3.5” SBC with AMD Geode™ LX800 onboard Processor, 8 COM, DDR 400MHz, VGA/LCD/LVDS display, 4 x USB2.0

WAFER-LX2-800
Quick Installation Guide
Version 1.1

June. 02, 2008

Package Contents

WAFER-LX2-800 package includes the following items:

- 1 x WAFER-LX2-800 Single Board Computer
- 1 x Audio Cable
- 1 x IDE Flat Cable 44p/44p
- 2 x 4 RS-232 Adapter Cable
- 1 x Mini Jumper Pack
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)

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Specifications

- CPU: On board AMD Geode™ LX800 500MHz processor
- System Chipset: AMD Geode™ LX800 + CS5536
- BIOS: Award BIOS
- System Memory:

  1 x 200-pin 400/333MHz DDR SDRAM SO-DIMM Supported (System max. 1GB)
- Ethernet: 10/100Mbps Single Realtek RTL8100C Ethernet chipsets
- I/O Interface:

  4 x USB 2.0

  7 x RS-232

  1 x RS-232/422/485

  1 x IDE
- Expansion: 1 x PC/104 (ISA Bus)
- Digital I/O: 8 bit digital I/O, input / output
- Audio: Realtek ALC203 with AC'97 Codec
- Display: VGA integrated in AMD Geode™ LX800

  24-bit TTL

  18-bit single channel LVDS
- WDT: Software programmable supports 1-255 sec. System reset
- SSD: CF Type Ⅱ
- Power Supply: +5V only, AT/ATX power support
- Power consumption: 5V@1.33A (AMD Geode™ LX800 with DDR 400MHz/ 1GB)
- Temperature: Operation: 0°C to 60°C (32°F ~ 140°F)
- Humidity: Operation: 5% to 95% non-condensing
- Dimension: 146mm x 102mm
- Weight: GW: 670 g; NW: 230 g

Ordering Information

WAFER-LX2-800-R11
3.5” SBC with AMD Geode™ LX800 onboard Processor, 8 COM, DDR 400MHz, VGA/LCD/LVDS display, 4 x USB2.0
IO-KIT-4COM-R10
4 COM Ports Adapter Board
WAFER-LX2-XPE
Windows® XP Embedded Image & SLD S/W CD, Licensed Sticker (w/o CPU board)

Jumpers setting and Connectors

JP1: COM1 Pin-9 Signal Select Setting	
1-2	COM1 pin-9 is RI signal (Default)
2-3 3-4	COM1 pin-9 is +5V output
4-5	COM1 pin-9 is +12V output

JP2: LCD VCC Select Setting	
1-2	LCD_VCC is +3.3V (Default)
2-3	LCD_VCC is +5V

JP5: LCD Clock Select Setting	
1-2	Normal LCD Clock (Default)
2-3	Invert LCD Clock

JP3: COM2 Function Select Setting	
1-2	RS-232 (Default)
2-3 3-4	RS-422
4-5	RS-485

JP4: AT Power Select Jumper	
Short	Use AT Power (if use ATX Power will be auto power on) (Default)
Open	Use ATX Power

JP7: CF Master/Slave Select Setting	
1-2	Master
2-3	Slave (Default)

CN2: TFT LCD LVDS Output Connector (DF14 20pin)			
Pin	**Description**	**Pin**	**Description**
2	GND	1	GND
4	D0-	3	D0+
6	D1-	5	D1+
8	D2-	7	D2+
10	CLK-	9	CLK+
12	NC	11	NC
14	GND	13	GND
16	SCL	15	SDA
18	LCD_VCC	17	LCD_VCC
20	LCD_VCC	19	LCD_VCC

CN4: TFT LCD TTL Output Connector (DF13 40pin)			
Pin	**Description**	**Pin**	**Description**
2	LCD_VCC	1	LCD_VCC
4	GND	3	GND
6	LCD_VCC	5	LCD_VCC
8	GND	7	SDA
10	B1	9	B0
12	B3	11	B2
14	B5	13	B4
16	B7	15	B6
18	G1	17	G0
20	G3	19	G2
22	G5	21	G4
24	G7	23	G6
26	R1	25	R0
28	R3	27	R2
30	R5	29	R4
32	R7	31	R6
34	GND	33	GND
36	VSYNC	35	CLK
38	HSYNC	37	LCD_EN
40	DISP_EN	39	SCL

CN14: DIO (GPIO) Connector (Pin-Header 5x2 2.0mm)			
Pin	**Description**	**Pin**	**Description**
1	GND	2	+5V
3	GP0	4	GP1
5	GP2	6	GP3
7	GP4	8	GP5
9	GP6	10	GP7

