

CX98124-11Z

Orion™ Plus Four-Channel Single-Pair High-Speed Digital Subscriber Line (SHDSL)

Target Markets

- Small and Medium Enterprises (SME)
- Network Infrastructure

Applications

- Remote Network Access
- Voice/Data Pair Gain Systems
- Video Conferences
- Cellular and Microcellular systems, Including Wireless Base-Stations
- T1/E1 and fractional T1/E1 DSL Transceiver

Standards Compliance

- ETSI TS 101 524 (SDSL ETSI)
- ITU-T G991.2, including Annex A, B, F, G (G.SHDSL)
- ITU-T G.994.1 (G.hs)
- IEEE 802.3ah-2004 (IEEE EFM)
- ANSI T1E1.4/2003-334R6 (ATM bonding)
- ITU G.998.1 (ATM bonding)
- ITU G.998.2 (EFM bonding)

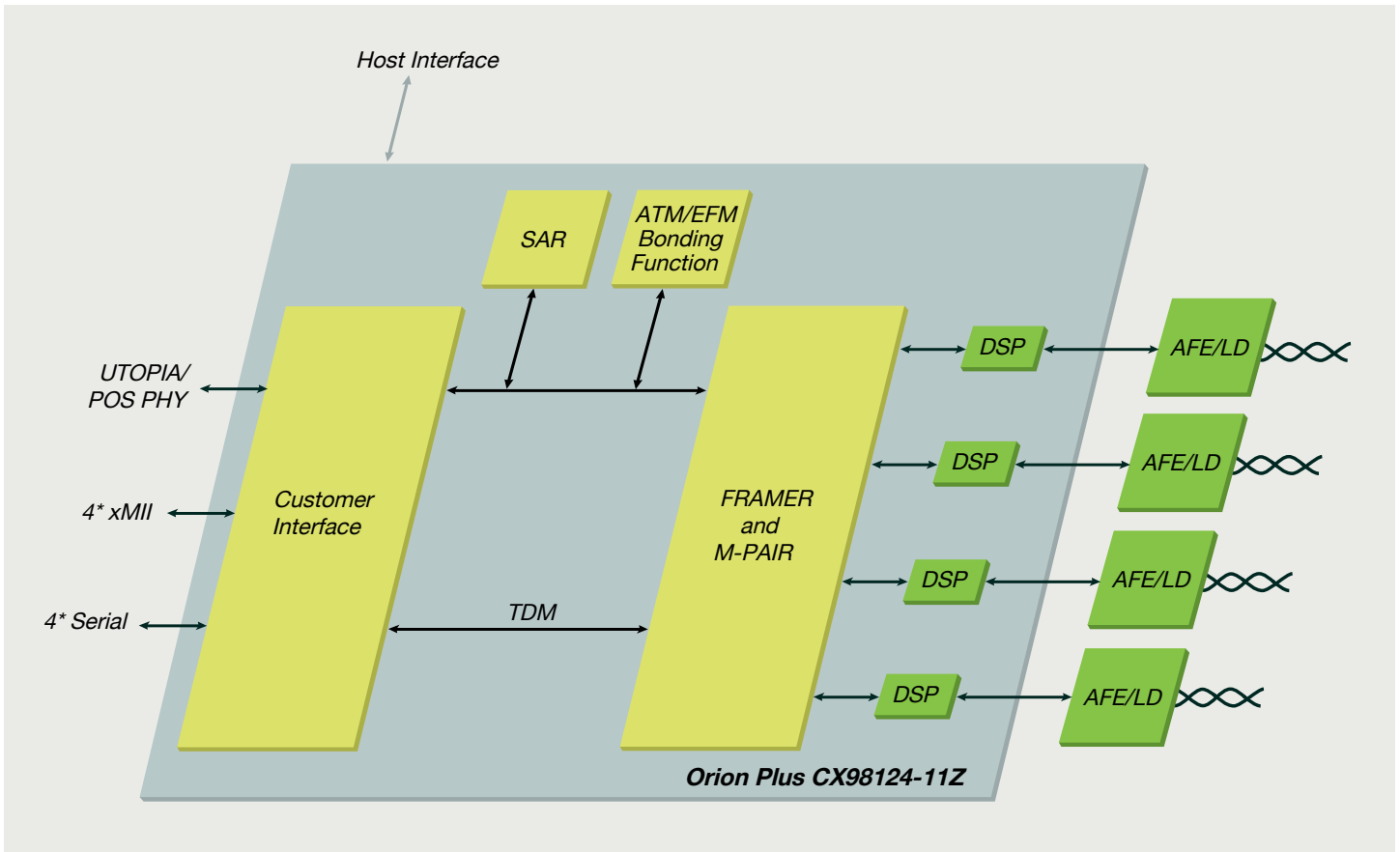


The Ikanos Orion Plus Four-Channel Single-Pair High-Speed Digital Subscriber Line (SHDSL) chipset provides low-power, high-density SHDSL solutions for Central Office (CO) and Customer Premise Equipment (CPE). This chipset is fully programmable and field-upgradeable, eliminating the risk of product obsolescence and accelerating the time-to-market for new network services such as Ethernet First Mile (EFM).

The Ikanos Orion Plus Four-Channel SHDSL chipset is comprised of a four-channel Digital Signal Processor (DSP) with built-in framer and four (4) Analog Front End chips, each with an Integrated Line Driver. The Orion Plus SHDSL chipset is fully interoperable with multi-vendor SHDSL chipset solutions that conform to ITU, ETSI, and IEEE DSL and EFM standards.

The Orion Plus Four-Channel SHDSL chipset supports multi-pair bonding that delivers up to 22.8 Mbps aggregate symmetric data rates utilizing various methods, including ITU M-Pair and IEEE EFM bonding. The chipset also supports a variety of customer interfaces, including xMII, POSPHY, UL2, and Serial.

Orion Plus Block Diagram



Product Features

