NISE 3120

AMD Geode Castle 400/500
Fanless +PC104 Plus
RoHS

User Manual

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Regulatory Compliance Statements

This section provides the FCC compliance statement for Class A devices and describes how to keep the system CE compliant.

Federal Communications Commission (FCC) For Class A Device

This equipment has been tested and verified to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE Certification

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

WARNINGS

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent
with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.

CAUTION

Electrostatic discharge (ESD) can damage NSA components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety Information

Before installing and using the EBC573, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a hearing device.

Support

For more information on this and other NEXCOM products, please visit our websites at: **http://www.NEXCOM.com**

Product Warranty

NEXCOM warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for one year from the date of purchase.

This warranty does not apply to any products that have been repaired or altered by persons other than repair personnel authorized by NEXCOM, or which have been subject to misuse, abuse, accident or improper installation. NEXCOM assumes no liability under the terms of this warranty as a consequence of such events.

Because of NEXCOM high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an NEXCOM product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement

materials, service time and freight. Please consult your dealer for more details. If you think you have a defective product, follow these steps:

Step 1. Collect all the information about the problem encountered. (For example, CPU speed, NEXCOM products used other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.

Step 2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.

Step 3. If your product is diagnosed as defective; obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.

Step 4. Carefully pack the defective product, a fully completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.

Step 5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Contents

Chapter 1 Overview

1.1 Introduction

Based on AMD Geode Castle processor and CS5536 chipset, the rugged NISE 3120 is designed for space-critical applications requiring fan-less operation, extreme reliability, low-power consumption and versatile I/O configuration. As such the NISE 3120 offers cost-effective solutions to a multitude of mission-critical embedded computing applications within automation, machine control, POS Systems and transportation.

Housed in a compact 195mm x 150mm x 80mm heavy-duty aluminum chassis the NISE 3120's fan-less design makes for reliable, maintenance-free industrial computing.

This versatile system gives users a wide variety of connection options with a myriad of I/O ports located at both the front and the rear of the unit.

These include two 10/100 Ethernet LAN ports, four USB 2.0 ports, IEEE1394, VGA and Audio-out.

For added flexibility, the NISE 3120 also boasts four RS232 ports, CompactFlash socket, PC104 plus and one min-PCI Expansion Slot for wireless connection solutions.

The NISE 3120 supports DDR memory up to 1GB and one 2.5'HDD drive bay.

1.2 Hardware Specifications

* Memory：Support one 184-pin Non-ECC Non-Registered DDR DIMM Max up to 1GB
* Construction：Aluminum Chassis with FANless Design
* Dimension(W x D x H)：195 x 150 x 80 mm
* Main board：

  --EBC420

  --Support AMD Geode Castle 500 MHz with 128 KB L2 cache

  --AMD CS 5536 companion chip
* Device

  --On board Compact Flash socket x 1

  --Internal 2.5”HDD Drive bay x 1
* BIOS：
* I/O Port（Front）

  --HDD access/Power/LAN status LED (Act/Link; Speed)

--Programmable Alarm LED

--Programmable Status LED

--USB 2.0 x 4 ports

--Serial port x 2

* I/O Port（Rear）

--Parallel port x 1

--PS/2 keyboard/mouse x 1

--IEEE1394 port x 1

--Serial port x 2

--Audio out x1

--10/100 Ethernet LAN x 2

--VGA connector x 1

--DC power +12V input x 1

* Expansion Slot

--PC/104 Plus (without -12V and -5V)

--Mini-PCI Socket x 1

* Power Supply

--External 48W AC adapter x 1

--Power input: 100~240V AC 2A 50/60Hz

--Power output: 12V DC

* Certification

--CE approval

--FCC

* Operating temperatures:

--Ambient with air flow: 0°C to 40°C

--NISE 3120 Tcase (Surface Temperature of Chassis)

5 °C ~ 40 °C (HDD)
-10 °C ~ 45 °C (CF Card Only)

* Storage temperatures: -20°C to 80°C
* Relative humidity: 10% to 90% (Non-condensing)

1.3 Safety Precautions

The following sections tell how to make each connection. In most cases, you will simply need to connect a standard cable.

Warning! *Always disconnect the power cord from your chassis whenever you are working on it. Do not connect while the power is on. A sudden rush of power can damage sensitive electronic components. Only experienced electronics personnel should open the chassis.*

Caution! *Always ground yourself to remove any static electric charge before touching NISE 3120. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag.*

