
EmCORE-a5360

EPIC Compact Board

Quick Installation Guide

Version 1.2

Form Factor
<i>EPIC compact board</i>

CPU
<i>AMD Geode LX800 500MHz</i>

Chipset
<i>AMD Geode LX800 + CS5536</i>

Video
<i>18/24-bit TTL, Analog RGB</i>

LAN
<i>1 x Realtek 8100CL 10/100 Base-T Ethernet</i>

Audio
<i>Realtek ALC203 AC97 Audio CODEC, Line-in/ Line-out/ Mic-in</i>

DIO
<i>CF II/ USB/ IDE/ COM/ LPT/ PCI-104</i>

◆ Technical Support

If you have any technical difficulties, please consult the user's manual first at:
<ftp://ftp.arbor.com.tw/pub/manual>

Please do not hesitate to call or e-mail our customer service when you still can not find out the answer.

<http://www.arbor.com.tw>

E-mail: info@arbor.com.tw

Declaration of Conformity

FCC Class A

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



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4041536000120P

Packing List

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



1 x EmCore-a5360



1 x Driver CD



1 x Quick Installation Guide



1 x ATX Power cable
ATX main power connector (2x10-pin) to EmCORE-a5360 power connector (2x5-pin)

If any of the above items is damaged or missing, contact your vendor immediately.

Ordering Information

EmCore-a5360VL2R	AMD LX800 EPIC mini board with CRT/LCD, Audio, PC/104 Plus and dual LAN
CBK-14-5360-00	CBK-14-5360-00 2 x USB Port Cables 1 x Parallel Port Cable 1 x IDE Flat Cable 4 x Serial Port Cables 1 x Audio Cable 1 x FDD Flat Cable 1 x Keyboard & Mouse Y-Cable 2 x LAN Cables 1 x VGA Cable

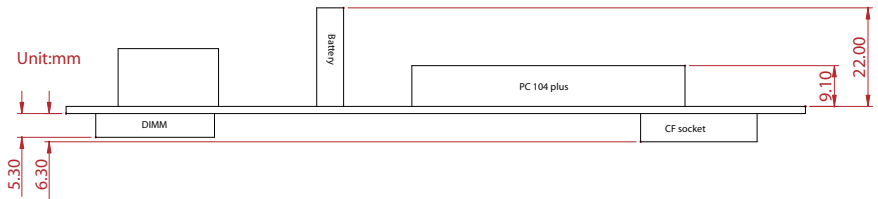
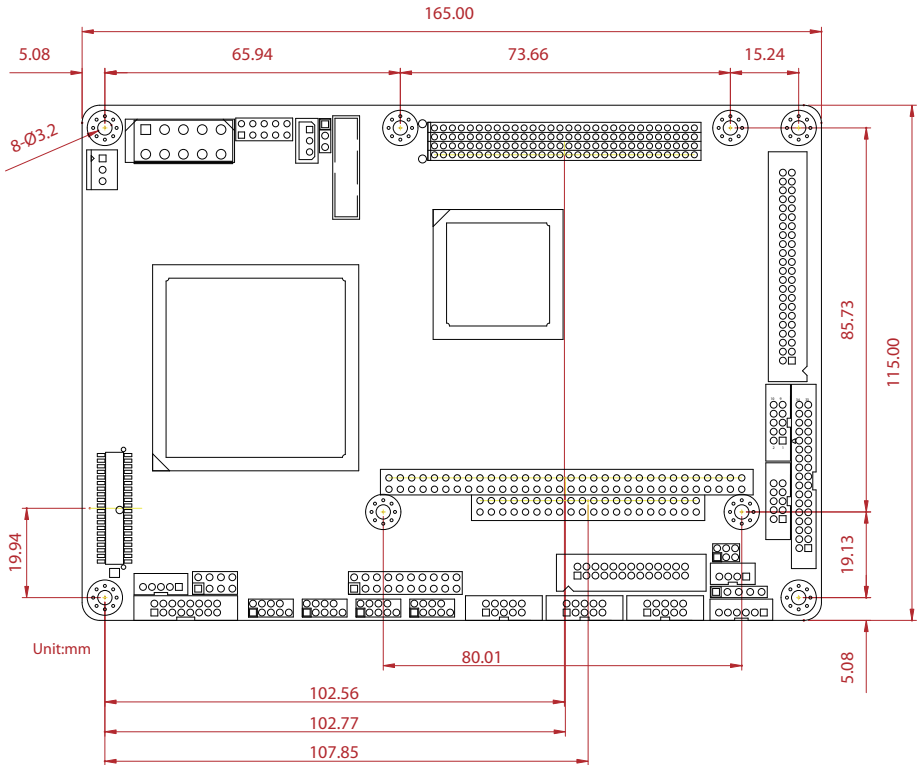
The Installation Paths of CD Driver