- Four-channel DSP with framer that fully integrates 4 separate DSP transceivers into a single device
- Four AFEs, each with an integrated differential line driver
- 16-TCPAM and 32-TCPAM line codes
- Supports quad-channel symmetric line rates of 200 kbps to 5704 kbps
- Supports IEEE 802.3ah EFM, including EFM bonding for up to 4 channels
- Supports ITU M-pair bonding for up to 4 channels
- Supports ATM, EFM, PTM, and Serial Framing
- Supports comprehensive diagnostic capabilities, including Analog, Digital, Framer and Remote Loopbacks and Bit Error Rate (BER) Test
- Offers physical layer interoperability with competitive solutions
- Glueless interface to popular microprocessors
- Transmission compliant with ITU-T G991.2 and ETSI TS 101 524
- Reference design compatible with Bellcore GR-1089, IEC 60950, UL 1950, ITU-T K.20 and K.21
- Built-in Segmentation and Reassembly (SAR) Functionality
- Built-in framer provides easy access to EOC indicator bits and ATM/EFM OAM
- Up to 4 Serial Interfaces that directly interface with off-the-shelf T1/E1 transceivers
- UTOPIA interface
- Up to 4 xMII interfaces
- POS-PHY Interface
- Simultaneous support of multiple customer interfaces, e.g. simultaneous xMII and Serial for EFM dual-bearer applications
- A single oscillator and hybrid topology supports all speeds
- +1.5 V, +3.3 V, and +5 V power supplies
- The 324 PBGA package offers pin-compatible DSP chipsets for 4-Channel, 2-Channel, and Single-Channel applications
- The 160 PBGA package offers pin-compatible DSP chipsets for legacy Orion designs

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For more information, contact Ikanos.

Ikanos Communications, Inc.
47669 Fremont Boulevard
Fremont, California 94538

www.ikanos.com

P +1 510.979.0400

F +1 510.979.0500

E sales@ikanos.com

