

communications

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Exar Delivers Industry's Highest Density SONET SDH 40G Framer

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XRT86SH221

SDH-to-PDH Framer/Mapper with Integrated 21-Channel E1 Short-Haul

Features

- Voyager-Lite performs mapping of 21 asynchronous E1 spans to either VC-12/TU-12/TUG-2/ VC-3/AU-3/STM-0 or VC-12/TU-12/TUG-2/TUG-3/STM-1
- Provides mapping of up to 21 E1 streams as bit retimed VT2 into an STS-1 SPE or TU-12 tributary unit into an STM-1/VC-3 or TUG-3 from STM-1/VC-4
- Supports Unframed E1 signals
- Support 21x21 VC cross-connect
- Complies with the Category I Intrinsic Jitter Requirements for E1 signals being de-mapped from SONET, per Telcordia GR-253-CORE
- Complies with the "Mapping Jitter Generation Specification" for E1 signals being de-mapped from SDH, per ITU-T G.783
- Integrated 21 E1 Short-Haul Line Interface Units
- IEEE 1149.1 Standard Boundary Scan
- Low Power: 1.8V Power Supply for Core Logic; 3.3V Power Supply for I/O (5V Tolerant)
- General Purpose Microprocessor Interface
- Pb-Free, RoHS Compliant Versions Offered

Applications

- Channelized and Unchannelized DS1 Applications
- T1/E1 Terminals
- SONET/SDH ADM

Description

The XRT86SH221 (Voyager-Lite) is a physical layer SDH to PDH mapper/demapper which enables E1 aggregation to STM-1 via standard VC-12 to AU-3 and TUG-3/AU-4 mapping protocols. Voyager-Lite supports all the framing, mapping and grooming functions required for STM-1 mapper applications. The device generates and terminates all SDH Regenerator Section, Multiplexer Section and Path Overhead including the low-order Virtual Container (VC) Path Overhead. E1 framing is transparent; therefore, the device neither generates nor terminates the E1 frame.

A single Voyager-Lite performs mapping of 21 asynchronous E1 spans to either VC-12/TU-12/TUG-2/ VC-3/AU-3/STM-0 or VC-12/TU-12/TUG-2/TUG-3/STM-1. Mapping to STM-1 requires (3) Voyager-Lite devices with one acting as "master" framer and two acting as "slave" framers. In this configuration, Voyager-Lite performs all the necessary framing, pointer processing and mapping functions required for mapping of 63xE1 spans to either VC-12/TU-12/TUG-2/VC-3/AU-3/STM-1 or VC-12/TU-12/TUG-2/TUG-3/VC-4/AU-4/STM-1.

Part Number	RoHS	Pkg Code	Min Temp. (°C)	Max Temp. (°C)	Status	Buy Now	Order Samples
XRT86SH221IB-F		PBGA388	-40	85	Active		
XRT86SH221IB		PBGA388	-40	85	Active		

Part Status Legend

- Active** - the part is released for sale, standard product.
- EOL (End of Life)** - the part is no longer being manufactured, there may or may not be inventory still in stock.
- CF (Contact Factory)** - the part is still active but customers should check with the factory for availability. Longer lead-times may apply.
- PRE (Pre-introduction)** - the part has not been introduced or the part number is an early version available for sample only.
- OBS (Obsolete)** - the part is no longer being manufactured and may not be ordered.
- NRND (Not Recommended for New Designs)** - the part is not recommended for new designs.

► Specifications

Line Interface	E1 1xSTM-0/STM-1
Protocols	SDH
Bus I/F	19.44/6.98MHz Telecom
SystemBus I/F	n/a
Pwr Sup	3.3V/1.8V
Pkgs	PBGA-388

► Documents



Block Diagram

• Datasheets

- Datasheet
- Version 1.0.0
- August 2008
- 2.16 MB

• Application Notes

- TAN-056, High Impedance Drivers During Power Failure Using XRT83SL3X/L3X LIU

Version 1.0.0

November 2003

75.06 KB
- TAN-067, R3 Technology For T/E Carrier Redundancy Applications

Version 1.0.0

April 2004

203.42 KB
- TAN-058, DS-1/E1 GR-1089 Surge Protection

Version 1.0.1

September 2006

69.43 KB
- TAN-057, DS1/E1 Layout Recommendations

Version 1.0.0

June 2006

29.97 KB
- TAN-059, DS-1/E1 Line Recovered Clock PLL Timing

Version 1.0.0

July 2006

23.37 KB
- TAN-200, Exar APIs - OS Portability

Version 1.0.0

August 2007

88.46 KB

• Manuals

- Evaluation User Manual
- Version 1.0.0
- November 2006
- 1.01 MB

• Schematics

- Schematic
- Version 2.0.0
- April 2007
- 170.34 KB

• Reference Design

- Orion
- Version 1.0.0
- September 2007
- 0.00 KB

• Product Flyer

- Product Flyer
- Version 1.0.0
- December 2006
- 230.77 KB