CN15: Audio Connector (Box-Header 5x2 2.0mm)			
Pin	**Description**	**Pin**	**Description**
1	LINE_OUT-R	2	LINE_IN-R
3	GND	4	GND
5	LINE_OUT-L	6	LINE_IN-L
7	GND	8	GND
9	MIC-IN	10	NC

CN9: COM2 – COM4 40pin 2.0mm Connector (Box-Header 40pin 2.0mm)
COM2 is multi-function port, support RS232, RS422, RS485
Selected by JP3

Pin	Description	Pin	Description
1	TXD485-	2	NC
3	TXD485+	4	NC
5	RXD485+	6	NC
7	RXD485-	8	NC
9	GND	10	GND
11	DCD2#	12	DSR2#
13	RXD2	14	RTS2#
15	TXD2	16	CTS2#
17	DTR2#	18	RI2#
19	GND	20	GND
21	DCD3#	22	DSR3#
23	RXD3	24	RTS3#
25	TXD3	26	CTS3#
27	DTR3#	28	RI3#
29	GND	30	GND
31	DCD4#	32	DSR4#
33	RXD4	34	RTS4#
35	TXD4	36	CTS4#
37	DTR4#	38	RI4#
39	GND	40	GND

CN12: PC104 –5V/-12V Power Input Connector (Wafer 3pin 2.0mm)	
Pin	**Description**
1	-5V
2	GND
3	-12V

CN16: Suspend Power Input & AT-Power Select Jumper Connector (Wafer 3pin 2.0mm)	
Pin	**Description**
1	+5VSB
2	NC
3	PSON#

CN20: Reset Button Connector (Wafer 2pin 2.0mm)	
Pin	**Description**
1	RESET#
2	GND

CN18: LCD Invert Connector (Wafer 5pin 2.0mm)	
Pin	**Description**
1	BL_ADJ (Def: GND)
2	GND
3	+12V
4	GND
5	BL_EN

CN13: IDE 44pin 2.0mm Connector (Box-header 44pin 2.0mm)			
Pin	**Description**	**Pin**	**Description**
1	RESET#	2	GND
3	D7	4	D8
5	D6	6	D9
7	D5	8	D10
9	D4	10	D11
11	D3	12	D12
13	D2	14	D13
15	D1	16	D14
17	D0	18	D15
19	GND	20	NC
21	DRQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	RDY	28	NC
29	ACK#	30	GND
31	INT	32	NC
33	A1	34	CABLEID
35	A0	36	A2
37	CS0#	38	CS1#
39	ASP#	40	GND
41	+5V	42	+5V
43	GND	44	NC

CN17: Main Power Input Connector (Wafer 4pin 5.08mm)	
Pin	**Description**
1	+5V
2	GND
3	GND
4	+12V

CN19: ATX Power Button Connector (Wafer 2pin 2.0mm)	
Pin	**Description**
1	PWRBTN#
2	GND

CN22: Battery Connector (Wafer 2pin 1.25mm)	
Pin	**Description**
1	Battery+
2	Battery-