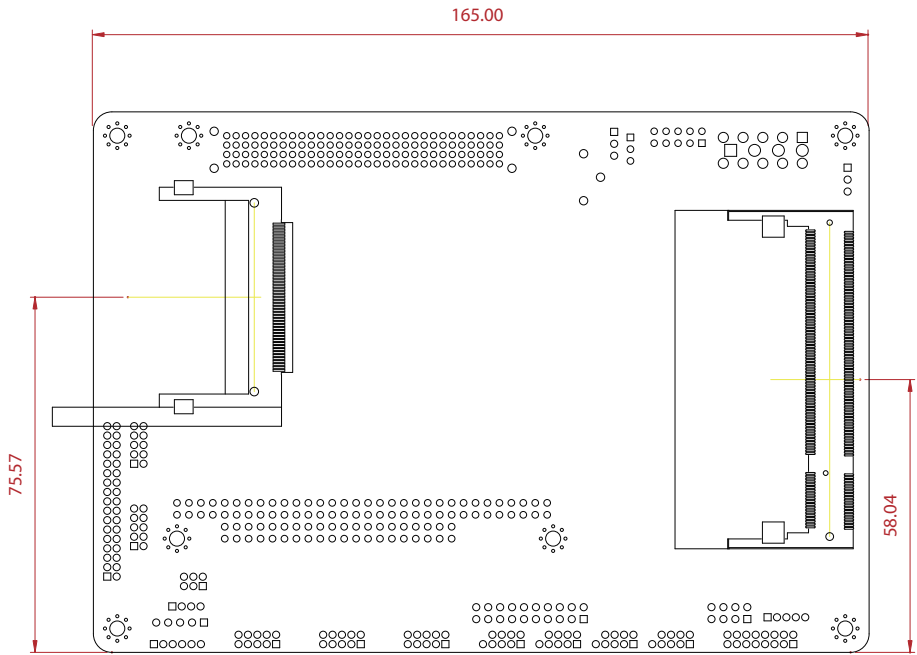
Driver	Path
CHIPSET	\\Driver\LX800
VGA	\\GRAPHICS\\AMD\\LX
LAN	\\ETHERNET\\REALTEK\\8100C
AUDIO	\\AUDIO\\REALTEK\\AC97

Specifications

Form Factor	EPIC Compact board
Processor	AMD Geode™ LX800 processor
Chipset	AMD LX800 + CS5536
System Memory	1 x 200-pin DDR SO-DIMM up to 1GB SDRAM
VGA/ LCD Controller	AMD Geode LX series CPU integrated VGA controller with 2D Engine (Shared memory Max. 64MB)
Ethernet	2 x Realtek 8100CL 10/100 base-T Ethernet
LCD	Supports 18/24-bit TTL up to 1280 x 1024
I/O Chips	W83627HG
BIOS	Phoenix-Award PnP Flash BIOS
Audio	Realtek ALC203 AC'97 Codec, supports Mic-in/Line-in/Line-out
IDE Interface	1 x Ultra DMA 33, support 2 IDE devices.
Serial Port	4 x RS-232 ports COM2: RS-422/RS-422/RS-485 selectable
Parallel Port / Floppy	1 x SPP/EPP/ECP mode 1 x Floppy connector
IrDA	1 x IrDA connector
KBMS	One 1x6-pin wafer connector for Keyboard and Mouse
Universal Serial Bus	4 x USB 2.0 ports
DIO	Digital I/O 16-bit (8-bit In/ 8-bit Out)
PCI to ISA bridge	Winbond W83628
Expansion Bus	PCI/104 interface
Flash Disk	1 x CompactFlash Disk Type II Socket
Hardware Monitor	Integrated in W83627HG
RTC	AMD Geode CS5536 built-in RTC with lithium battery
Power Input Connector	5x2-pin ATX power connector
Operation Temp.	-20 ~ 70°C (-4 ~ 158°F)
Watchdog Timer	1 ~ 255 Level Reset (Sec. or Min.)
Dimension (L x W)	165 x 115 mm (6.5" x 4.5")