1.4 Chassis Dimensions

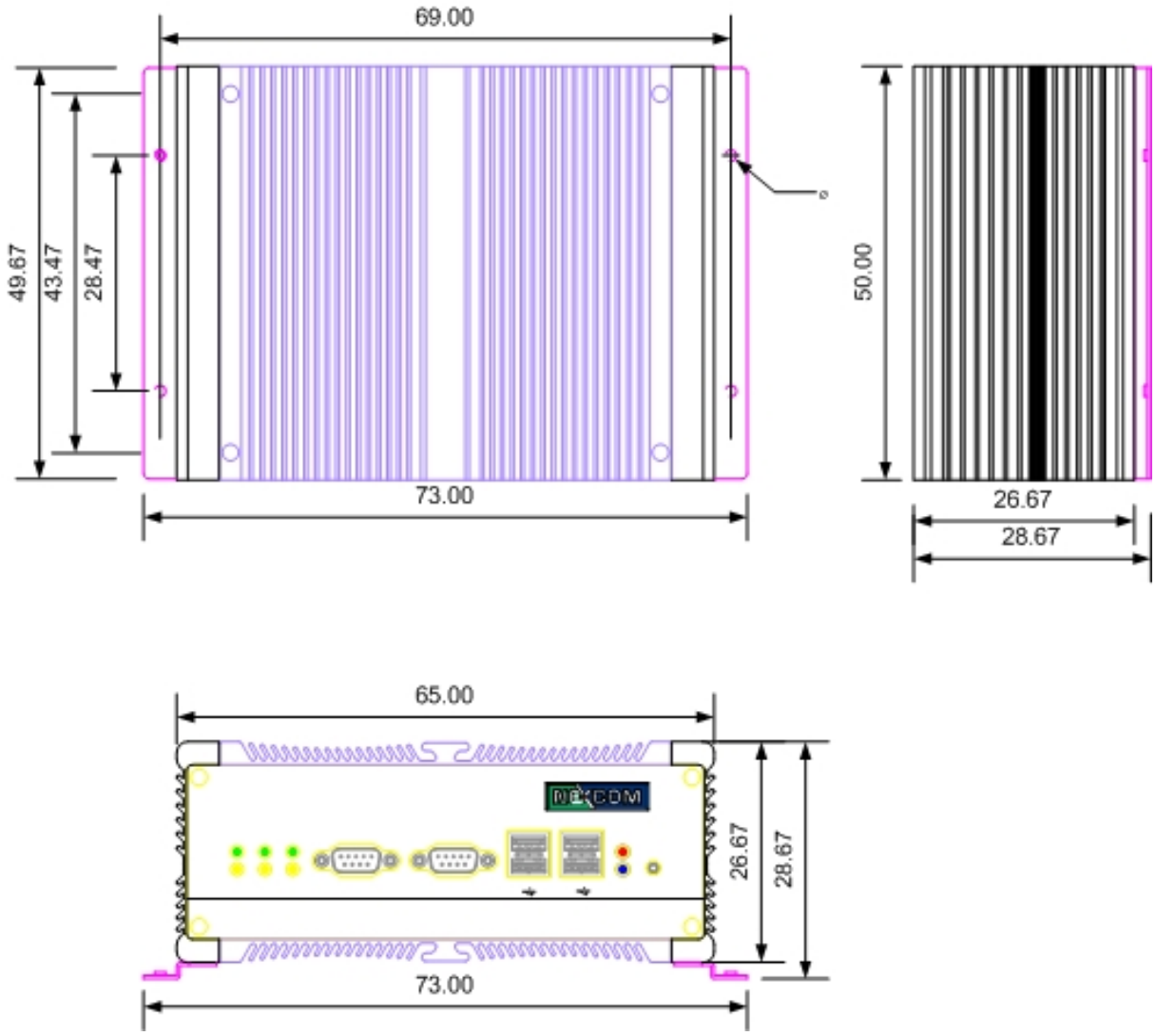


Figure 1-1: Chassis Dimensions

1.5 Packing List

The accessory package of NISE 3120 contains of following items:

1. M/B BRACKET FOR NISE3120
2. FANLESS HEATSINK
3. CABLE, COM PORT. 9PINx2 TO HOUSING
4. HOLE PLUGS FOR NISE3120
5. IDE CABLE
6. PRINT CABLE
7. WALL MOUNT BRACKET
8. CHASSIS
9. IO BRACKET
10. EBC420 CD DRIVER
11. CABLE, Y PS/2 1 TO 2 KEYBOARD/MOUSE
12. DOW CORNING 340 Silicone Heat Sink Compound (3g)
13. EBC420 QUICK REFERENCE GUIDE
14. POWER ADAPTER

Chapter 2 Hardware

2.1 Introduction

The following two figures show the connectors on NISE3120. The following sections give you detailed information about function of each peripheral.