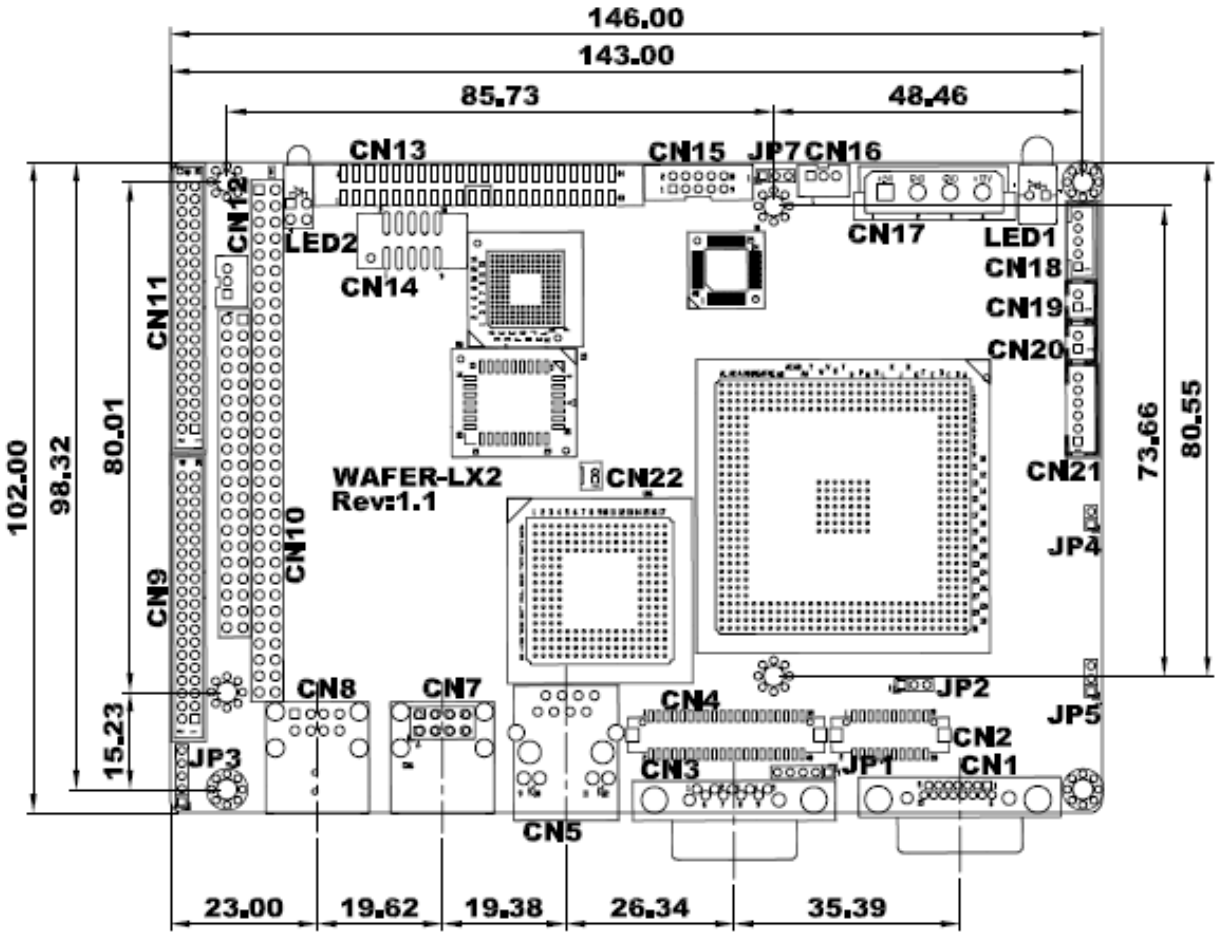
CN21: LED Connector (Wafer 6pin 2.0mm)	
Pin	**Description**
1	+5V
2	GND
3	Power LED+
4	Power LED-
5	HDD LED+
6	HDD LED-

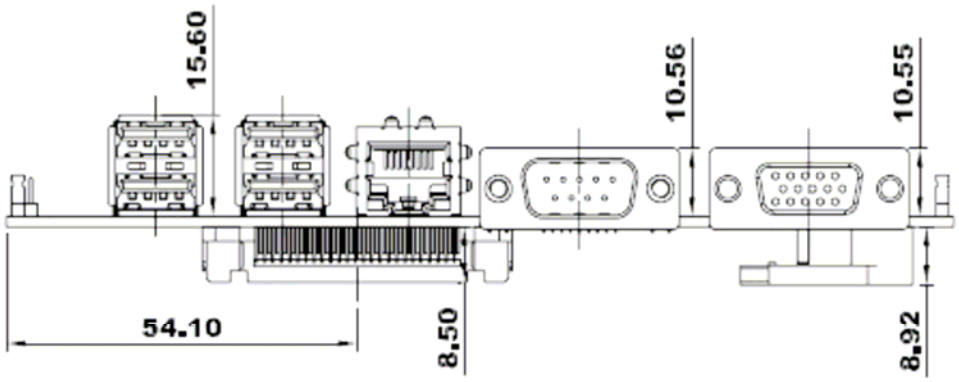
CN11: COM5 – COM8 40pin 2.0mm Connector (Box-Header 40pin 2.0mm)			
Pin	Description	Pin	Description
1	DCD5#	2	DSR5#
3	RXD5	4	RTS5#
5	TXD5	6	CTS5#
7	DTR5#	8	RI5#
9	GND	10	GND
11	DCD6#	12	DSR6#
13	RXD6	14	RTS6#
15	TXD6	16	CTS6#
17	DTR6#	18	RI6#
19	GND	20	GND
21	DCD7#	22	DSR7#
23	RXD7	24	RTS7#
25	TXD7	26	CTS7#
27	DTR7#	28	RI7#
29	GND	30	GND
31	DCD8#	32	DSR8#
33	RXD8	34	RTS8#
35	TXD8	36	CTS8#
37	DTR8#	38	RI8#
39	GND	40	GND

