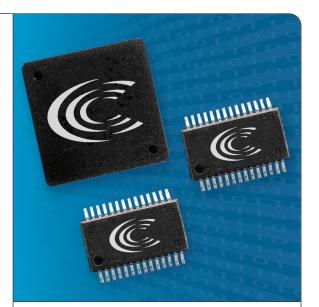**CONEXANT**

Orion™

Dual Channel SHDSL Chipset for CPE

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for broadband communications, enterprise networks and the digital home. The Orion™ chipset offers unsurpassed functionality and density for symmetric high bit rate digital subscriber loop (SHDSL)*. Conexant's Orion chipset provides full G.991.2 (G.shdsl) compliance for both single and dual copper pair systems. In addition to powering SHDSL products, Orion designs will benefit from full connectivity to legacy single-pair digital subscriber line (SDSL) equipment. The Orion chipset delivers industry-leading performance and interoperability as a result of the underlying architecture and transceiver firmware.

DSL equipment suppliers will benefit from the packaging of Conexant's new high-density Orion chipset, which offers SHDSL functionality in a package that significantly reduces board area and thus lowers system costs for the central office (CO) environment. Leveraging Conexant's experience in fully programmable digital signal processors (DSPs) and high performance analog front ends (AFEs), designs benefit from Conexant's commitment to ongoing product improvements and functional integration through software changes only.

SHDSL offers superior performance to legacy integrated services digital network (ISDN) and SDSL systems though advanced trellis-coding and spectral efficiency. The benefit of SHDSL's trellis coding is improved overall reach as well as substantially improved performance in the presence of noise. Higher performance translates into more customers reached, resulting in greater revenue potential for service providers. As well as improved performance, SHDSL eliminates the spectral compatibility issues associated with 2B1Q SDSL. SHDSL has been engineered to peacefully coexist with asymmetric digital subscriber line (ADSL) and HDSL2 in the public network binders.

Distinguishing Features

- G.991.2 (G.shdsl) compliance for both single and dual copper pair systems
- Full connectivity to legacy SDSL equipment
- Support for rates up to 4.6 Mbps
- CO and CPE selectable

Part Number	Orion
Description	Dual Channel SHDSL Chipset

*GlobespanVirata legacy product

Conexant's SHDSL Orion chipset provides value added features well beyond the scope of existing DSL market segments, enabling system vendors to enter new markets and significantly differentiate their offerings. Examples of such features include integrated services digital network digital subscriber line (IDSL) support, provision for rates up to 4.6 Mbps for multiple tenant unit/multiply dwelling Unit (MTU/MDU) applications, and SHDSL 4 wire support on the same hardware platform. To accelerate original equipment manufacturer (OEM) time-to-market, Conexant provides fully documented, turnkey transceiver reference designs, development systems, and technical support.

Conexant has a broad portfolio of semiconductor products, including:

- DSL, dial-up, and cable modem solutions
- Home network processors
- Broadcast video encoders and decoders
- Digital set-top box components and system solutions

Conexant also offers wireless data and networking solutions that includes HomePlug, HomePNA, and WLAN (802.11) components and reference designs.

Orion Features and Benefits

- High-density transceiver consisting of a 160-pin plastic ball grid array (PBGA) DSP/Framer and 28-pin thin shrink small outline package (TSSOP) analog front end/line driver (AFE/LD)
- 1.8 cm2 per port density for chipset
- Optimal performance vs. power design
- Compliant with G.991.2
- Extended embedded operations channel (EOC) management
- CO or CPE selectable
- Time-division multiplexing (TDM) and UTOPIA interfaces supported
- Pulse amplitude modulation (PAM), quadrature amplitude modulation (QAM), and 2 binary to 1 quaternary (2B1Q) modulation supported
- Joint test action group (JTAG)
- Supports rates up to 2.3 Mbps

Applications

- High density access multiplexers
- T1/E1 line cards and repeaters
- Router and bridge CPE
- DAML systems
- Leased line services
- Cellular base station

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