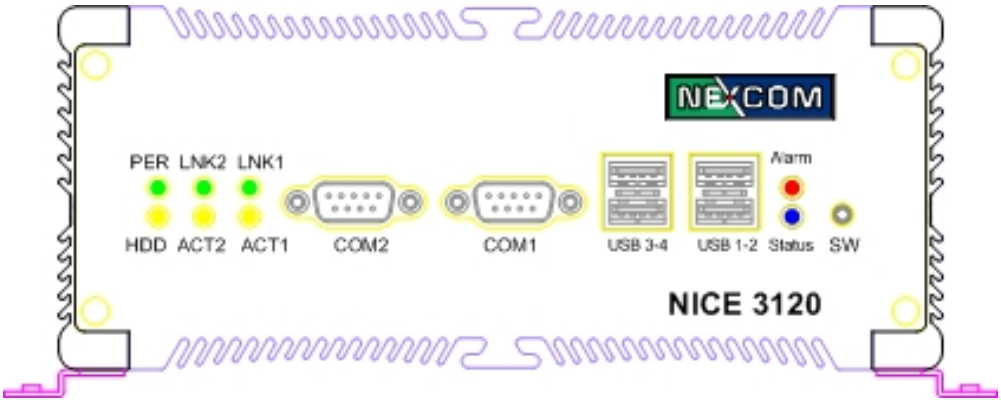


Figure2.1: Front panel of NISE3120

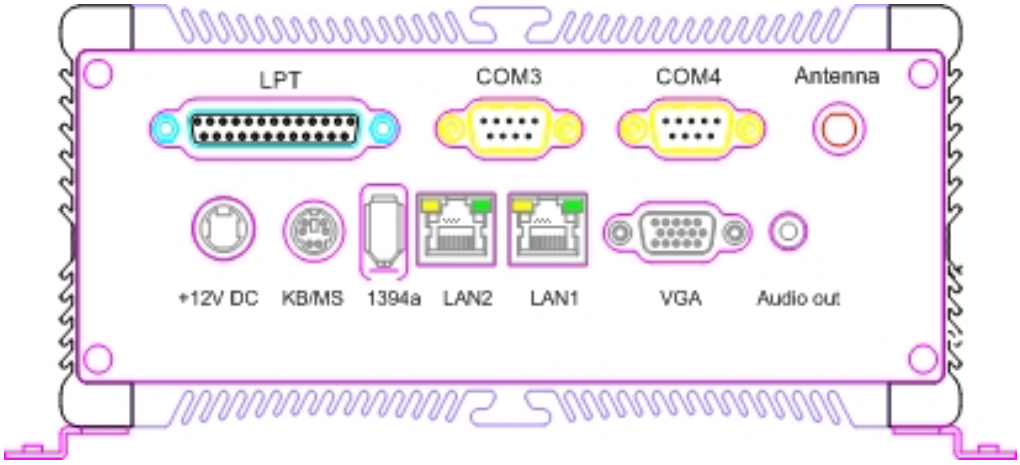


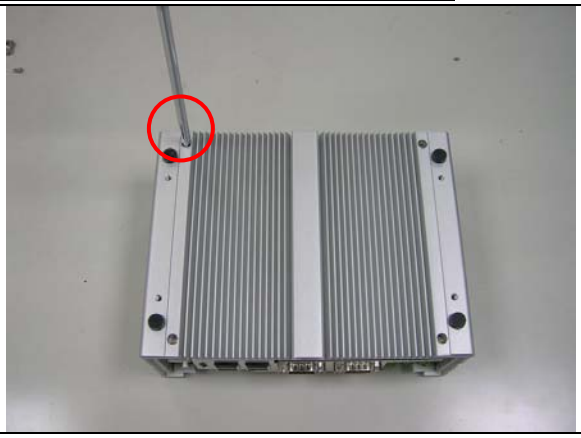
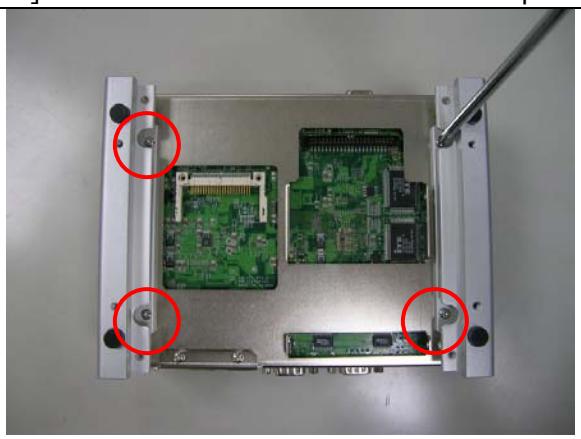
Figure2.2: Rear panel of NISE3120

Chapter 3 Installation

In the follow pages, we will show you how to install (or remove) the cover and devices, including Antenna, MINI-PCI, Memory, CompactFlash™ card, Hard Disk and cables.

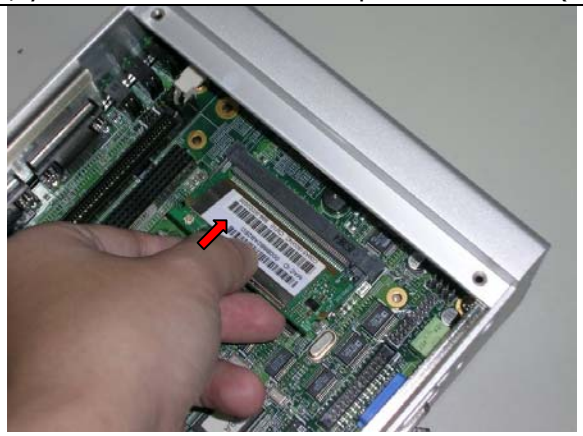
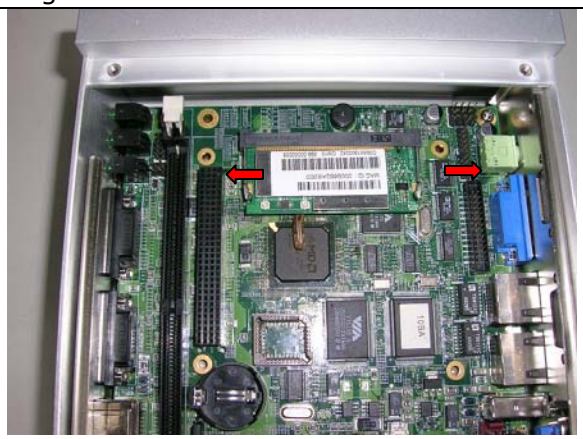
Before the following action, please make sure you already remove the power cord.

3.1 Remove / Install the Chassis

	
[Top]Unscrew four screws from the top.	[Bottom] Unscrew four screws from the bottom.
	
[Front]Remove four screws from the front panel.	[Rear]Remove four screws from the rear panel.
	[Side] 1. Remove top and bottom cover and the front and rear panel. 2. Unscrew four screws from the bracket 3. Remove the both side chassis.

3.2 Remove/ Install the MINI PCI

NISE 3120 provide one MINI PCI card socket. You can use it to . Before you install (or remove) MINI-PCI Card, you must remove the Top Chassis first.(see chapter3.1)

	
[install] Slowly slide the MINI PCI Card along the plastic guides in the both ends of the socket.	[install] Press down the MINI PCI Card.
	
[Remove]	[Remove] The Mini PCI will jump up. Then you can remove it.

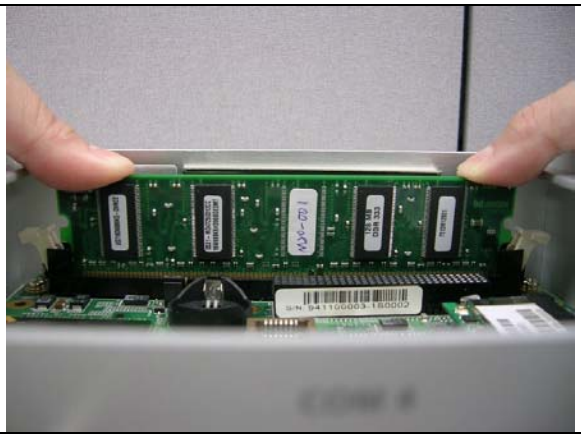
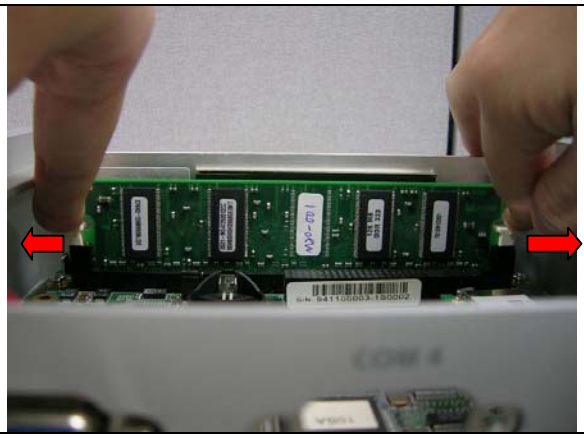
3.3 Remove/ Install the Antenna

NISE3120 provide one Antenna. Before you install the Antenna, you must separate the Antenna and remove the top chassis first.