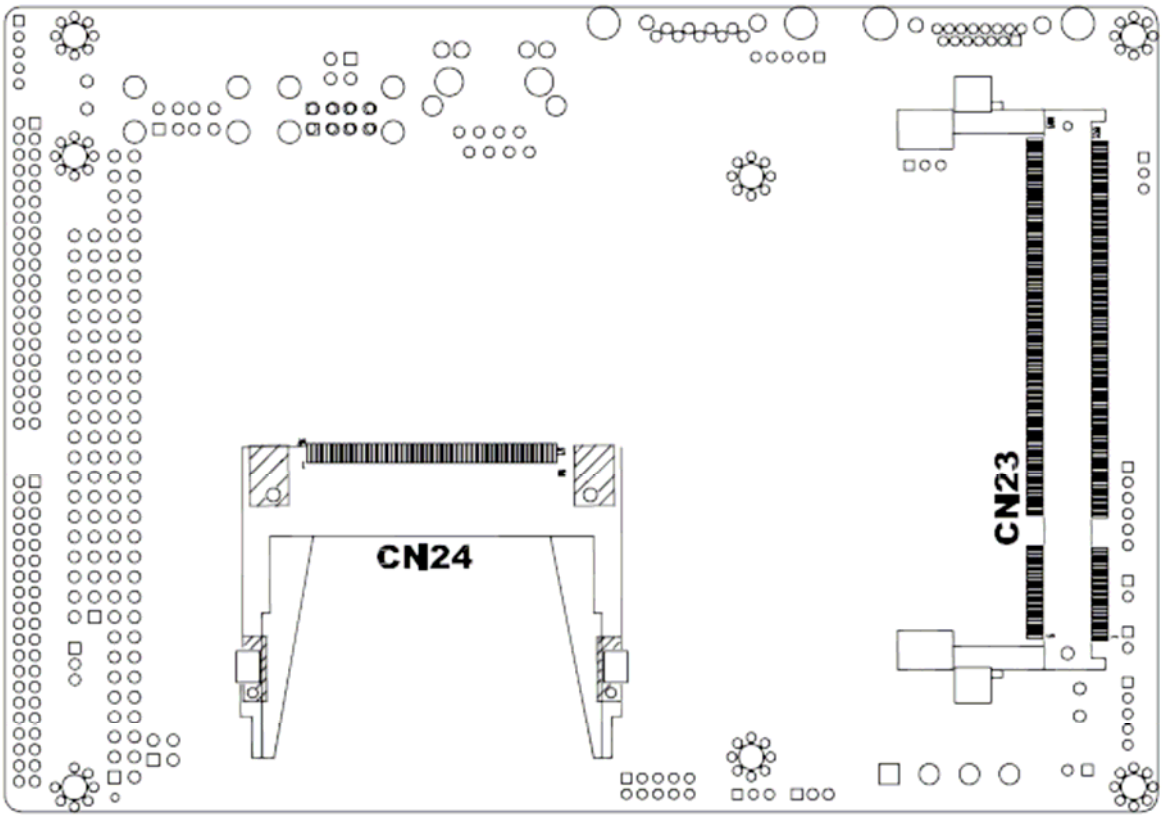
CN10: PC/104 (64 pin ISA bus) Connector							
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**	**PIN**	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	-IOCHK	33	SA14	2	GND	34	-DACK1
3	SD7	35	SA13	4	RSTDRV	36	DRQ1
5	SD6	37	SA12	6	VCC	38	-REFRESH
7	SD5	39	SA11	8	IRQ9	40	BCLK
9	SD4	41	SA10	10	NC	42	IRQ7
11	SD3	43	SA9	12	DRQ2	44	IRQ6
13	SD2	45	SA8	14	NC	46	IRQ5
15	SD1	47	SA7	16	-NOWS	48	IRQ4
17	SD0	49	SA6	18	+12V	50	IRQ3
19	IOCHRDY	51	SA5	20	GND	52	-DACK2
21	AEN	53	SA4	22	-SMEMW	54	TC
23	SA19	55	SA3	24	-SMEMR	56	BALE
25	SA18	57	SA2	26	-IOW	58	VCC
27	SA17	59	SA1	28	-IOR	60	ISAOSC
29	SA16	61	SA0	30	-DACK3	62	GND
31	SA15	63	GND	32	DRQ3	64	GND

CN10: PC/104 (40 pin ISA bus) Connector							
PIN	**DESCRIPTION**	**PIN**	**DESCRIPTION**	**PIN**	**DESCRIPTION**	**PIN**	**DESCRIPTION**
1	GND	21	-MEMW	2	GND	22	-DACK5
3	-SBHE	23	SD8	4	-MEMCS16	24	DRQ5
5	SA23	25	SD9	6	-IOCS16	26	-DACK6
7	SA22	27	SD10	8	IRQ10	28	DRQ6
9	SA21	29	SD11	10	IRQ11	30	-DACK7
11	SA20	31	SD12	12	IRQ12	32	DRQ7
13	SA19	33	SD13	14	IRQ15	34	VCC
15	SA18	35	SD14	16	IRQ14	36	-MASTER
17	SA17	37	SD15	18	-DACK0	38	GND
19	-MEMR	39	NC	20	DRQ0	40	GND

Board Layout: Jumper and Connector Locations






CN24
CN23