Board Dimensions





Unit:mm

Jumpers/ Connectors Quick Reference

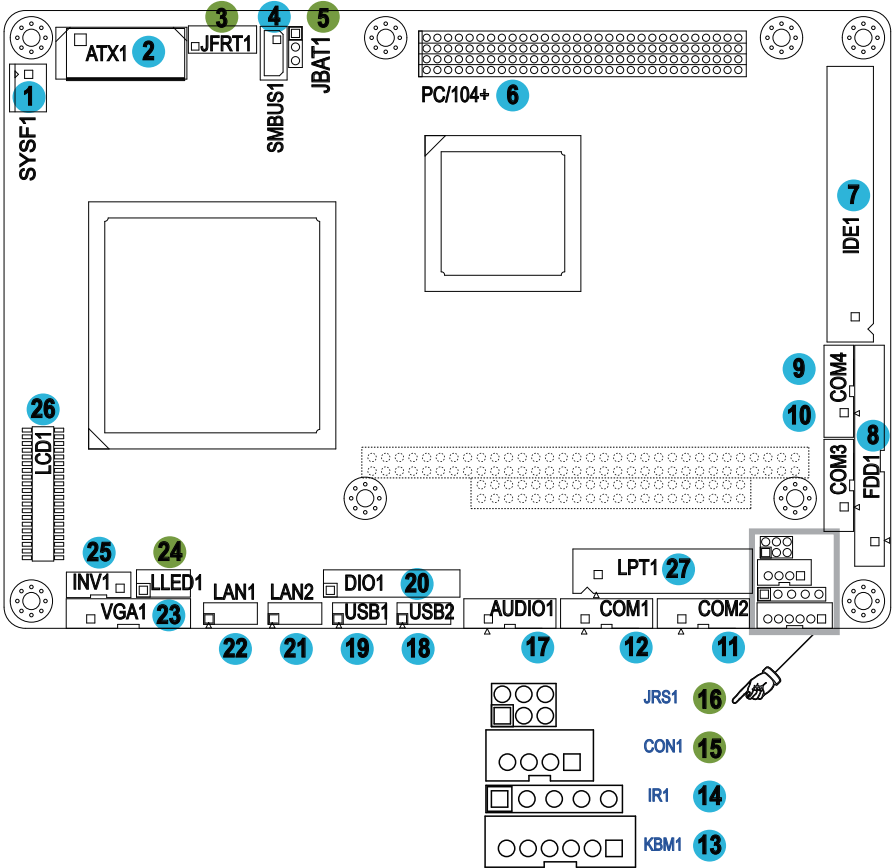
Jumpers

Label	Function
JBAT1	Clear CMOS Setting
JRS1	COM2 RS-232/422/485 Selection
LLED1	LAN LED indicators

Connectors

Label	Function
SYSF1	Fan Power Connector
ATX1	Power Supply Connector
JFRT1	Switches and Indicators
SMBUS1	External SMBUS Connector
PC/104+	PCI Interface
IDE1	IDE Connector
FDD1	FDD Connector
COM1~4	Serial Port Connectors
KBM1	Keyboard & Mouse Connector
IR1	Infrared Connector
CON1	RS-422/ 485 Output Connector
AUDIO1	AC97 AUDIO Connector
USB1~2	USB Connectors
DIO1	Digital I/O Connector
LAN1~2	Fast Ethernet Connectors
VGA1	Analog RGB Connector
INV1	LCD Inverter Connector
LCD1	TTL LCD Connector
LPT1	Parallel Port Connector
CFD1	CompactFlash II Socket

Jumpers & Connectors Location



Jumpers

JBAT1: Clear CMOS Setting (5)

Connector type: Onboard 3-pin header.

Pin	Mode
1-2	Keep CMOS (Default)
2-3	Clear CMOS



JRS1: COM2 RS-232/422/485 Selection (16)

It can be configured to operate in RS-232, RS-422 or RS-485 mode.

Connector type: Onboard 6-pin (2*3) header.

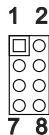
Pin	Mode
1-2 (Short)	RS-232 (Default)
3-4 (Short)	RS-422
5-6 (Short)	RS-485



LLED1: LAN LED indicators (24)

Connector type: Onboard 2.54mm pitch 2x4-pin header.

Pin	Description
1	LAN1_LINK-
2	LAN1_LINK+
3	LAN1_ACTIVE-
4	LAN1_ACTIVE+
5	LAN2_LINK-
6	LAN2_LINK+
7	LAN2_ACTIVE-
8	LAN2_ACTIVE+



Connectors

SYSF1: Fan Power Connector (1)

SYSF1 is a 3-pin header for the CPU fan. The fan must be a +12V fan.

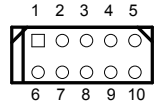
Pin	Description
1	GND
2	+12V
3	FAN_Detect



ATX1: Power Supply Connector (2)

Connector type: 10-pin ATX Power Connector.