	
Remove the Plug from the NISE 3120 rear panel.	Then you can install your Antenna wire.

3.4 Insert/ Remove the Memory modules

The NISE 3120 provides one DIMM memory socket. Before you install Memory modules, please make sure the two handles of the DIMM sockets are in the "open" position, and you must remove the top chassis first.

	
[Insert] Slowly slide the DIMM modules along the plastic guides in the both ends of the socket.	[Remove] Push the both handles outward, the memory module will be ejected by the mechanism in the socket.

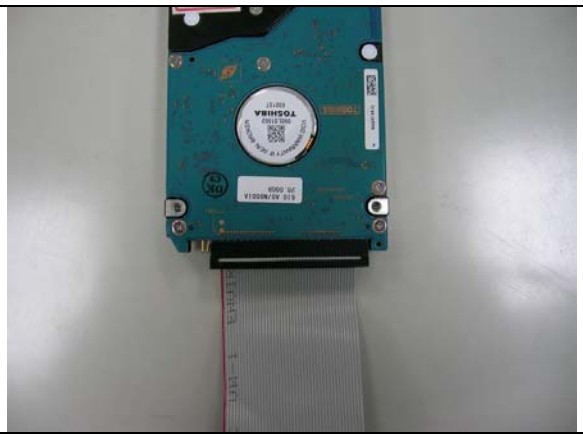
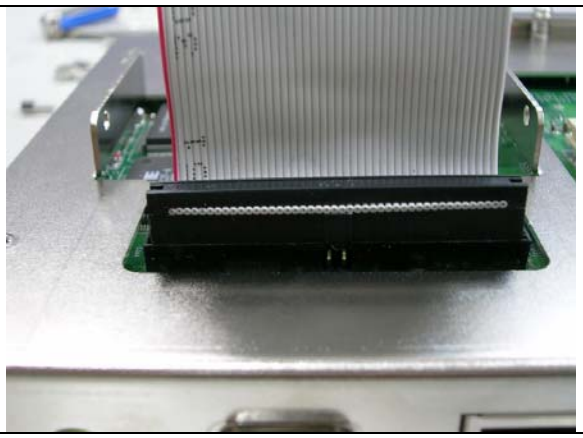
3.5 Insert/ Remove the CompactFlash™ Card

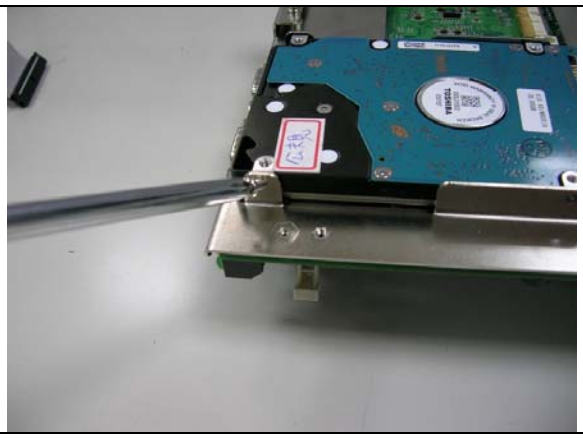
The NISE3120 provides one CompactFlash™ card socket. You can insert your CompactFlash™ Card directly. Before you insert the CF card, you must remove the bottom chassis first.

	
[Insert] Slowly slide the CF card along the plastic guides in the both ends of the socket.	[Remove] Pull out the memory card from the CF card socket.

3.6 Remove/ Install the Hard Disk

The NISE3120 provides one IDE socket. Before you install the Hard Disk, you must remove the bottom and the side chassis first.

	
Connect the IDE flat cable to the HDD. (pin1 is indicated in red).	Connect the other side of the cable to IDE connector. (Pin1 is indicated in red).

	
Screw on the HDD in the bracket with four screws.	

Appendix A: System Setting and Pin Assignments

A.1 EBC 420 System I/O Ports

A.2 EBC 420 Interrupt Assignment

Interrupt No.	Interrupt Source	Interrupt No.	Interrupt Source
IRQ0	Timer	IRQ1	KBC
IRQ2	Cascade	IRQ3	COM2
IRQ4	COM1	IRQ5	IR
IRQ6	FDC	IRQ7	LPT
IRQ8	RTC	IRQ9	Free (reserved for PCI)
IRQ10	Free (reserved for PCI)	IRQ11	COM3
IRQ12	PS/2 Mouse	IRQ13	Math Co-processor
IRQ14	IDE1	IRQ15	IDE2

* Also have three On-board PCI IRQ and add on card IRQ be assigned, the IRQ resource be dynamic assigned by BIOS.

