



深圳开源通信有限公司 OpenVox-Best Cost Effective Asterisk Cards



OpenVox IPC100 Series

Atom Fan-less CPU Boards

Hardware Installation V1.0.03

Hardware Version: V1.2







深圳开源通信有限公司 OpenVox-Best Cost Effective Asterisk Cards

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Declaration Of Conformity

We herewith certify that product

IPC100A IPC100B

Conforms with the

EC -directive 2004/108/EC (EMC)

To assess the product's compliance the following standards were applied:

EN61000-6-3 (2007) for residential environments

(generic device emissions)-Class Λ

EN61000-6-2 (2005) for industrial environments (generic device immunity)

EN55022 (2007) (ITE device emissions)-Class A

EN55024 (2003) (ITE device immunity)

This product also meet the requirements of

FCC Part 15 Subpart B -- Class A

This explanation is responsible for the manufacturer

OpenVox

Given by:

President,OpenVox Jan 22,2010



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1. Compliance Information

1.1 EMI and EMS

For FCC, OpenVox IPC100 has been tested as a CPU board installed in an enclosure. No further testing is needed if the board works with other components FCC qualified Please see <u>http://www.fcc.gov/oet/</u> for more details.

CE must be done at the level of completed. Please contact OpenVox for assistance and documentation. OpenVox IPC100 can be used as an I.T.E, as well as a generic device. As an I.T.E, it must be tested and passed according to EN55022 and EN55024; as a generic device, it applies to EN 61000-6-2 (EMI test for commercial and light industrial environment) and EN61000-6-3 (Immunity test for industrial environment). OpenVox IPC100 meets both two measuring standards with class A result, specially the class A for emission. OpenVox will provide Class B products in the future. Also, we will offer adapter with CE verification if customers require. It is suggested that 12V@5A should be typical value considering I/O peripheral.

1.2 ESD

For satisfied resistance of electrostatic discharge events (ESD), the case of OpenVox IPC100 board should be grounded earth Ground terminal. (E.g. Through the mounting holes, or the serial port connector). Under this condition, the system can get class A evaluation according to EN 61000-4-2, or the system may get class B evaluation.

1.3 Recycling and disposal



Do not discard electronic products in household trash! All waste electronic equipment should be recycled according to local regulations.

Information for the recycler:

Please cut off Lithium battery, if present, for separate recycling. OpenVox enclosures are made of aluminum.

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2. Introduction

2.1 Features

OpenVox IPC100 is a reliable mini-ATX board. The fan-less design, as low as 6W power, enables more abilities to operate in harsh industrial environments. Integrated up to 3 Ethernet ports, IPC100 motherboard provides flexible options for different targets. IPC100 support Mini PCI cards perfectly.

Specific Features:

Powerful Intel Atom Z500P series Processor up to 1.6GHz 512 KB L2 cache, 24K data, 32K instruction Two mini PCI interfaces and other expansions Two GB DDR2 SDRAMs, 64 bit wide for high memory bandwidth 8Mbit flash for AMI BIOS Flexible combinations of data storage solutions Three Ethernet ports Wide voltage range: 7 to 20V (absolutely) DC supply through DC jack One serial port for debug usage Header for LPC bus (use for flash recovery or I/O expansions) Low EMI Emission level and high Electro Magnetic Susceptibility

2.2 Specification

CPU: Intel Atom Z510P 1.1GHz/ Z520P 1.3GHz /Z530P 1.6GHz DRAM: Slot onboard, up to 2GB DDR2 400/533 SDRAM (double sides 1GB) Chipset: Intel Poulsbo Southbridge: Poulsbo integrated Storage: Compact Flash socket, 44-pin PATA connector; one SATA slot Power: DC jack, 7V to 20V, suggest 12V supply Front panel LED: For programmable GPO status indicator Push button support Expansion: Two mini PCI slots Network connectivity: Three Ethernet ports (10/100Mbps speed) I/O: One DB9 RS232 serial port; two USB 2.0 ports Board size: 6×6" (152.4×152.4 mm) Operating temperature: 0°C to 60°C Firmware: AMI BIOS PCB layer: 8 Power dissipation: ~6W



2.3 OEM information

Standard OEM options available:

Name	Function	Operating Temperature
IPC100B	Z530P/2*100M LAN/1*Gigabit LAN	0°C to 60°C
IPC100C	Z510P/2*100M LAN/1*Gigabit LAN	0°C to 60°C

Table-1 Standard options

IPC_VGA OEM information:

Name: IPC_VGA V1.1 Function: SDVO to VGA daughter board

OEM options:

The following options can be configured for OEM options: DRAM size (1GB, 2GB) CPU speed (1.1 GHz/ 1.3GHz / 1.6GHz) Configuration options: 2×100Mbps / 1×Gigabit 1×100Mbps / 1×Gigabit 2×100Mbps 1×Gigabit 0°C to 85°C (only @ Z510PT/Z520PT)



3. Compatibility

3.1 Hardware

Following PCI interfaces and RAM have been tested:

Mini PCI slot:

Broadcom BCM4318 wireless LAN adapter Intel(R) PRO/Wireless 2200BG Network Connection Intel(R) PRO/Wireless 2915BG Network Connection

Mini PCI cards:

OpenVox B400M, B200M, B100M, A400M

Memory:

Kingston KVR667D2S5/1G, KVR800D2S6/1G, KVR533D2S4/512MB

3.2 Operating system

Sugton	Results					
System	IDE,STAT	Network	USB	Serial port	Mini-PCI	
Windows XP	Pass	Pass	Pass	Pass	Pass	
Centos5.3	Pass	Pass	Pass	Pass	Pass	
Centos5.4	Pass	Pass	Pass	Pass	Pass	
Trixbox-2.6	Pass	Pass	Pass	Pass	Pass	
Elastix-1.6	Pass	Pass	Pass	Pass	Pass	

Table-2 The Compatibility of Operating system



4. Connectors and Definitions of Jumpers

4.1 Layout



Figure-1 IPC100 Layout



4.2 Connectors

4.2.1 List

ID	Name	Function	Page
1	CN1	SDVO Display Output	11
2	CN2	External LEDs and GPIO	12
3	CN6	Clear CMOS	12
4	CN9	Power Supply Jacket	12
5	CN13	DDR2 Memory Slot	13
6	CN15	Mini PCI Slot 1	13
6	CN16	Mini PCI Slot 2	13
7	CN17	Ethernet 1	14
7	CN18	Ethernet 2	14
8	CN19	Ethernet 3	14
9	CN20	RS232 Serial Port	15
10	CN24	PS/2 Keyboard and Mouse Port	15
11	CN25	SATA Power Supply	15
12	CN30	44 Pin IDE Interface	16
13	CN32	Compact Flash Interface	17
14	CN33	SATA Interface	18
15	CN34	USB Port	18
16	CN35	Main Power in Jacket	18
17	CN43	LPC Interface	18

Table-3 Connectors





4.2.2 Descriptions

(1) CN1 SDVO Display Output

Attached with IPC_VGA card for VGA display



Figure-2 IPC_VGA Interface

Pin	Name	Pin	Name
1	RED positive	11	Reset#
2	Red negative	12	GND
3	Ctrl CLK	13	GND
4	Green positive	14	GND
5	Green negative	15	3.3v
6	Blue positive	16	3.3v
7	Blue negative	17	3.3v
8	CLK positive	19	3.3v
9	CLK negative	19	5v
10	Ctrl Data	20	5v

Table-4 IPC_VGA Interface Pins



(2) CN2 External LEDs and GPIOs





Figure-3 External LEDs and GPIOs schematic

Pin	Name	Pin	Name
1	LED1P (3.3V)	2	LED1N
3	LED2P(3.3V)	4	LED2N
5	LED3P(3.3V)	6	LED3N
7	GPIO	8	GND

