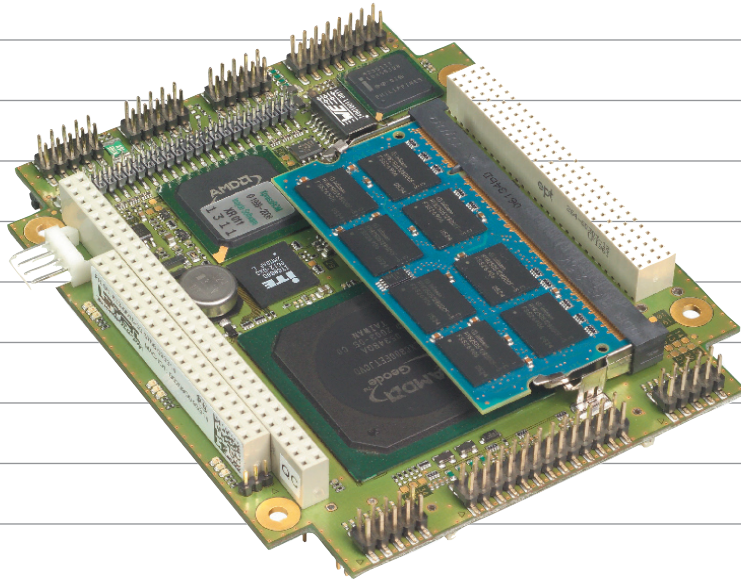


Cool RoadRunner-LX800

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

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 needed 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 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. I²C bus, 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.

More Features

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



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the embedded PC Company

Cool RoadRunner-LX800

PC/104-Plus Single Board Computer

AMD Geode™ LX800



Technical Specifications

Board Format	PC/104-Plus with wings, 96 mm x 115.6 mm (3.775" x 4.050")	Digital I/O	8 programmable signals, available on supervisory connector
Processor	AMD Geode™ LX800	I²C	Available on supervisory connector
Speed	500 MHz	Watchdog	yes
Core logic	I/O companion: CS5536 Super I/O: ITE8712	Status LED	HDD, power, standby, power mode, live, 3x Ethernet, watchdog
RAM (max.)	1 GB DDR333-SODIMM	Operating temperature	-20°C ... +60°C -40°C ... +85°C (optional)
RAM clock	333 MHz	ISA Bus	PC/104
Graphics	Integrated in LX800 up to 254 MB video memory	PCI Bus	PC/104-Plus, 3.3V compliant. Peripherals need their own 3.3V supply.
CRT	Analog VGA 1920 x 1440 pixel at 85 Hz max.	RTC Backup	Gold Cap, optionally battery
LVDS	Single channel, 18 and 24 bits 1600 x 1200 pixel at 60 Hz max.	Power Supply	5 V ±5% All necessary voltages are generated on-board.
TFT	18 bits 1600 x 1200 pixel	Power Consumption	~6.5 W, depending on RAM configuration and processor load
USB	4 x USB 2.0 host	Cooling	passive
Ethernet	10/100 MBit with Intel 82551ER	MTBF	>100.000h (tbd.)
Serial	2 x RS232/RS422/RS485	BIOS	Insyde Technology BIOS parameters are also saved in FEPRM
IDE	1 x Ultra ATA100 (ATA6) port	Supported OS	Windows XP, XP Embedded, Windows CE, Linux, VxWorks
CompactFlash	Socket type III		
Sound I/O	AC97 compatible		
LPT	Multi-Mode (TM) bi-directional Parallel Port		
PWM	4 pwm outputs, available on supervisory connector		

Ordering Information

Ordering Number	Description
#03-0010-10	PC/104+ CPU board with AMD GEODE™ (500 MHz) processor. LCD, VGA, CRT, TFT and LVDS Interface, 1GB DDR SDRAM, 4 x USB 2.0, IrDA, RTC, GoldCap, EIDE, 3 x COM, LPT, PS/2 keyboard and mouse, watchdog, 100/10BaseT, GPIO, CF Socket, AC97 sound

Note: **f** denotes the temperature range. Substitute with **8** for standard and **9** for extendend temperature range

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