Appendix B: Key components power consume

Chipset	12V_IN	+12V		+3VSB	+5VSB	Vcore (CPU) +1.2V	Vcore (CS5536) +1.2V	VTT +1.25V	+3.3V LAN	+2.5V MEM	+3.3V	+5V	+5V AUDIO
Castle	□	□	□	□	□	1.42	□	□	□	0.16	0.1	□	□
CS5536	□	□	□	□	□	□	0.333	□	□	□	0.182	□	□
DIMM X 1	□	□	□	□	□	□	□	0.75	□	4	□	□	□
Clock Gen	□	□	□	□	□	□	□	□	□	□		□	□
1394A (VT6307S)	□	□	□	□	□	□	□	□	□	□	0.112	□	□
LAN1 (RLT8110SB)	□	□	□	□	□	□	□	□	0.41	□	□	□	□
LAN2 ((RLT8110SB)	□	□	□	□	□	□	□	□	0.41	□	□	□	□
Mini-PCI	□	□	□	□	□	□	□	□	□	□	0.475	0.1	□
PC/104-Plus	□	1	□	□	□	□	□	□	□	□	3	2	□
AC97 (VT1616A)	□	□	□	□	□	□	□	□	□	□	0.038	□	0.052
Super IO (ITE8712)	□	□	□	0.1	□	□	□	□	□	□	□	0.6	□
Super IO (ITE8710)	□	□	□	□	□	□	□	□	□	□	0.6	□	□
IDE	□	□	□	□	□	□	□	□	□	□	□	1.5	□
Compact flash	□	□	□	□	□	□	□	□	□	□	□	0.1	□
USB x 4	□	□	□	□	□	□	□	□	□	□	□	2	□
Other	□	□	□	□	0.1	□	□	□	□	□	□	□	□
Total Consumption		1		0.1	0.1	1.42	0.333	0.75	0.82	4.16	4.34	6.3	0.052
Total Watt (Unit: W)		12		0.33	0.5	1.7	0.4	0.94	2.659	10.4	14.32-9.9	31.5-10-10	0.26
Transfer Voltage From (Unit: V)	12V_IN	+12V	+12V	12V_IN	12V_IN	+12V	+12V	+12V	+12V	+12V	+12V	+12V	+12V

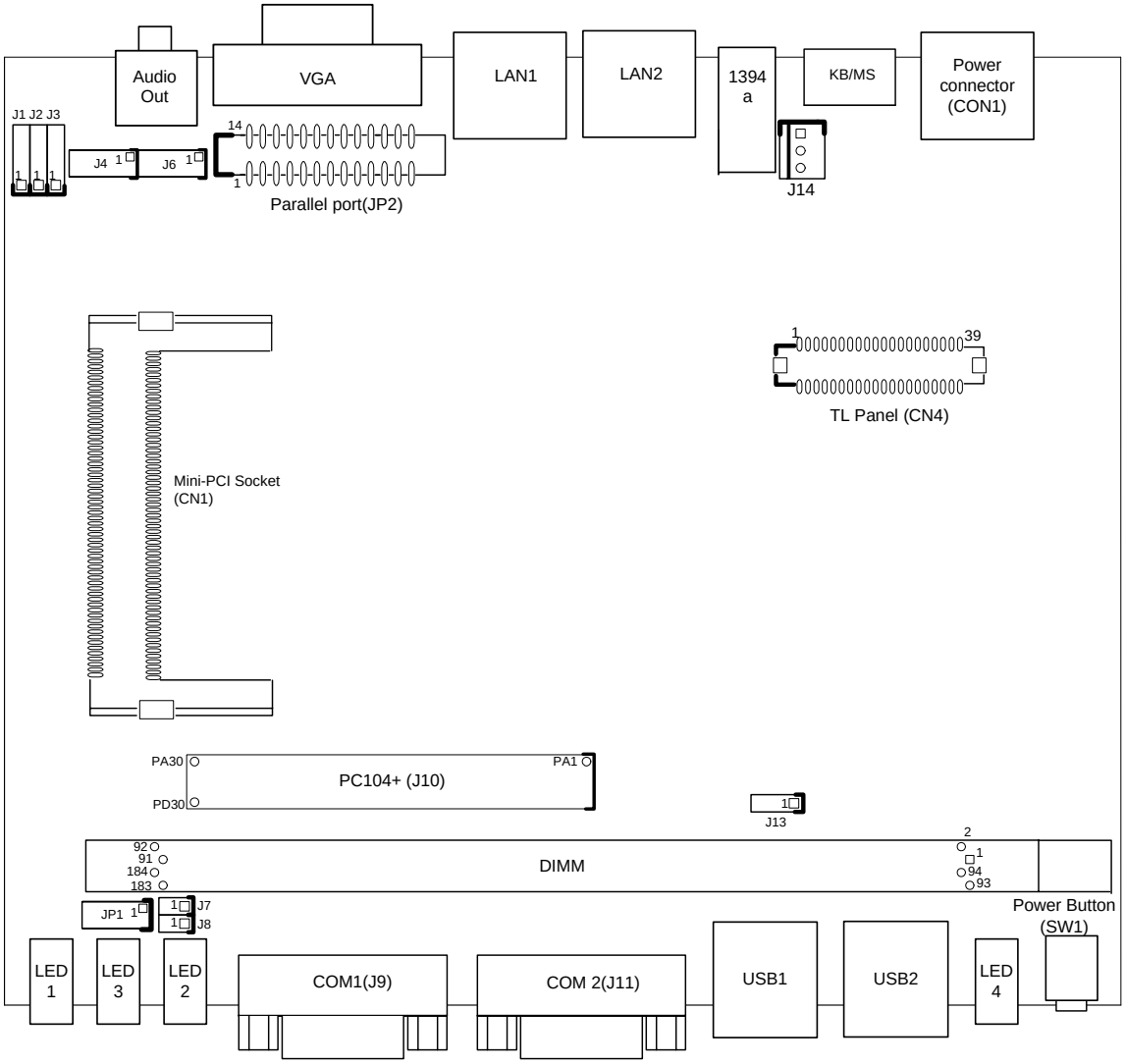
All consumption

Power Type	+12V_IN	+12V	TOTAL	NISE3120
Consumed watts	75	74	75	44
Consumed currents (Item A)	6.25	6.17	6.25	3.67
Actually required currents (Item A/0.85)	7.82	7.71	7.82	4.58

