

# Cool RoadRunner-LX800

PC/104-Plus Single Board Computer  
AMD Geode™ LX800

## Features

AMD Geode™ LX800 Processor @ 500 MHz

2 x RS232/RS422/RS485

1 GB DDR333 RAM max

Graphics up to 1920 x 1440 pixel

CRT, TFT, LVDS

IDE Ultra ATA100

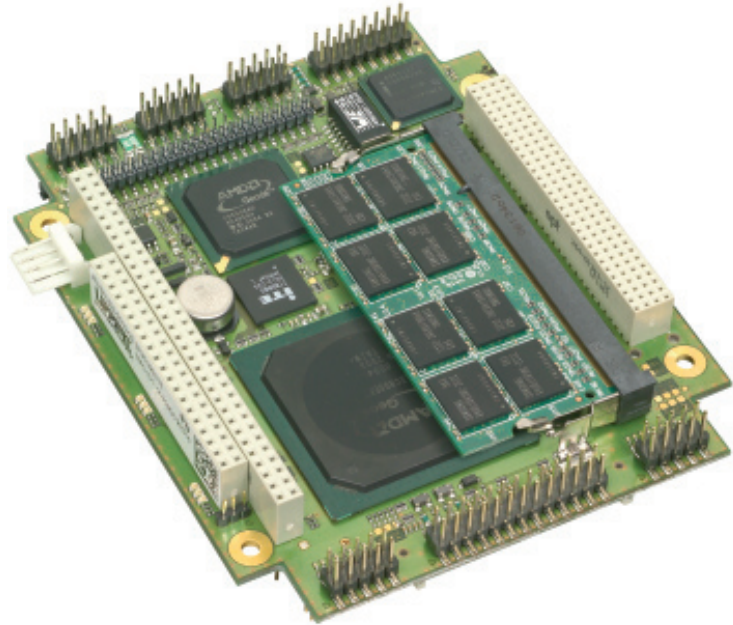
100/10BaseT Ethernet

4 x USB 2.0

CompactFlash™ socket

Only 6.5 W power consumption

Extended temperature range -40 ... +85°C



### More Features

- PC/104, PC/104-Plus bus
- Watchdog
- AC97 sound



The Cool RoadRunner-LX800 is a high-performance PC/104-Plus board with AMD's Geode™ LX processor, having very low power requirements. The board comprises all peripherals for an embedded PC on a small 3.775" by 4.050" printed circuit board. The top-side connectors are fully plug-in compatible with the Cool RoadRunner 2, which was obsoleted due to end-of-life of the Geode GX1.

The Cool RoadRunner-LX800 integrates a powerful yet efficient AMD Geode™ LX800 processor together with a CS5536 I/O companion and a Super I/O chip to form a complete PC, with all the standard peripherals already on board. There is graphics controller with VGA, LVDS, and parallel TFT adapters to connect many sorts of display terminals. Backlighting is provided for LCD modules.

A fast 100/10BaseT Ethernet port, RS232/RS42/RS485 serial ports, and four USB 2.0 host ports handle the communication with external devices. There are PS/2 connectors for keyboard and mouse as well as a parallel printer port available. Sound I/O according to AC97 is supported, too. An IDE ATA100 adapter allows connection of hard disk or CD drives. Applications that require non-moving storage can use the integrated CompactFlash socket.

System expansion is easily done using the PC/104 and PC/104-Plus connectors. PWM outputs and programmable general purpose digital signals are available on a supervisory connector.

The Cool RoadRunner-LX800 is powered by a 5V-only supply and supports ACPI, advanced power management and PCI power management.

Security critical applications take advantage of the Geode LX processor, too. It has an on-chip AES 128-bit crypto acceleration block capable of 44 Mbps throughput on either encryption or decryption. The AES block runs asynchronously to the processor core and is DMA based.

The Cool RoadRunner-LX800 runs Windows, Linux and VxWorks operating systems. LiPPERT is an independent design house and manufacturer that develops and builds special customer specific solutions. Please ask for a specific quotation.

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PC/104-Plus Single Board Computer

AMD Geode™ LX800

## Technical Specifications

<b>Board Format</b>	PC/104-Plus with wings, 96 mm x 115.6 mm (3.775" x 4.050")	<b>PWM</b>	4 pwm outputs, available on supervisory connector
<b>Processor</b>	AMD Geode™ LX800	<b>Digital I/O</b>	8 programmable signals, available on supervisory connector
<b>Speed</b>	500 MHz	<b>Watchdog</b>	yes
<b>Core Logic</b>	I/O companion: CS5536 Super I/O: ITE8712	<b>Status LED</b>	HDD, power, standby, power mode, live, 3x Ethernet, watchdog
<b>RAM (max.)</b>	1 GB DDR333-SODIMM	<b>Operating temperature</b>	-20°C ... +60°C -40°C ... +85°C (optional)
<b>RAM clock</b>	333 MHz	<b>ISA Bus</b>	PC/104
<b>Graphics</b>	Integrated in LX800 up to 254 MB video memory	<b>PCI Bus</b>	PC/104-Plus, 3.3V compliant. Peripherals need their own 3.3V supply.
<b>CRT</b>	Analog VGA 1920 x 1440 pixel at 85 Hz max.	<b>RTC Backup</b>	Gold Cap, optionally battery
<b>LVDS</b>	Single channel, 18 and 24 bits 1600 x 1200 pixel at 60 Hz max.	<b>Power Supply</b>	5 V ±5% All necessary voltages are generated on-board.
<b>TFT</b>	18 bits 1600 x 1200 pixel	<b>Power Consumption</b>	~6.5W, depending on RAM configuration and processor load
<b>USB</b>	4 x USB 2.0 host	<b>Cooling</b>	passive
<b>Ethernet</b>	10/100 MBit with Intel 82551ER	<b>MTBF</b>	>100.000 h (t.b.d.)
<b>Serial</b>	2 x RS232/RS422/RS485	<b>BIOS</b>	Insyde Technology BIOS parameters are also saved in FEPROM
<b>IDE</b>	1 x Ultra ATA100 (ATA6) port	<b>Supported OS</b>	Windows XP, XP Embedded, Windows CE, Linux, VxWorks
<b>CompactFlash™</b>	Socket type III		
<b>Sound I/O</b>	AC97 compatible		
<b>LPT</b>	Multi-Mode™ bi-directional Parallel		



## Ordering Information

Ordering Number	Description
t03-0010-10	PC/104+ CPU board with AMD GEODE™ (500 MHz) processor.

**Note:** t denotes the temperature range. Substitute with **8** for standard and **9** for extended temperature range

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