Table-5 External LEDs and GPIOs Pins

(3) CN6 clears CMOS

Setting	Function
Close 1-2	Clear CMOS
Open 1-2 (default)	Normal

Table-6 CMOS Setting

(4) CN9 Power Supply Jacket DC out @12V



Pin	Name
1	Vin
2	GND

Figure-4 Power Jacket

Table-7	Power J	lacket	Pins
---------	---------	--------	------



(5) CN13 DDR2 Memory Slot

1.8V DDR2 Support for a maximum of 2GB of DRAM

(6) CN15 CN16 Mini PCI Slots 1&2

Type III 124 Pin 3.3V 32bit 33Mhz

Pin	Name	Pin	Name	Pin	Name
1	TIP	43	RESERVED	83	GROUND
2	RING	44	AD[26]	84	AD[09]
3	8PMJ-3	-	Key	85	AD[08]
4	8PMJ-1	-	-	86	C/BE[0]#
5	8PMJ-6	45	C/BE[3]#	87	AD[07]
6	8PMJ-2	46	AD[24]	88	3.3V
7	8PMJ-7	47	AD[23]	89	3.3V
8	8PMJ-4	48	IDSEL	90	AD[06]
9	8PMJ-8	49	GROUND	91	AD[05]
10	8PMJ-5	50	GROUND	92	AD[04]
11	LED1_GRNP	51	AD[21]	93	RESERVED
12	LED2_YELP	52	AD[22]	94	AD[02]
13	LED1_GRNN	53	AD[19]	95	AD[03]
14	LED2_YELN	54	AD[20]	96	AD[00]
15	CHSGND	55	GROUND	97	5V
16	RESERVED	56	PAR	98	RESERVED_WIP5
17	INTB#	57	AD[17]	99	AD[01]
18	5V	58	AD[18]	100	RESERVED_WIP5
19	3.3V	59	C/BE[2]#	101	GROUND
20	INTA#	60	AD[16]	102	GROUND
21	RESERVED	61	IRDY#	103	AC_SYNC
22	RESERVED	62	Ground	104	M66EN
23	GROUND	63	3.3V	105	AC_SDATA_IN
24	3.3VAUX	64	FRAME#	106	AC_SDATA_OUT
25	CLK	65	CLKRUN#	107	AC_BIT_CLK
26	RST#	66	TRDY#	108	AC_CODEC_ID0#
27	GROUND	67	SERR#	109	AC_CODEC_ID1#
28	3.3V	68	STOP#	110	AC_RESET#
29	REQ#	69	GROUND	111	MOD_AUDIO_MON

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GNT#	70	3.3V	112	RESERVED
3.3V	71	PERR#	113	AUDIO_GND
GROUND	72	DEVSEL#	114	GROUND
AD[31]	73	C/BE[1]#	115	SYS_AUDIO_OUT
PME#	74	GROUND	116	SYS_AUDIO_IN
AD[29]	75	AD[14]	117	SYS_AUDIO_OUT GND
RESERVED	76	AD[15]	118	SYS_AUDIO_IN GND
GROUND	77	GROUND	119	AUDIO_GND
AD[30]	78	AD[13]	120	AUDIO_GND
AD[27]	79	AD[12]	121	RESERVED
3.3V	80	AD[11]	122	MPCIACT#
AD[25]	81	AD[10]	123	VCC5VA
AD[28]	82	GROUND	124	3.3VAUX
	GNT# 3.3V GROUND AD[31] PME# AD[29] RESERVED GROUND AD[30] AD[27] 3.3V AD[25] AD[28]	GNT# 70 3.3V 71 GROUND 72 AD[31] 73 PME# 74 AD[29] 75 RESERVED 76 GROUND 77 AD[30] 78 AD[27] 79 3.3V 80 AD[25] 81 AD[28] 82	GNT# 70 3.3V 3.3V 71 PERR# GROUND 72 DEVSEL# AD[31] 73 C/BE[1]# PME# 74 GROUND AD[29] 75 AD[14] RESERVED 76 AD[15] GROUND 77 GROUND AD[30] 78 AD[13] AD[27] 79 AD[12] 3.3V 80 AD[11] AD[25] 81 AD[10] AD[28] 82 GROUND	GNT#703.3V1123.3V71PERR#113GROUND72DEVSEL#114AD[31]73C/BE[1]#115PME#74GROUND116AD[29]75AD[14]117RESERVED76AD[15]118GROUND77GROUND119AD[30]78AD[13]120AD[27]79AD[12]1213.3V80AD[11]122AD[25]81AD[10]123AD[28]82GROUND124

Table-8 Mini PCI Slot Pins

(7) CN17/CN18 10/100M Ethernet Ports 1 & 2

Support for a maximum speed of 100Mbps Ethernet



Pin	Name	Pin	Name
1	TX+	5	NC
2	TX-	6	RX-
3	RX+	7	NC
4	NC	8	NC

Table-9 10/10M Ethernet Port Pins

(8) CN19 Giga Ethernet Port

1	8
	5555
<u> </u>	

Pin	Name	Pin	Name
1	BI_DA+	5	BI_DC-
2	BI_DA-	6	BI_DB-
3	BI_DB+	7	BI_DD+
4	BI_DC+	8	BI_DD-

Table-10 Giga Ethernet Port Pins





(9) CN20 RS232 Serial Port



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

Table-11 RS232 Serial Port Pins

(10) CN24 PS/2 Keyboard and Mouse Port

Pin	Name	Pin	Name
1	+5V	4	KBCLK
2	MSCLK	5	KBDATA
3	MSDATA	6	GND

Table-12 PS/2 port Pins

(11) CN25 SATA Power Supply



Figure-5 SATA Power Interface

Pin	Name	Pin	Name
1	5v	3	Ground
2	Ground	4	12v

Table-13 SATA Power interface pin

NOTE:

Before using the jacket, make sure the voltage of DC-in jacket (CN35) be 12V + 5% below.