[Appendix C] PCI Device interrupt and BUS Assignments

Chipset	Configure BUS / Device/ Function	PCI INT#	REQ# / GNT# to IT8209R	Special feature description
AMD Geode Castle	0 / 1 / 1			Host-Hub Interface Bridge
AMD CS5535/5536	0 /15/ 4,5			USB 1.1/2.0 Controller
VT6307S	0 / 11 /0	D	2 to 1	1394A
VT6105	0 / 12 /0	C	1 to 1	10/100 LAN
VT6105	0 / 13 /0	B	1 to 2	10/100 LAN
MINI-SPCI	0 / 14 /0	A	1 to 3	
PC104-Plus	0 / 18 /0	A	2 to 2	

[Appendix D] EBC 420 Connector Specification



FigureD.1: Main Board-EBC 420

D-1 IDE connector (IDE1)

A. Connector size:2 x 22 = 44Pins BOX Header, (2.0 mm Pitch)

B. Connector pin definition

Pin	Definition	Pin	Definition
1	RSTDRV-	2	GND
3	IDED7	4	IDED8
5	IDED6	6	IDED9
7	IDED5	8	IDED10
9	IDED4	10	IDED11
11	IDED3	12	IDED12
13	IDED2	14	IDED13

15	IDED1	16	IDED14
17	IDED0	18	IDED15
19	GND	20	NC
21	IDEREQ-	22	GND
23	IDEIOW-	24	GND
25	IDEIOR-	26	GND
27	IDERDY	28	IDE-PD1
29	IDEACK-	30	GND
31	IDEIPQ	32	NC
33	DA1	34	66 DETECT
35	DA0	36	DA2
37	SCS1	38	SCS3
39	IDEACT-	40	GND
41	+5V	42	+5V
43	GND	44	NC

D-2 AUDIO LINE- IN (J1)/ AUDIO MIC- IN (J2)/ AUDIO CD- IN (J3)

A. Connector size: 1 X 4 = 4 Pin Header (2.54mm Pitch)

B. Connector pin definition

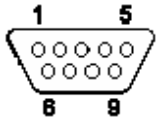
J1		J2		J3	
Pin	Definition	Pin	Definition	Pin	Definition
1	LINE IN - R	1	MIC_BIAS	1	CD - L
2	AUDIO GROUND	2	AUDIO GROUND	2	AUDIO GROUND
3	AUDIO GROUND	3	AUDIO GROUND	3	AUDIO GROUND
4	LINE IN – L	4	MIC_IN	4	CD – R

D-3 Serial Ports connector

A. Connector size: 2 X 5 = 9 Pin

B. Connector location and pin definition

- 9 PIN D-SUB MALE : COM1-2 (J9,J11)
- PIN HEADER connector COM3-4 (J4)



Pin	Definition	Pin	Definition
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CST
9	RI		

D-4 SMBUS connector (J7)

A. Connector size: 1 X 2 = 2 Pin Header (2.54mm Pitch)

B. Connector definition

Pin	Definition
1	SMBDATA
2	SMBCLK

D-5 Hardware Reset connector (J8)

A. Connector size: 1 X 2 = 2 Pin Header (2.54 Pitch)

B. Connector pin definition

Pin	Definition
1	GND
2	Reset

D-6 PC-104 PLUS connector (J10~PCI only 3.3v Device)

A. Connector pin definition

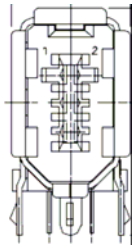
Pin	Description	Description	Description	Description
	A	B	C	D
1	Gnd/5.0V KEY	Reserved	+5V	AD00
2	VI/O	AD02	AD01	+5V
3	AD05	Gnd	AD04	AD03
4	C/BE0#	AD07	Gnd	AD06
5	Gnd	AD09	AD08	Gnd
6	AD11	VI/O	AD10	M66EN
7	AD14	AD13	Gnd	AD12
8	+3.3V	C/BE1#	AD15	+3.3V
9	SERR#	GND	SB0#	PAR
10	Gnd	PERR#	+3.3V	SDONE
11	STOP#	+3.3V	LOCK#	Gnd
12	+3.3V	TRDY#	Gnd	DEVSEL#
13	FRAME#	Gnd	IRDY#	+3.3V
14	Gnd	AD16	+3.3V	C/BE2#
15	AD18	+3.3V	AD17	Gnd
16	AD21	AD20	Gnd	AD19
17	+3.3V	AD23	AD22	+3.3V
18	IDSEL0	Gnd	IDSEL1	IDSEL2
19	AD24	C/BE3#	VI/O	IDSE;3

20	Gnd	AD26	AD25	Gnd
21	AD29	+5V	AD28	AD27
22	+5V	AD30	Gnd	AD31
23	REQ0#	Gnd	REQ1#	VI/O
24	Gnd	REQ2#	+5V	GNT0#
25	GNT1#	VI/O	GNT2#	Gnd
26	+5V	CLK0	Gnd	CLK1
27	CLK2	+5V	CLK3	Gnd
28	Gnd	INTD#	+5V	RST#
29	+12V	INTA#	INTB#	INTC#
30	-12V	Reserved	Reserved	Gnd/3.3V KEY

D-7 1394A connector **(J12)**

A. Connector size : 1394 PORT

B. Connector location and pin definition



Pin	Definition	Pin	Definition
1	+12V	2	GNDA
3	XTPB0M	4	XTPB0P
5	XTPB1M	6	XTPB1P

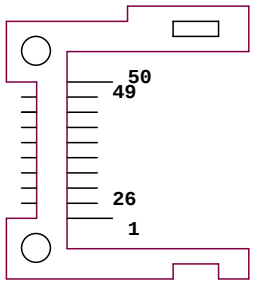
D-8 FAN POWER connector (J14)

