

# Orion™ GS2237

## Dual Channel SHDSL Chipset for Central Office and Customer Premises Equipment



### Target Markets

- Enterprise Access
- Transmission Infrastructure

### Applications

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

### 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 5.7 Mbps
- CO and CPE selectable

### Development Tools/Software

- Turnkey transceiver reference designs, development systems, and technical support

The Orion™ GS2237 chipset offers superior functionality and density for symmetric high bit rate digital subscriber loop (SHDSL). Ikanos' 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 GS2237 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 Ikanos' 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 Ikanos' experience in fully programmable digital signal processors (DSPs) and high performance analog front ends (AFEs), designs benefit from Ikanos' 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 through 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.

Ikanos' 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 provision for rates up to 5.7 Mbps for enterprise router applications and SHDSL 4 wire support on the same hardware platform. To accelerate original equipment manufacturer (OEM) time-to-market, Ikanos provides fully documented, turnkey transceiver reference designs, development systems, and technical support.

## Key Features

- 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 cm<sup>2</sup> 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 5.7 Mbps

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