is fully compliant to all requirements of the ETSI TS 101524 and ITU G.991.2 (G.shdsl) standards. Unique features like the integrated hybrid and oscillator give a significant advantage in the bill of material. The additional TDM interface enables CVoDSL service. The unmatched power consumption of less than 800 mW supports remote feeding applications. The built-in microcontroller unloads the host and makes the Software design as easy as possible. SOCRATES™-U is member of a family of SHDSL transceivers with tailor-made products for different applications. Infineon also supplies a wide range of other telecom ICs to offer complete end to end system solutions.



SHDSL

Potential Applications

- Integrated Access Devices
- ATM modems
- ATM trunk lines
- DSL Access Multiplexers
- IMA (Inversed Multiplexing for ATM)

Development and Support Tools

- SMART 2000 Evaluation package
- IAD reference design
- Reference Layout
- API software

Features

- Single chip SHDSL transceiver
- Compliant with ITU G.991.2 and ETSI TS 101524 standards
- 18x18 mm P-BGA-256 package
- Power consumption <800 mW at full speed and power
- TCPAM linecode with 2, 3 or 4 Bits/symbol
- Synchronous or plesiochronous operation
- Integrated μ -Controller
- Built-in SHDSL Framer
- Tunable internal hybrid for best real life performance
- Internal oscillator and PLL
- Two HDLC controllers for payload and EOC per channel

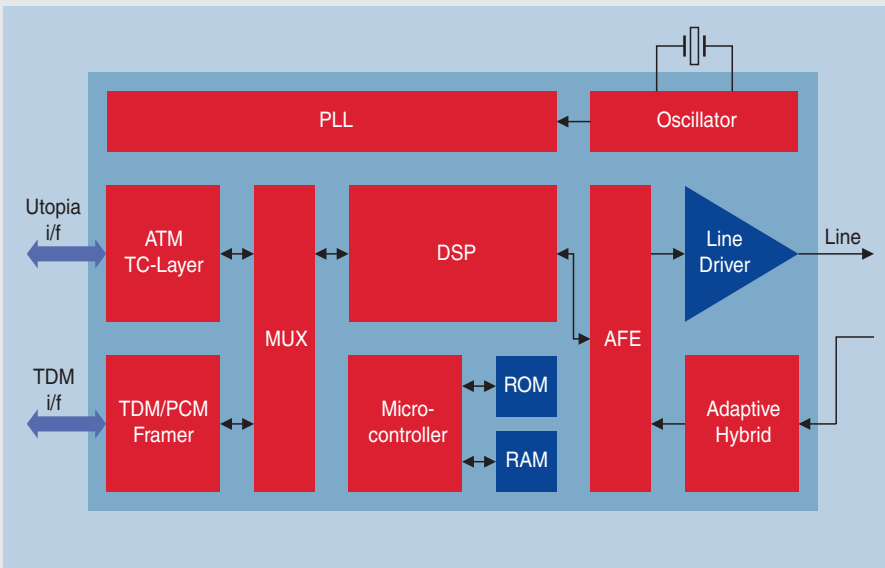
- Lowest number of passive components
- G. handshake start-up with line probing
- Central office (COT) and remote (RT) operation
- Universal 8-Bit μ C interface
- Universal TDM interface
- Utopia level1/2 interface
- Supports dual bearer mode
- 2B1Q mode for SDSL interoperability
- Single 1.8 V, 3.3 V and +5 V power supply
- Inputs and Outputs TTL level
- JTAG boundary scan
- Software compatible to SOCRATES™ and SOCRATES™-4

S O C R A T E S TM - U



Never stop thinking.

SOCRATES-U
Block Diagram



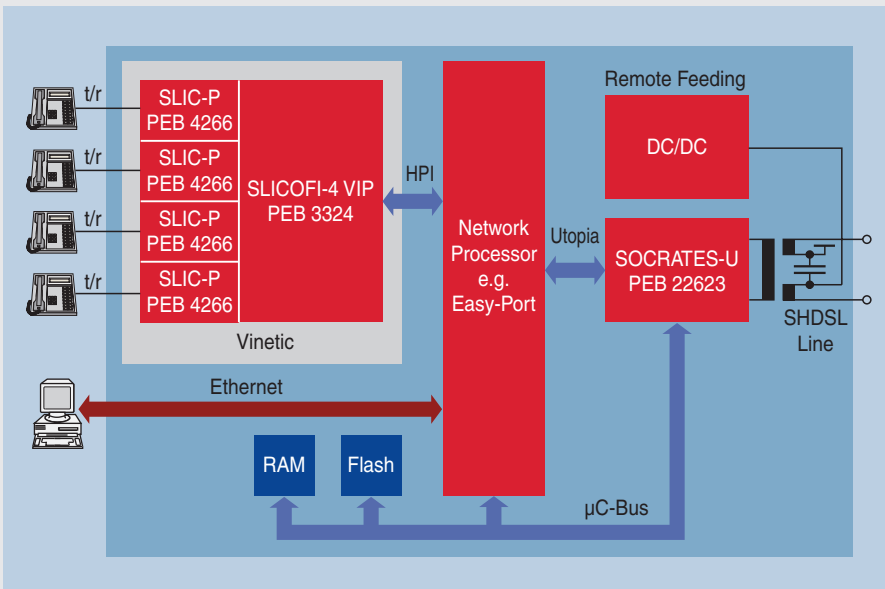
Documentation

Type	Date of Issue/Version
PEB 22623 V1.1 Product Overview	04.01
PEB 22623 V1.1 Preliminary Data Sheet	06.01

Packing

Type	Ordering Code	Package	Availability
PEB 22623 E V1.1	Q67233-H1307	P-BGA-256	ES 07.01
SMART 22623 EVM	Q67230-H1316		07.01

Application Example IAD



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