A. Connector size: 1 X 3 = 3PIN W/FAN (2.54mm Pitch)

B. Connector pin definition

Pin	Definition
1	GND
2	+12V
3	Sensor

D-9 COMPACTFLASH SOCKET(J15)→ PRIMARY CHANNEL : Default MASTER



D-10 GPIO connector (JP1)

A. Connector size: 2 X 5 = 10 Pin Header (2.00mm Pitch)

B. Connector pin definition

Pin	Definition	Pin	Definition
1	GP27IN (PIN20)	2	GP23OUT (PIN24)
3	GP26IN (PIN21)	4	GP22OUT (PIN25)
5	GP25IN (PIN22)	6	GP21OUT (PIN26)
7	GP24IN (PIN23)	8	GP20OUT (PIN27)
9	+5V	10	GND

D-11 PIO connector (JP2)

A. Connector size: 2 X 13 = 25 Pin BOX Header (2.0 mm Pitch)

B. Connector location and pin definition

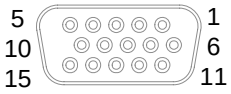
Pin	Definition	Pin	Definition
1	STB#	14	AFD#
2	PD0	15	ERR#
3	PD1	16	PINIT#
4	PD2	17	SLIN#
5	PD3	18	GND
6	PD4	19	GND
7	PD5	20	GND
8	PD6	21	GND
9	PD7	22	GND
10	ACK#	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT	26	N.C

D-12 POWER INPUT (JP3):+12V DC Adapter Board Power Input Connector

D-13 VGA connector (VGA1)

A. Connector size: 3 X 5 = 15 Pin

B. Connector location and pin definition-15 PIN D-SUB FEMALE

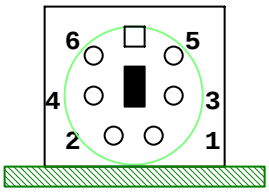


Pin	Definition	Pin	Definition
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	GND
7	GND	8	GND
9	KEY	10	GND
11	NC	12	ID1
13	HSYNC	14	VSYNC
15	ID3		

D-14 Key board connector (KB_MSA1)

A. Connector size: Mini din 6 pins

B. Connector location and pin definition

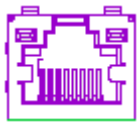


Pin	Definition	Pin	Definition
1	KBDAT	2	MSDAT
3	GND	4	+5V
5	KBCLK	6	MSCLK

D-15 LAN connector (LAN1/2)

A. Connector size: RJ-45

B. Connector location and pin definition

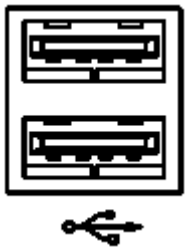


Pin	Definition	Pin	Definition
1	TX+	2	TX-
3	RX+	4	LAN1
5	LAN1	6	RX-
7	LAN2	8	LAN2
9	LAN Speed LED	10	Vcc3
11	LAN Link LED	12	LAN ACT LED#

D-16 USB connector **(USB1 / 2)**

A. Connector size : USB PORT

B. Connector location and pin definition



Pin	Definition	Pin	Definition
1	USB POWER +5V	2	USB PORT * D-
3	USB PORT * D+	4	GROUND POWER
5	USB POWER +5V +	6	USB PORT * D-
7	USB PORT * D+	8	GROUND POWER

D-17 POWER ON & IDE Active & LAN/link/ Active & Alarm & Status LED connector (LED1/2/3/4)

A. Connector size: 2 X 2 = 4PIN (2.54mm Pitch)

B. Connector location

D-18 CN1 (MINI-PCI Slot): Standard MINI PCI slot

A. Connector pin definition

Pin	Description	Pin	Description	Pin	Description	Pin	Description
1	TIP(NC)	63	+3.3V	2	RING(NC)	64	Frame#
3	8PMJ-3(NC))	65	CLKRUN(NC)	4	8PMJ-1(NC)	66	Target Ready#
5	8PMJ-6(NC)	67	System Error#	6	8PMJ-2(NC)	68	Stop#
7	8PMJ-7(NC)	69	Ground	8	8PMJ-4(NC)	70	+3.3V
9	8PMJ-8(NC)	71	PERR	10	8PMJ-5(NC)	72	Device Select#
11	LED1-GRNP(NC)	73	CMD/Byte Enable1	12	LED2-YELP(NC)	74	Ground
13	LED1-GRNN(NC)	75	AD14	14	LED1-YELP(NC)	76	AD15
15	CHSGND(NC)	77	Ground	16	Reserved	78	AD13
17	Interrupt B#	79	AD12	18	+5V	80	AD11
19	+3.3V	81	AD10	20	Interrupt A#	82	Ground
21	Reserved	83	Ground	22	Reserved	84	AD9
23	Ground	85	AD8	24	3V3_SB	86	CMD/Byte Enable0
25	Clock	87	AD7	26	Reset#	88	+3.3V
27	Ground	89	+3.3V	28	+3.3V	90	AD6
29	Request#	91	AD5	30	GNT#	92	AD4
31	+3.3V	93	Reserved	32	Ground	94	AD2
33	AD31	95	AD3	34	PME#	96	AD0
35	AD29	97	+5V	36	Reserved	98	Reserved-wip4
37	Ground	99	AD1	38	AD30	100	Reserved-wip4
39	AD27	101	Ground	40	+3.3V	102	Ground
41	AD25	103	AC-SYNC(NC)	42	AD28	104	M66EN
43	Reserved	105	AC-SDATA-IN(NC)	44	AD26	106	AC-SDATA-OUT(NC)
45	CMD/Byte nable3#	107	AC-BIT-CLK(NC)	46	AD24	108	AC-CODEC-ID0#(NC)
47	AD23	109	AC-CODEC-ID1#(NC)	48	ID Select	110	AC-RESET#(NC)
49	Ground	111	MOD-AUDIO-OUT(NC)	50	Ground	112	Reserved
51	AD21	113	Audio Ground	52	AD22	114	Ground
53	AD19	115	SYS-AUDIO-OUT(N	54	AD20	116	SYS-AUDIO-IN(NC)