Pin	Desc.	Pin	Desc.
1	PS-ON	2	GND
3	GND	4	+12V
5	+3.3V	6	+5VSB
7	+5V	8	+5V
9	-12V	10	GND

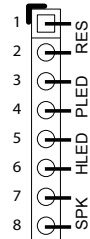


JFRT1: Switches and Indicators (3)

It provides connectors for system indicators that provides light indication of the computer activities and switches to change the computer status.

Connector type: Onboard 10-pin header.

Pin	Description
1	RESET+
2	GND
3	PWR LED+
4	GND
5	HDD LED+
6	HDD LED-
7	SPK OUT+
8	SPK OUT-



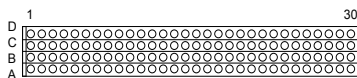
SMBUS1: External SMBUS Connector (4)

Connector type: onboard 3-pin Wafer.

Pin	Description
1	Data
2	Clock
3	GND



PC/104+: PCI Interface (6)



A1	GND	PME#	B1	C1	+5V	AD0	D1
A2	VI/O	AD2	B2	C2	AD1	+5V	D2
A3	AD5	GND	B3	C3	AD4	AD3	D3
A4	C/BE0#	AD7	B4	C4	GND	AD6	D4
A5	GND	AD9	B5	C5	AD8	GND	D5
A6	AD11	VI/O	B6	C6	AD10	M66EN	D6
A7	AD14	AD13	B7	C7	GND	AD12	D7
A8	+3.3V	C/BE1#	B8	C8	AD15	+3.3V	D8
A9	SERR#	GND	B9	C9	Reserved	PAR	D9
A10	GND	PERR#	B10	C10	+3.3V	Reserved	D10
A11	STOP#	+3.3V	B11	C11	LOCK#	GND	D11
A12	+3.3V	TRDY#	B12	C12	GND	DEVEL#	D12
A13	FRAME#	GND	B13	C13	IRDY#	+3.3V	D13
A14	GND	AD16	B14	C14	+3.3V	C/BE2#	D14
A15	AD18	+3.3V	B15	C15	AD17	GND	D15
A16	AD21	AD20	B16	C16	GND	AD19	D16
A17	+3.3V	AD23	B17	C17	AD22	+3.3V	D17
A18	IDSEL0	GND	B18	C18	IDSEL1	IDSEL2	D18
A19	AD24	C/BE3#	B19	C19	VI/O	IDSEL3	D19
A20	GND	AD26	B20	C20	AD25	GND	D20
A21	AD29	+5V	B21	C21	AD28	AD27	D21
A22	+5V	AD30	B22	C22	GND	AD31	D22
A23	REQ0#	GND	B23	C23	REQ1#	VI/O	D23
A24	GND	REQ2#	B24	C24	+5V	GNT0#	D24
A25	GNT1#	VI/O	B25	C25	GNT2#	GND	D25
A26	+5V	CLK0	B26	C26	GND	CLK1	D26
A27	CLK2	+5V	B27	C27	CLK3	GND	D27
A28	GND	INTD#	B28	C28	+5V	RST#	D28
A29	+12V	INTA#	B29	C29	INTB#	INTC#	D29
A30	-12V	REQ3#	B30	C30	GNT3#	GND	D30

Rotary Switch Setting

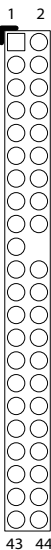
Switch	Slot	REQ/GNT	CLK	IDSEL	INT
0/4	1	REQ/GNT0	CLK0	AD19	INTA
1/5	2	REQ/GNT1	CLK1	AD20	INTB
2/6	3	REQ/GNT2	CLK2	AD21	INTC
3/7	4	REQ/GNT3	CLK3	AD22	INTD

Note: Slot 3 & 4 share LAN1, LAN2 REQ/GNT.

IDE1: IDE Connector (7)

Connector type: Onboard 2.0mm pitch 2x22-pin box headers.

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	N/C (Key)
21	REQ	22	GND
23	IO WRITE	24	GND
25	IO READ	26	GND
27	IO READY	28	N/C
29	DACK	30	GND
31	IRQ14	32	N/C
33	ADDR1	34	ATA66 DE-TECT
35	ADDR0	36	ADDR2
37	CS#2	38	CS#3
39	IDEACTP	40	GND
41	+5V	42	+5V
43	GND	44	N/C



Pin	Description	Pin	Description
1	GND	2	Drive density Select 0
3	GND	4	N/C (Key)
5	GND	6	Drive Density Select 1
7	Write Data#	8	Index#
9	Write Gate#	10	Motor Enable A#
11	Track 0#	12	Driver Select B#
13	Write Protect#	14	Driver Select A#
15	Read Data#	16	Motor Enable B#
17	Head Select#	18	Direction#
19	Disk Change#	20	Step#

COM1/ 2/ 3/ 4: Serial Port Connectors (9, 10, 11, 12)

Connector type: Onboard 2.0mm pitch 2x5-pin box header.

