

**PC/104 SBC with AMD Geode™ LX800 CPU, VGA/TTL,
LAN, USB 2.0 and CF II**

PM-LX2

Quick Installation Guide

Version 1.0

Mar. 30, 2009

Package List

PM-LX2 package includes the following items:

- 1 x PM-LX2 Single Board Computer
- 1 x IDE 44P/44P flat cable
- 1 x Dual Ports USB cable
- 1 x LAN cable
- 2 x RS-232 cable
- 1 x PS/2 KB/MS cable
- 1 x VGA cable
- 1 x Power 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 + Geode™ CS5536
- BIOS: Award BIOS
- System memory:
 - 1x 200-pin 266/333/400MHz SO-DIMM DDR SDRAM DIMM supported (system max. 1GB)
- Ethernet: Realtek RTL8100C 10/100Mbps Ethernet Controller(PCI Interface)
- I/O Interface:
 - 2 x USB 2.0 (2 by pin-header)
 - 1 x LPT
 - 2 x RS-232
 - 1 x RS-422/485
 - 1 x IDE
 - 1 x FDD by FPC connector
 - 1 x PS/2 for KB/MS, (6-pin pin-header for KB/MS)
- Expansion:
 - PC/104 slot (ISA Bus, by PCI to ISA Bridge ITE IT8888G)
- SSD: CF Type II
- Super I/O:
 - PM-LX2-800-R10: SMSC SCH3114-NU
 - PM-LX2-800W-R10: SMSC SCH3114I-NU (Wide Temperature)
- Display:
 - CRT integrated in AMD Geode™ LX800
 - 24-bit TTL integrated in AMD Geode™ LX800
- WDT: Software programmable 1-255 sec. by super I/O SMSC SCH3114(I)-NU
- Power supply: +5V only, AT support, 12V for LCD Inverter and PC/104(ISA)
- Power Consumption:
 - 5V@1.09A (AMD Geode™ LX800 with 512MB DDR400 DRAM)
- Temperature:
 - Operation: PM-LX2-800-R10: 0~60°C

PM-LX2-800W-R10: -40~70°C

- Humidity: Operation:5%~95% non-condensing
- Dimension: 95mm x 95mm
- Weight: GW: 500g; NW: 110g

Ordering Information

PM-LX2-800-R10:

PC/104 SBC with AMD Geode™ LX800 500MHz CPU, VGA/TTL, LAN, USB2.0 and CF II

PM-LX2-800W-R10:

PC/104 SBC with AMD Geode™ LX800 500MHz CPU, VGA/TTL, LAN, USB2.0 and CF II, Wide Temperature -40~+70°C

322000-015100-RS: LPT cable

32400-001100-RS: FDD cable

32200-074800-RS: RS-422/485 cable

Table of Jumper setting

LABEL	FUNCTION
JP1	LCD Voltage Select setting
JP2	COM3 RS422 / RS485 Select setting
CF_MS_SEL1	CF Master/Slave select setting

JP1: LCD Voltage Select setting	
JP1	Description
1-2	LCD/VCC +3.3V (Default)
2-3	LCD/VCC +5V

JP2: COM3 RS422 / RS485 Select setting	
JP2	Description
1-2	RS-422 (Default)
2-3	RS-485

CF_MS_SEL1: CF Master/Slave select setting	
JP2	Description
1-2	Slave (Default)
2-3	Master

Table of Connectors

LABEL	FUNCTION
CN1	LCD Inverter Connector
CN6	Reset, LED Indicators connector
LAN	LAN Box-header Connector
VGA1	VGA 10-pin Box-header Connector
COM1, 2	RS-232 Serial Port Box-header Connectors
CN7	RS-422/485 Serial Port Wafer-header Connector
KBMS2	6-pin Keyboard/Mouse Connector
BT1	+3.3V Battery Connector
CN2	IDE 44pin 2.0mm connector
LPT1	Parallel port Box-header connector
CN5	TFT LCD connector (TTL)
CN3	+12V & +5V Main Power Input Connector
CN4	-12V & -5V Power Input Connector
USB1	2 ports internal USB Connector
CN8	PC/104 Connector(ISA Bus)
CN9	CF Card Interface Slot
CN10	FDD FPC connector
CN11	DDR SO-DIMM socket

CN1: LCD Inverter Connector	
PIN NO.	DESCRIPTION
1	LCD_ADJ
2	GND
3	VCC(+12V)
4	GND
5	BL_EN

CN6: Reset, LED Indicators connector		
Pin No.	Description	
1	Reset button	RST_SW
2		GND
3	PWR LED	VCC (+5V)
4		GND
5	HDD LED	VCC (+5V)
6		HDD LED-

LAN: LAN Box-header Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	VCC(+3.3V)	6	ACT#
2	RX+	7	RX-
3	Link#	8	GND
4	N/C	9	GND
5	TX+	10	TX-

VGA1: VGA 10-pin Box-header Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	RED	6	DDCCLK
2	GREEN	7	DDCDAT
3	BLUE	8	GND
4	HSYNC	9	GND
5	VSYNC	10	GND

COM1, 2: RS-232 Serial Port Box-header Connectors			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DCD#	6	DSR#
2	RXD	7	RTS#
3	TXD	8	CTS#
4	DTR#	9	RI#
5	GND	10	GND

