Lantiq™ SEROCCO - H / M / D

3.3 V, 2 Channel, Serial Optimized Communications Controller, with µP Interface

Microprocessor Interface

- Selectable 8 or 16 Bit data width
- Multiplexed or non-multiplexed operation
- Maximum 33 MHz bus timing with no wait-states

General

- JTAG boundary scan test interface
- CMOS Technology
- 3.3 V power supply with 5 V tolerant I/O
- P-TQFP-100, P-TQFP-144 packages
- Temperature range of -40 °C to +85 °C

Support Package

- Data Sheet
- Application Notes
- Evaluation Systems EASY20525/32/42

Building on Lantiq's expertise, the SEROCCO satisfies a system designer's need for a multiprotocol serial communications controller that operates at 3.3 V.
Additionally, the SEROCCO provides a throughput of up to 16 Mbit/s full duplex on each port and deep (64 byte) TX and RX FIFO's. The µP interface can be operated as either 8 or 16 Bit with a maximum of 33 MHz bus speed and can be configured to be compatible with both Intel® or Motorola® style processors.

The design of the SEROCCO is based upon the industry standard ESCC2 (SAB 82532) and DSCC4 (PEB 20534) and supports HDLC, BISYNC, ASYNC and PPP protocols. A DMA controller handshake interface is provided. SEROCCO is available in three versions optimized for your application.

Applications

- Serial Link Control
- Intersystem or Backplane Communication
- LAN/WAN Internetworking
- Maintenance Ports on WAN Switches/Routers
- Mobile Base Stations
- Workstations, Server, Modems

Features

- Two independent serial multiprotocol communication controllers in three versions (-H, -M, -D)
- Each channel supports HDLC, BISYNC, ASYNC and PPP protocols
- Serial Interface
  - Full duplex data rates on each channel up to 16 Mbit/s
  - Enhanced time-slot assignment (8 Mbit/s PCM link)
  - Octet-, bit- synchronous and asynchronous PPP interface modes
  - Asymmetric data rates for RX and TX direction
  - Clock gating and gapping
  - Modem control signals (/CTS, /RTS, ...)
  - Internal DPLL and baud rate generator per channel
  - Internal oscillator
- A large set of layer-2 protocol functions (LAPD Automode, SS7) reduces bus and host CPU load
- Two channel specific timers support protocol functions 64 byte TX and RX FIFO for each channel
- Integrated 4-channel DMA controller (SEROCCO-D version only)

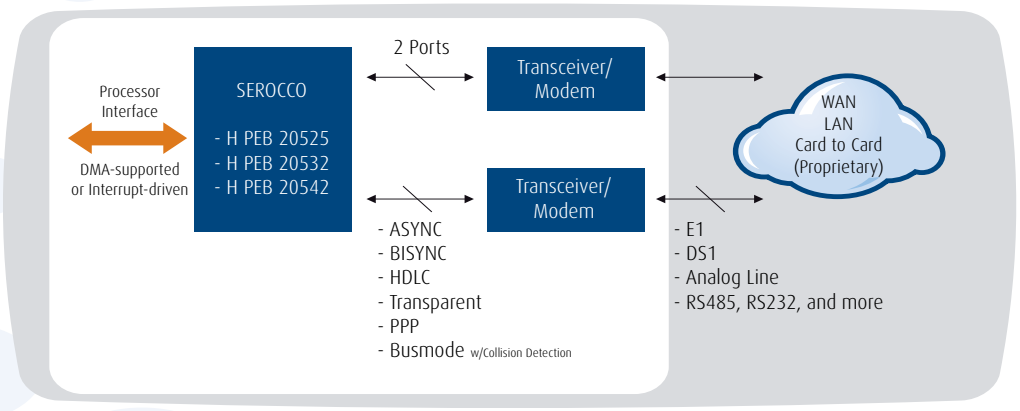
LANTIQ™ SEROCCO - H / M / D

3.3 V, 2 Channel, Serial Optimized Communications Controller, with µP Interface

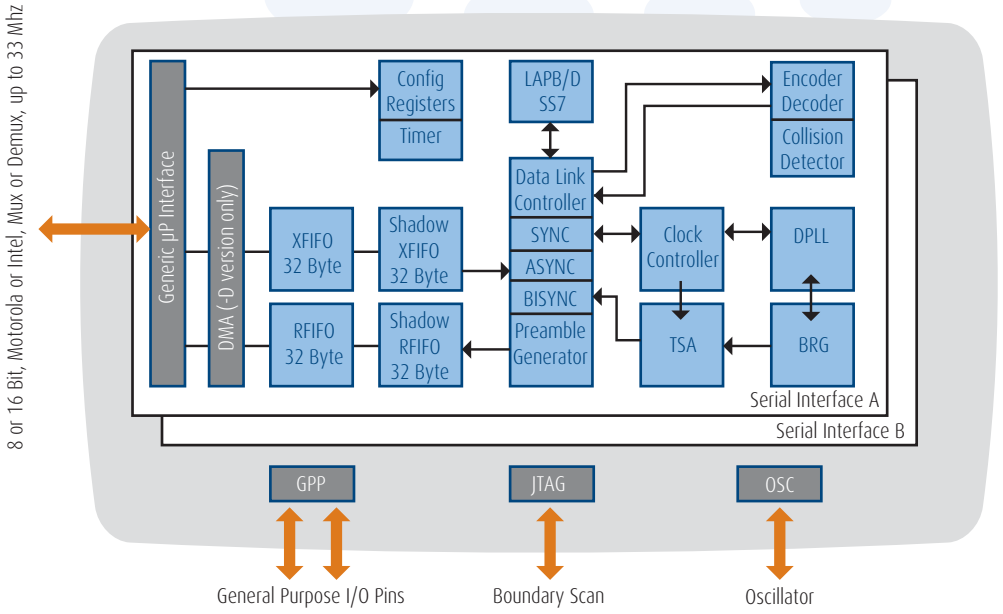
Evaluation System EASY20525/32/42

The EASY boards are including an Lantiq 16 Bit-Microprocessor, the C165UTAH. Together with the low level software driver, this complete evaluation kit is speeding-up your development process.

SEROCCO Application Example



SEROCCO Block Diagram



Product Summary

Product Name	Sales Code	Application	Package
SEROCCO - H	PEB 20525	As above, but ports are limited to 12 Mbit/s HDLC and PPP support only	P-TQFP-100
SEROCCO - M	PEB 20532	Supports all protocols at a throughput of 16 Mbit/s	P-TQFP-100
SEROCCO - D	PEB 20542	Integrated 4-channel DMA controller, Optimized for a minimum CPU intervention	TQFP-144-1

How to reach us: http://www.Lantiq.com

Published by Lantiq
85579 Neubiberg, Germany

Order Number: PB-e-0031-v1