

17 & 18 RS-232 Serial Port (COM1/COM2)

Type: onboard 2.0mm 2*5-pin box header

Pin	Description	Pin	Description
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	NC

Solder Side

200-pin DDR SDRAM DIMM Socket (DIMM1)

Compact Flash Connector (CFD1)

Note: CFD1 does not support hot swap.

Pin	Description	Pin	Description
1	GND	26	GND
2	DATA3	27	DATA11
3	DATA4	28	DATA12
4	DATA5	29	DATA13
5	DATA6	30	DATA14
6	DATA7	31	DATA15
7	CS#1	32	CS#3
8	GND	33	GND
9	GND	34	IO READ
10	GND	35	IO WRITE
11	GND	36	+5V
12	GND	37	IRQ 14
13	+5V	38	+5V
14	GND	39	CSEL
15	GND	40	N.C.
16	GND	41	IDE RESET
17	GND	42	DRDY
18	ADDR2	43	DREQ
19	ADDR1	44	DACK
20	ADDR0	45	DASP
21	DATA0	46	DIAG
22	DATA1	47	DATA8
23	DATA2	48	DATA9
24	N.C.	49	DATA10
25	GND	50	GND



RHODEUS – LC

Quick Installation Guide

Version 1.0

Rhodeus – LC

PC/104 Form Factor Embedded AMD Geode LX
SBC with CRT/LCD, Ethernet, PC/104
and Compact Flash Socket

Technical Support

Please do not hesitate to call or e-mail our customer service department if you have questions about this product or if you would like to learn more about Diamond Systems.

Part Number: 7460571

(650) 810-2500

techinfo@diamondsystems.com

www.diamondsystems.com

01 PS/2 Keyboard and Mouse (KBM1)

Type: onboard 6-pin water connector

Pin	Description
1	KB_DATA
2	GND
3	MS_DATA
4	KB_CLK
5	VCC
6	MS_CLK

02 Fast Ethernet Connector (LAN1)

Type: onboard 2.0mm 2*5-pin header

Pin	Description	Pin	Description
1	TX+	2	TX1-
3	RX+	4	N.C
5	N.C	6	RX-
7	N.C	8	N.C
9	GND	10	Key

03 Enhanced IDE Connector (IDE1)

Type: onboard 2.0mm 2*22-pin header

Pin	Description	Pin	Description
1	IDE RESET	2	GND
3	DATA7	4	DATA8
5	DATA6	6	DATA9
7	DATA5	8	DATA10
9	DATA4	10	DATA11
11	DATA3	12	DATA12
13	DATA2	14	DATA13
15	DATA1	16	DATA14
17	DATA0	18	DATA15
19	GND	20	KEY
21	REQ	22	GND
23	IO WRITE	24	GND
25	IO READ	26	GND
27	IO READY	28	IDESL
29	DACK	30	GND
31	IRQ14	32	N.C
33	ADDR1	34	DIAG
35	ADDR0	36	ADDR2
37	CS#2	38	CS#3
39	IDEACTP	40	GND
41	+5V	42	+5V
43	GND	44	N.C

04 Power Connector (PWR1)

Type: onboard 4-pin power connector

Pin	Description
1	+5V
2	GND
3	GND
4	+12V

05 PC/104 ISA Interface (PC 104_1)**06 COM2 RS-232/422/485 Select (JRS1)**

Type: onboard 2*3-pin header

Select	1-2	3-4	5-6
RS-232 (default)	ON	OFF	OFF
RS-422	OFF	ON	OFF
RS-485	OFF	OFF	ON

07 LAN LED Indicator (LLED1)

Type: onboard 2.54mm 1*4-pin header

Pin	Description
1	LAN1 ACTIVE-
2	LAN1 ACTIVE+
3	LAN1 LINK-
4	LAN1 LINK+

08 Front Panel (Switches & Indicators) (JFRT1)

Type: onboard 2.54mm 1*8-pin header

Pin	Description
1	RESET+
2	RESET-
3	PWRLED+
4	PWRLED-
5	HDLED+
6	HDLED-
7	ESPK+
8	ESPK-

09 Infrared (IR) Connector (IR1)

Type: onboard 2.54mm 5-pin header

Pin	Description
1	+5V
2	N.C
3	IRRX
4	GND
5	IRTX

Specification

Form Factor	PC/104 form factor
Processor	AMD Geode™ LX series CPU
Chipset	AMD CS5536
System Memory	One 1 x 200-pin DDR SO-DIMM up to 1GB
VGA/ LCD Controller	AMD Geode LX800 integrated VGA controller with 2D engine
LCD	Supports 18/24-bit TTL up to 1280 x 1024
PCI to ISA BRIDGE	ITE8888G (Master ISA and PNP feature not supported)
Ethernet	Realtek 8100CL 10/100 Base-T
I/O Chips	Winbond 83627HG
BIOS	Phoenix-Award BIOS, supports 4MB Flash ROM
IDE Interface	ATA-33 x 1 channel (supports one ATAPI device)
	Compact Flash Disk x 1 use Primary IDE Master resource (supports up to 4GB)
Two Serial Port	Two COM ports: COM 1: RS-232 COM 2: RS-232/422/485
Parallel Port	Parallel port supports SPP/EPP/ECP mode
K/B and Mouse	Supports standard PS/2 K/B and Mouse
Floppy	1 x Floppy Drive Connector
Universal Serial Bus.	2 x USB 2.0 port
Watchdog Timer	1~255 Level (Sec. or Min.)
Hardware Monitor	Integrated in W83627HG
RTC	AMD Geode CS 5536 built-in RTC with lithium battery
Power Input Connector	1 x 4-pin 5V, 12V power connector
Operation Temp.	-20°C to +70°C
Dimension (Lx W)	96 x 90mm (3.8" x 3.5")