			C)				
55	Ground	117	SYS-AUDIO-OUT-GND(NC)	56	Parity	118	SYS-AUDIO-IN-GND
57	AD17	119	Audio Ground	58	AD18	120	Audio Ground
59	CMD/Byte Enable2	121	Reserved(NC)	60	AD16	122	MPCIACT#
61	Initiator Ready#	123	VCC5VA	62	Ground	124	3V3_SB

D-19 SINGLE 24 BIT TTL PENAL CONNECTOR(CN4 – DF13 MALE CONNECTOR)

A. Connector pin definition

Pin	Description	Pin	Description
1	+5V POWER	2	+5V POWER
3	GROUND POWER	4	GROUND POWER
5	+3.3V POWER	6	+3.3V POWER
7	ENABLE BACKLIGHT	8	GROUND POWER
9	FLAT PANEL DATA OUT 0	10	FLAT PANEL DATA OUT 1
11	FLAT PANEL DATA OUT 2	12	FLAT PANEL DATA OUT
13	FLAT PANEL DATA OUT 4	14	FLAT PANEL DATA OUT 5
15	FLAT PANEL DATA OUT 6	16	FLAT PANEL DATA OUT 7
17	FLAT PANEL DATA OUT 8	18	FLAT PANEL DATA OUT 9
19	FLAT PANEL DATA OUT 10	20	FLAT PANEL DATA OUT 1
21	FLAT PANEL DATA OUT 12	22	FLAT PANEL DATA OUT 13

Pin	Description	Pin	Description
23	FLAT PANEL DATA OUT 14	24	FLAT PANEL DATA OUT 15
25	FLAT PANEL DATA OUT 16	26	FLAT PANEL DATA OUT 17
27	FLAT PANEL DATA OUT 18	28	FLAT PANEL DATA OUT 19
29	FLAT PANEL DATA OUT 20	30	FLAT PANEL DATA OUT 21
31	FLAT PANEL DATA OUT 22	32	FLAT PANEL DATA OUT 23
33	GROUND POWER	34	GROUND POWER
35	FLAT PANEL CLOCK	36	FLAT PANEL VERTICAL SYNC
37	FLAT PANEL DATA ENABLE	38	FLAT PANEL HORIZONTAL SYNC
39	+12V POWER	40	ENABLE VEE

B. FPD RGB MAPPING

	18 BIT	**24 BIT**		**18 BIT**	**24 BIT**
PIN	**R G B**	**R G B**	**PIN**	**R G B**	**R G B**

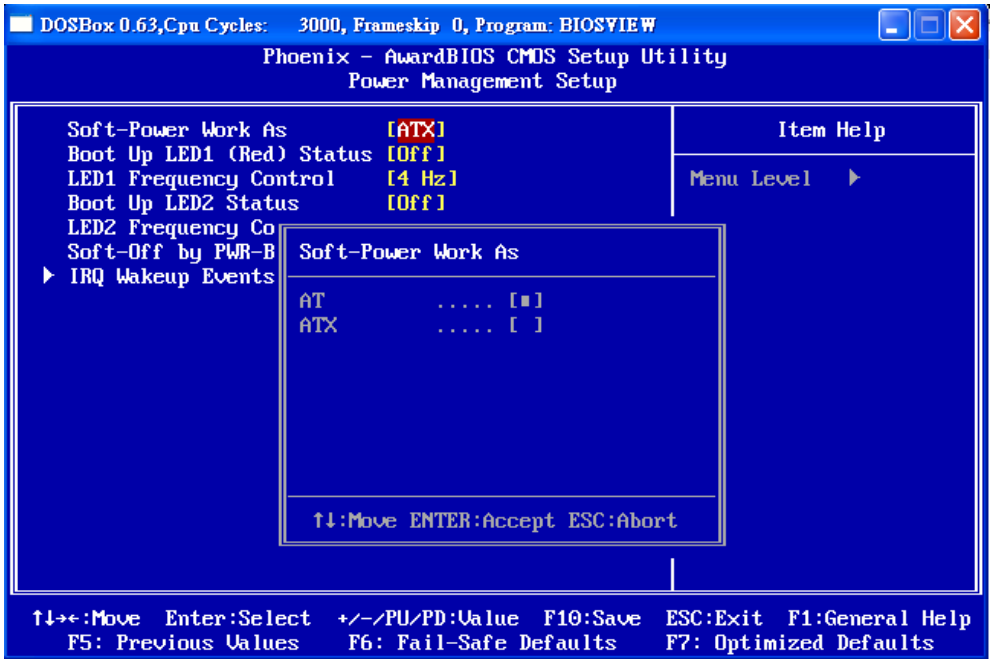
FPD0		**B0**	**FPD12**	**G4**	**G4**
FPD1		**B1**	**FPD13**	**G5**	**G5**
FPD2	**B2**	**B2**	**FPD14**	**G6**	**G6**
FPD3	**B3**	**B3**	**FPD15**	**G7**	**G7**
FPD4	**B4**	**B4**	**FPD16**		**R0**
FPD5	**B5**	**B5**	**FPD17**		**R1**
FPD6	**B6**	**B6**	**FPD18**	**R2**	**R2**
FPD7	**B7**	**B7**	**FPD19**	**R3**	**R3**
FPD8		**G0**	**FPD20**	**R4**	**R4**
FPD9		**G1**	**FPD21**	**R5**	**R5**
FPD10	**G2**	**G2**	**FPD22**	**R6**	**R6**
FPD11	**G3**	**G3**	**FPD23**	**R7**	**R7**

D-20 CMOS Status Select: (JP13)

Pin No.	Status	Function Description
1-2	Short*	Normal Operation
2-3	Short	Clear CMOS Data

[Appendix E] BIOS setting: How to enable Power on after Power failure

1. Soft-Power Work As - AT



2. Software-Off by PWR-BTTN - Instant-off