CN7: RS-422/485 Serial Port COM3 Wafer-header Connector	
PIN NO.	DESCRIPTION
1	RXD485#
2	RXD485+
3	TXD485+
4	TXD485#

KBMS2: 6-pin Keyboard/Mouse Connector	
Pin No.	Description
1	VCC (+5V)
2	Mouse Data
3	Mouse Clock
4	Keyboard Data
5	Keyboard Clock
6	GND

BT1 : +3.3V Battery Connector			
Pin No.	Description	Pin No.	Description
1	BAT (+3.3V)	2	GND

CN2: IDE 44pin 2.0mm connector			
Pin No.	Description	Pin No.	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

LPT1: Parallel port Box-header connector			
Pin No.	Description	Pin No.	Description
1	STB#	2	AFD#
3	PD0	4	ERR#
5	PD1	6	INIT#
7	PD2	8	SLIN#
9	PD3	10	GND
11	PD4	12	GND
13	PD5	14	GND
15	PD6	16	GND
17	PD7	18	GND
19	ACK#	20	GND
21	BUSY	22	GND
23	PE	24	GND
25	SLCT	26	NC

CN5: TFT LCD connector (TTL)			
Pin No.	Description	Pin No.	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

CN3: +12V & +5V Main Power Input Connector	
PIN NO	DESCRIPTION
1	+12V
2	GND
3	+5V

CN4: -12V & -5V Power Input Connector	
PIN NO	DESCRIPTION
1	-5V
2	GND
3	-12V

USB1: 2 ports internal USB Connector			
Pin No.	Description	Pin No.	Description
1	VCC (+5V)	5	GND
2	DATA-	6	DATA+
3	DATA+	7	DATA-
4	GND	8	VCC (+5V)

CN8: PC/104 Connector(ISA Bus)

Pin	Description	Pin	Description	Pin	Description	Pin	Description
A1	IOCHCK#	B1	GND	C1	GND	D1	GND
A2	SD7	B2	RESET	C2	SBHE#	D2	MEMCS16#
A3	SD6	B3	VCC5	C3	LA23	D3	IOCS16#
A4	SD5	B4	IRQ9	C4	LA22	D4	IRQ10
A5	SD4	B5	-5V	C5	LA21	D5	IRQ11
A6	SD3	B6	DRQ2	C6	LA20	D6	IRQ12
A7	SD2	B7	-12V	C7	SA19	D7	IRQ15
A8	SD1	B8	OWS#	C8	SA18	D8	IRQ14
A9	SD0	B9	+12V	C9	SA17	D9	DACK0#
A10	IOCHRDY	B10	GND	C10	MEMR#	D10	DRQ0#
A11	AEN	B11	SMEMW#	C11	MEMW#	D11	DACK5#
A12	SA19	B12	SMEMR#	C12	SD8	D12	DRQ5#
A13	SA18	B13	IOW#	C13	SD9	D13	DACK6#
A14	SA17	B14	IOR#	C14	SD10	D14	DRQ6#
A15	SA16	B15	DACK3#	C15	SD11	D15	DACK7#
A16	SA15	B16	DRQ3	C16	SD12	D16	DRQ7#
A17	SA14	B17	DACK1#	C17	SD13	D17	VCC5
A18	SA13	B18	DRQ1	C18	SD14	D18	MASTER#
A19	SA12	B19	REFRESH#	C19	SD15	D19	GND
A20	SA11	B20	SYSCLK	C20	NC	D20	GND
A21	SA10	B21	IRQ7				
A22	SA9	B22	IRQ6				
A23	SA8	B23	IRQ5				
A24	SA7	B24	IRQ4				
A25	SA6	B25	IRQ3				
A26	SA5	B26	DACK2#				
A27	SA4	B27	TC				
A28	SA3	B28	ALE				
A29	SA2	B29	VCC5				
A30	SA1	B30	OSC				

CN9 : CF Card Interface Slot			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	26	CD1#
2	D3	27	D11
3	D4	28	D12
4	D5	29	D13
5	D6	30	D14
6	D7	31	D15
7	CE#	32	CE2#
8	NC	33	NC
9	OE#	34	IOR#
10	NC	35	IOW#
11	NC	36	WE#
12	NC	37	IRQ
13	VCC	38	VCC
14	NC	39	CSEL#
15	NC	40	NC
16	NC	41	RESET#
17	NC	42	WAIT#
18	A2	43	INPACK#
19	A1	44	REG#
20	A0	45	BVD2
21	D0	46	BVD1
22	D1	47	D8
23	D2	48	D9
24	NC	49	D10
25	CD2#	50	GND

CN10: FDD FPC connector	
Pin No.	Description
1	+5V
2	INDEX#
3	+5V
4	DSA#
5	+5V
6	DSKCHG#
7	NC
8	NC
9	NC
10	MOTO0#
11	NC
12	DIR#
13	NC
14	STEP#
15	GND
16	WDATA#
17	GND
18	WGATE#
19	GND
20	TRACK0#
21	GND
22	WP#
23	GND
24	RDATA#
25	GND
26	HEAD#

Board Layout: Jumper and Connector Locations