Packing List

Before you begin installing your single board computer, please make sure that the following materials have been shipped:

- ❖ 1 Rhodeus-LC Embedded SBC
- ❖ 1 Quick Installation Guide
- ❖ 1 Diamond Systems CD

Optional

- ❖ 1 Cable Kit containing the following:
 - 1 USB V2.0 Cable
 - 2 COM Flat Cables
 - 1 FDD Flat Cable
 - 1 IDE Cable
 - 1 Print Cable
 - 1 LAN Cable
 - 1 VGA Cable
 - 1 K/B-M/S Cable

Ordering Information

RDS800 – LC	PC/104 Form Factor Embedded AMD Geode LX800 SBC with CRT/LCD, Ethernet, PC/104 and Compact Flash Socket up to 4GB
Cable Kit	C-RDS-KIT

10 CRT Display Connector (VGA1)

Type: onboard 2.0mm 2*8-pin header

Pin	Description	Pin	Description
1	RED	2	GREEN
3	BLUE	4	N.C
5	GND	6	GND
7	GND	8	GND
9	N.C	10	GND
11	N.C (Key)	12	VDDAT
13	HSYNC	14	VSYNC
15	VDCLK	16	N.C

11 USB Connector (USB1)

Type: onboard 2.0mm 2*5-pin header

Pin	Description	Pin	Description
1	USB_VCC	2	USB_VCC
3	USB D-	4	USB D-
5	USB D+	6	USB D+
7	USB_GND	8	USB_GND
9	USB_GND	10	N.C (Key)

12 Floppy Disk Drive Connector (FDD1)

Type: onboard 2.0mm 2*10-pin header

Pin	Description	Pin	Description
1	GND	2	DRV DENO
3	GND	4	KEY
5	GND	6	DRV DEN1
7	-WDATA	8	-INDEX
9	-WGATE	10	-MOA
11	-TRACK0	12	-DSB
13	-WP	14	-DSA
15	-RDATA	16	-MOB
17	-HEAD	18	-DIR
19	-DSKCHG	20	-STEP

13 CMOS Jumper Settings (JBAT1)

Type: onboard 3-pin header

CMOS	JBAT1
Keep CMOS (default)	1-2 ON
Clear CMOS	2-3 ON

14 Parallel Port Connector (LPT1)

Type: onboard 2.0mm 2*10-pin header

Pin	Description	Pin	Description
1	STROBE	2	AFD
3	PTD0	4	ERROR
5	PTD1	6	INIT
7	PTD2	8	SLIN
9	PTD3	10	GND
11	PTD4	12	GND
13	PTD5	14	GND (Key)
15	PTD6	16	BUSY
17	PTD7	18	PE
19	ACK	20	SELECT

15 RS422/485 Output Connector (CON1)

Type: onboard 2.0mm 4-pin water conn.

Pin	RS-422	RS-485
1	TX+	Data+
2	TX-	Data-
3	RX+	N.C
4	RX-	N.C

RS-422/RS-485 Selected by JRS1, share COM2 resource

16 TTL LCD Panel Connector (LCD1)

Type: onboard DF-13-40DP-1.25V

Pin	Description	Pin	Description
1	VDD5	2	VDD5
3	GND	4	GND
5	VDD3	6	VDD3
7	N.C	8	GND
9	LPD0	10	LPD1
11	LPD2	12	LPD 3
13	LPD4	14	LPD 5
15	LPD 6	16	LPD 7
17	LPD 8	18	LPD 9
19	LPD 10	20	LPD 11
21	LPD 12	22	LPD 13
23	LPD 14	24	LPD 15
25	LPD 16	26	LPD 17
27	LPD 18	28	LPD 19
29	LPD 20	30	LPD 21
31	LPD22	32	LPD 23
33	GND	34	GND
35	DOTCLK	36	FP_VS
37	DE	38	FP_HS
39	BLON	40	ENVDD

Jumper/Connector Quick Reference

Jumpers

Label	Function
JRS1	COM2 RS-232/422/485 Select
JBAT1	CMOS Jumper Settings

Connectors

	DIMM1	200-pin DDR SDRAM DIMM Socket (on bottom)
5	PC/104	PC/104 for ISA Interface
1	KBM1	PS/2 Keyboard and Mouse
10	VGA1	CRT Display
16	LCD1	TTL LCD Panel Connector
17, 18	COM1 ~ COM2	Serial Ports
15	CON1	RS-422/485 Output
9	IR1	Infrared (IR) Connector
14	LPT1	Parallel Port
2	LAN1	LAN Ethernet Connector
7	LLED1	LAN LED Connector
11	USB1	USB 1/2 Connector
4	PWR1	Power Connector Small 4P
8	JFRT1	Front Panel (Switches and Indicators)
12	FDD1	Floppy Disk Drive Connector
3	IDE1	Primary IDE Connector
	CFD1	Compact Flash Socket (on bottom)

Jumpers and Connectors

