RHODEUS Low-Cost, Low-Power AMD Geode LX800 PC/104 SBC

DIAMOND SYSTEMS

PC104

FEATURES

Low-power cost effective PC/104 single board computer

Low Power PC/104 Single Board Computer AMD Geode LX800 Processor at 500MHz

1 x 200-pin DDR SO-DIMM up to 1 GB SDRAM

1x 10/100Mbps Ethernet

1x Ultra DMA 33 IDE pconnector

1x Type II CompactFlash Socket

Supports VGA CRT and 18/24 bit TTL LCD

2 x USB 2.0 Ports and 2 x Serial Ports

1x Parallel port and 1x Floppy port

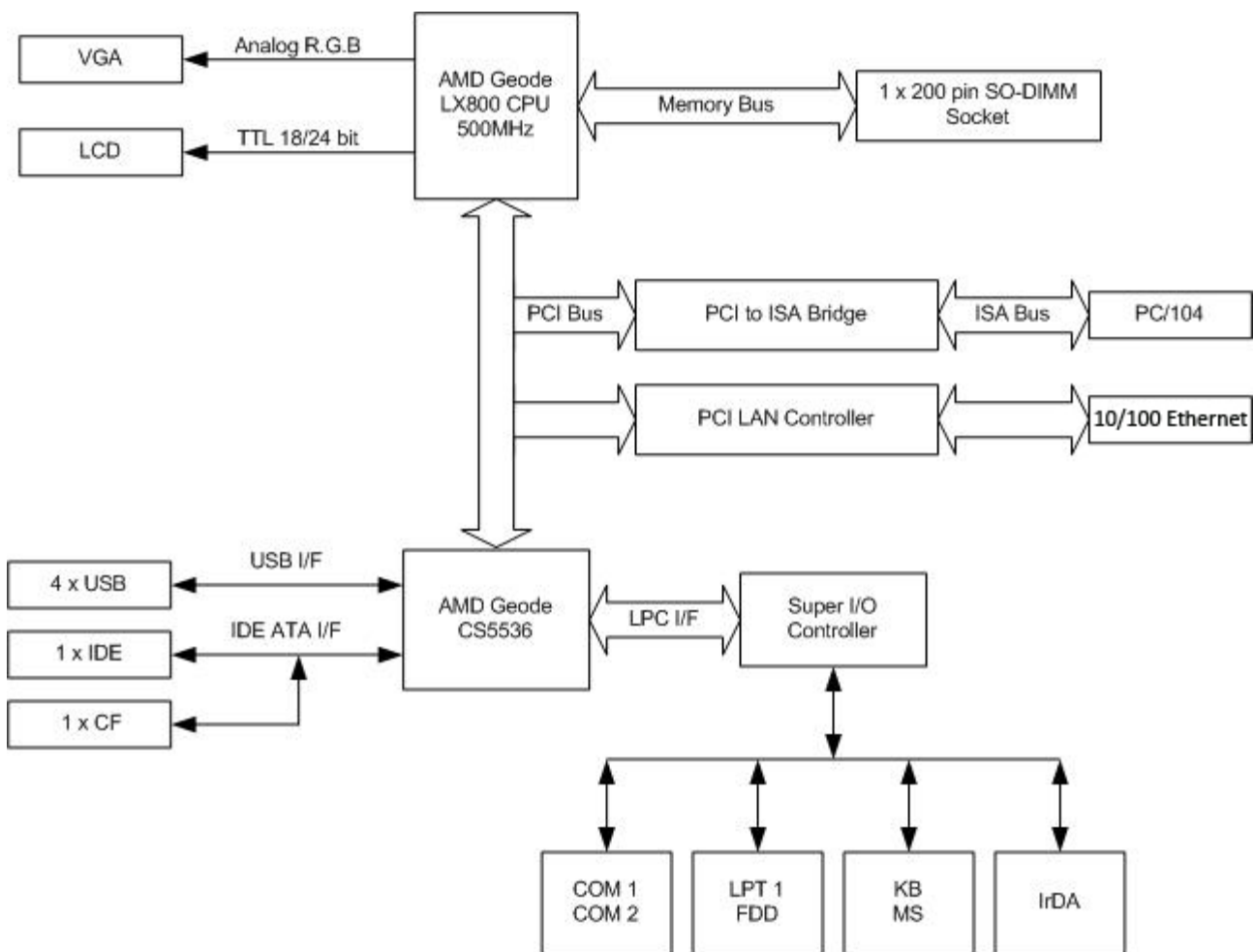PS/2 keyboard/mouse ports

16-bit PC/104 ISA expansion bus

-40 to +85C operating temperature

Description

Rhodeus is a fan-less PC/104 SBC which features the AMD Geode LX800 low power consumption processor running at 500MHz. It uses high speed DDR SDRAM providing maximum capacity at 1GB. Rhodeus offers fully integrated PC functionality with low power consumption which allows Rhodeus to operate in harsh environments where the airflow for heat dissipation is restricted and heat sinks or fans are unacceptable. Its ruggedability gives it the power to perform round-the-clock in unattended environments.

Other advantages of Rhodeus includes high speed 10/100 Ethernet LAN and ample I/O interfaces, 2 serial ports, 2 USB 2.0 ports, parallel port for peripheral connection, 1 ATA-33 channel, Compact Flash Type-II socket, PC/104 expansion bus, LCD & CRT interface, floppy, and watchdog timer. Rhodeus has all the necessary features and expansion capability in 96 X 90 mm form factor, which makes it ideal for applications where space is limited but multiple I/O configurations are needed. Rhodeus supports Windows 2000, Windows XP, Windows CE 5.0, and Linux.

System Block Diagram

◆ Development Kit