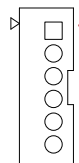
Pin	Description	Pin	Description
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	N/C



KBM1: Keyboard & Mouse Connector (13)

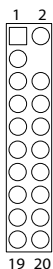
Connector type: 6-pin Keyboard & Mouse wafer connector.

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



FDD1: FDD Connector (8)

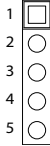
Connector type: Onboard 2x10-pin headers.



IR1: Infrared Connector (14)

Connector type: Onboard 2.54mm pitch 5-pin header.

Pin	Voltage
1	+5V
2	N/C
3	IRRX
4	GND
5	IRTX

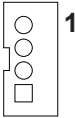


CON1: RS-422/ 485 Output Connector (15)

RS-422/RS-485, selected by JRS1, share COM2 resource.

Connector type: Onboard 2.0mm pitch 4-pin Wafer.

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



AUDIO1: AC97 AUDIO Connector (17)

Connector type: Onboard 2.0mm pitch 2x5-pin box header.

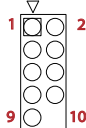
Pin	Description	Pin	Description
1	Line-in Left	2	Line-in Right
3	GND	4	GND
5	MIC	6	N/C
7	GND	8	GND
9	Line-out Left	10	Line-out Right



USB1~2: USB Connectors (19, 18)

Connector type: Onboard 2.0mm pitch 2x5-pin box header. USB1 supports two USB 2.0 w/ 480MB/s by pin header.

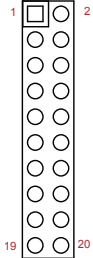
Pin	Description	Pin	Description
1	+5V	2	+5V
3	USBD-	4	USBD-
5	USBD+	6	USBD+
7	GND	8	GND
9	GND	10	N/C (Key)



DIO1: Digital I/O Connector (20)

Connector type: Onboard 2.54mm pitch 2x10-pin header.

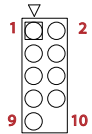
Pin	Description	Pin	Description
1	DIO1	2	DIO2
3	DIO3	4	DIO4
5	DIO5	6	DIO6
7	DIO7	8	DIO8
9	GND	10	GND
11	DIO9	12	DIO10
13	DIO11	14	DIO12
15	DIO13	16	DIO14
17	DIO15	18	DIO16
19	+5V	20	+12V



LAN1~2: Fast Ethernet Connectors (21,22)

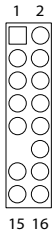
Connector type: Onboard 2.0mm pitch 2x5-pin header.

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



VGA1: Analog RGB Connector (23)

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	DA
13	HSYNC	14	VSYNC
15	CL	16	N/C



INV1: LCD Inverter Connector (25)

Connector type: Onboard 2.0mm pitch 5-pin Wafer.

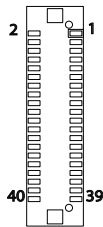


Pin	Desc.	Pin	Desc.
1	+12V	2	GND
3	Backlight on/off	4	Brightness control
5	GND		

LCD1: TTL LCD Connector (26)

Connector type: Onboard DF-13-40DP-1.25V.

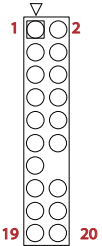
Pin	Desc.	Pin	Desc.
2	5V_SAFE	1	5V_SAFE
4	GND	3	GND
6	3V_SAFE	5	3V_SAFE
8	GND	7	Vcon
10	PD1	9	PD0
12	PD3	11	PD2
14	PD5	13	PD4
16	PD7	15	PD6
18	PD9	17	PD8
20	PD11	19	PD10
22	PD13	21	PD12
24	PD15	23	PD14
26	PD17	25	PD16
28	PD19	27	PD18
30	PD21	29	PD20
32	PD23	31	PD22
34	GND	33	GND
36	FILM	35	SHIFT CLOCK
38	LP	37	M
40	ENAVEE	39	ENABLK



LPT1: Parallel Port Connector (27)

Connector type: Onboard 2.0mm pitch 2x13-pin box-header.

Pin	Desc.	Pin	Desc.
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



CFD1: CompactFlash II Socket

After hot-swapping CF II, you must restart your system for device detecting.

Default setting: IDE slave.

