Rhodeus™ SBC

Rugged, low-power PC/104™ SBC featuring integrated CRT/LCD video, Ethernet, and CompactFlash

Key Features
♦ Low-power, PC/104 form-factor SBC
♦ Based on an AMD Geode™ LX800 CPU, operating fanless at at 500MHz
♦ Up to 1GB of SO-DIMM DDR SDRAM
♦ Comprehensive set of I/O interfaces:
  - two USB 2.0 ports
  - one RS-232/422/485 and one RS-232 serial port
  - 10/100Mbps Ethernet
  - one IDE port supporting 2 devices
  - on-board CompactFlash Type II socket
  - VGA CRT or TTL LCD display
♦ -20°C to +71°C or -40°C to +85°C operating temperature

Low-Cost Single Board Computer
Rhodeus™ is a full-featured, rugged, PC/104™-expandable single board computer offering a wide range of system I/O at an affordable price.

Low Power Consumption
Rhodeus combines a full set of embedded-PC functions with lower power consumption and rugged construction, allowing it to excel in applications with restricted airflow.

Wide Operating Temperature
Rhodeus operates over the full extended temperature range of -40°C to +85°C, enabling it to deliver maximum performance in harsh environments.

Fully Integrated Systems
Rhodeus is available as a complete system with your choice of operating system, in a specially-designed enclosure that eliminates all cables and provides a rugged, compact, wide-temperature box PC ready for application download and deployment.

Software Support

Cable Kit
A Rhodeus Cable Kit (C-RDS-KIT) is available with all of the Rhodeus I/O cables.
## RHODEUS: PC/104 Single Board Computer

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>AMD Geode LX800 at 500MHz</td>
</tr>
<tr>
<td>Chipset</td>
<td>AMD LX800 + CS5536</td>
</tr>
<tr>
<td>Cache</td>
<td>64k L1 cache and 128K L2 cache</td>
</tr>
<tr>
<td>Cooling</td>
<td>Heat sink, fanless</td>
</tr>
<tr>
<td>Memory</td>
<td>Up to 1GB DDR SO-DIMM DRAM</td>
</tr>
<tr>
<td>Display type</td>
<td>VGA CRT or TTL LCD</td>
</tr>
<tr>
<td>Display resolution</td>
<td>1280x1024 maximum</td>
</tr>
<tr>
<td>USB ports</td>
<td>2 USB 2.0</td>
</tr>
<tr>
<td>Serial ports</td>
<td>1 RS-232, 1 RS-232/422/485</td>
</tr>
<tr>
<td>Parallel port</td>
<td>1 SPP/EPP/ECP mode</td>
</tr>
<tr>
<td>Floppy port</td>
<td>1 floppy connector</td>
</tr>
<tr>
<td>Networking</td>
<td>10/100Base-T Ethernet from Realtek 8100CL</td>
</tr>
<tr>
<td>Mass storage</td>
<td>1 IDE UDMA-33 port Supports 2 IDE devices</td>
</tr>
<tr>
<td>Flashdisk</td>
<td>1 Type II CompactFlash socket Supports up to 8GB</td>
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<tr>
<td>Keyboard/Mouse</td>
<td>PS/2</td>
</tr>
<tr>
<td>Audio</td>
<td>Speaker out</td>
</tr>
<tr>
<td>Hardware monitor</td>
<td>Integrated in W83627HG</td>
</tr>
<tr>
<td>Real-time clock</td>
<td>AMD Geode CS5536 built-in RTC with lithium battery</td>
</tr>
<tr>
<td>Watchdog timer</td>
<td>255-level reset</td>
</tr>
<tr>
<td>Expansion bus</td>
<td>PC/104 (ISA)</td>
</tr>
<tr>
<td>Input power</td>
<td>5V ±5%</td>
</tr>
<tr>
<td>Power consumption</td>
<td>5W typical @1A</td>
</tr>
<tr>
<td>Operating temp.</td>
<td>-20°C to +71°C (-4°F to +160°F) or -40°C to +85°C (+40°F to +185°F)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>3.55” x 3.775” (90mm x 96mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5oz / 71g</td>
</tr>
<tr>
<td>RoHS</td>
<td>Compliant</td>
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</tbody>
</table>

### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDS800-XT</td>
<td>Rhodeus SBC, 500MHz, LX800, 0MB RAM, -40°C to +85°C operating temperature</td>
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<tr>
<td>RDS800-LC</td>
<td>Rhodeus SBC, 500MHz, LX800, 0MB RAM, -20°C to +71°C operating temperature</td>
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<tr>
<td>MEM-256-04</td>
<td>256MB DDR SO-DIMM SDRAM</td>
</tr>
<tr>
<td>MEM-512-04</td>
<td>512MB DDR SO-DIMM SDRAM</td>
</tr>
<tr>
<td>MEM-1024-04</td>
<td>1024MB DDR SO-DIMM SDRAM</td>
</tr>
<tr>
<td>SDK-RDS-LNX</td>
<td>Rhodeus Linux 2.6.23 Software Development Kit with Linux image on 512MB CompactFlash disk, software tools on CD, and documentation</td>
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<tr>
<td>C-RDS-KIT</td>
<td>Rhodeus Cable Kit for all on-board I/O</td>
</tr>
<tr>
<td>PNL-RDS-01</td>
<td>Rhodeus Panel I/O Board</td>
</tr>
<tr>
<td>OCTAVIO-RDS-RD128-00-17-00</td>
<td>Octavio-RDS Embedded Application Server: 500MHz Rhodeus XT SBC, 1MB RAM, 128MB Linux flashdisk, 1.7” enclosure</td>
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Rhodeus SBC Block Diagram

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