A Linux software development kit is available for Rhodeus. The **Rhodeus Linux Kit** (SDK-RDS-LNX) contains a 512MB CompactFlash disk with a bootable linux image pre-loaded, a software CD with the linux tool chain and a backup image, and documentation.

◆ Rhodeus Cable Kit

Cable	Description	Drawing
C-RDS-KIT	Rhodeus Cable Kit	-

◆ Specifications

CPU and System	
Processor	AMD Geode LX800 processor at 500MHz
Cache	64k L1 cache and 128k L2 Cache
Memory	1 x 200-pin DDR SO-DIMM up to 1GB SDRAM
Chipset	AMD LX800 + CS5536
BIOS	Phoenix-Award PnP Flash BIOS
ATA/IDE	1 x Ultra DMA 33, support 2 IDE drives
Flash Disk	1 x CompactFlash Type II Socket up to 8GB
Audio	Speaker Out
Watchdog Timer	255-level Reset
I/O	

Serial Port	1 x RS-232 ports (COM1) 1 x RS-232/422/485 port (COM2)
Parallel Port	SPP/EPP/ECP mode
Floppy	Support 1 x Floppy disk drive
USB Port	2 x USB 2.0 port
KB/MS	1 x PS2 K/B and Mouse
Expansion Bus	1 x PC/104 interface
Ethernet	
Chipset	Realtek 8100CL 10/100 base-T Ethernet
Display	
Graphics Chipset	AMD Geode LX800 CPU integrated VGA controller with 2D Engine (Shared memory Max. 64MB)
Graphics Interface	LCD support 18/24 bit TTL up to 1280 x 1024
General	
Power Input	5V +/-5%
Power Consumption	5W typical (1A)
Operating Temperature	-40ºC to +85ºC or -20ºC to +71ºC
Operating Humidity	0 ~ 90% (non-condensing)
Dimensions (L x W)	96 x 90 mm (3.775" x 3.550")
MTBF	RDS800-XT 157,899 hours at 25ºC
RoHS	Compliant

◆ Models and Accessories

Rhodeus		
available models:		
RDS800-XT	Rhodeus-XT SBC, 500MHz LX800, 0MB RAM, -40ºC to +85ºC	Long Leadtime
RDS800-LC	Rhodeus-LC SBC, 500MHz LX800, 0MB RAM, -20ºC to +71C; special order MOQ 100 units	Long Leadtime
MEM-512-04	512MB DDR SO-DIMM SDRAM	Available
MEM-1024-04	1024MB DDR SO-DIMM SDRAM	Available

Please login or signup for an online quote request.

Cables and accessories	
available models:	
C-RDS-KIT	Rhodeus Cable Kit

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