(12) CN30 44 Pin IDE Interface



Figure-6 IDE Interface Pins

44 pin (2.0mm pitch) for 2.5" hard disks

Controller Drive 1 or 2 Drive 1 or 2 +--+ +--+ +--+ 1::|= = | : : |=== =|::| <-Pin 1 1::|= = | : : |= =[::] 1::1 =|::| ==[::] ::: 1:1 = : : : 1::| =|::| =====|::| 1::1 = | : : |======== | : : | == | : : |========= | : : | |::|== + - ++--+ +-+

Pin	Name	Pin	Name
1	/RESET	23	/DIOW
2	GND	24	GND
3	DD7	25	/DIOR
4	DD8	26	GND
5	DD6	27	IORDY
6	DD9	28	SPSYNC:CSEL
7	DD5	29	/DMACK
8	DD10	30	GND
9	DD4	31	INTRQ
10	DD11	32	/IOCS16
11	DD3	33	DA1
12	DD12	34	PDIAG
13	DD2	35	DA0
14	DD13	36	DA2
15	DD1	37	/IDE_CS0
16	DD14	38	/IDE_CS1
17	DD0	39	/ACTIVE
18	DD15	40	GND
19	GND	41	+5V
20	KEY	42	+5V
21	DMARQ	43	GND
22	GND	44	GND

 Table-14 IDE Interface Pins

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(13) CN32 Compact Flash Interface

Pin	Name	Pin	Name
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	/CE1	32	/CE2
8	A10	33	/VS1
9	/OE	34	/IORD
10	A9	35	/IOWR
11	A8	36	/WE
12	A7	37	/READY:/RDY:/IREQ
13	VCC	38	VCC
14	A6	39	CSEL
15	A5	40	/VS2
16	A4	41	RESET
17	A3	42	/WAIT
18	A2	43	/INPACK
19	A1	44	/REG
20	A0	45	/BVD2:SPKR
21	D0	46	/BVD1:STSCHG
22	D1	47	D8
23	D2	48	D9
24	/WP:/IOIS16	49	D10
25	/CD2	50	GND

Table-15 Compact Flash Interface Pins





(14) CN33 SATA Interface

_	Pin	Name
	1	Ground
	2	Transmit +
- n	3	Transmit -
	4	Ground
- e-	5	Receive -
	6	Receive +
	7	Ground

Table-16 SATA Interface Pins

(15) CN34 USB Port

500 mA Continuous Current per Channel Short-Circuit and Thermal Protection with Over current Logic.



Pin	Name
1	5v
2	Data-
3	Data+
4	Ground

Table-17 USB Interface Pins

(16) CN35 Main Power Jacket DC in @12V

	Pin	Name
-(•	1	GND
1 2	2	Vin

Table-18 Main Power jacket Pins

(17) CN43 LPC Interface

Pin	Name	Pin	Name
1	LPC_CLK	9	AD3
2	SERIRQ	10	+3.3V
3	AD0	11	FRAME#
4	NC	12	GND
5	AD1	13	GND
6	GND	14	NC
7	AD2	15	48MHz_CLK
8	+5V	16	NC

Table-19 LPC Interface Pins

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4.3 Jumpers

4.3.1 Lists

Name	Function	
JP2	Manual Reset In	
JP3	IDE/SATA Configuration	

Table-20 Jumpers

4.3.2 Descriptions

JP2 Manual Reset

Setting	Function
Close 1-2	Reset System
Open 1-2 (default)	Normal

Table-21 JP2 Setting

JP3 IDE/SATA Configuration

Default Setting	Function
Close 1-2	CF Master (open it means CF slave)
Close 3-4	IDE Master (open it means IDE slave)
Close 5-6	Disable SATA (default)

Table-22 JP3 Setting

Note:

- 1. **There is a very important point** that only one device can be allowed to exist in one master (slave) simultaneously. The IDE device should be considered as a SATA hard disk drive/a type II CF card/an IDE hard disk drive.
- 2. Before installing CF card or IDE hard disk, SATA (close 5-6) should be disabled. If not, system will spend much time to detect IDE devices.



4.4 Indicators of System Status

4.4.1 List

Name	Function
LED6	GPO use
LED17	GPO use
LED16	GPO use
SW1	GPI use

 Table-23 Indicators of System Status

4.4.2 Descriptions

What are the status of LEDs when system booting?

- (1) All three LEDs will light on after system power-up.
- (2) The right LED is off, which means that system is running POST. BIOS startup messages will be displayed on serial console.
- (3) Two LEDs on the right side are off, which means that POST is complete. At this time, press F4 to enter BIOS menu to modify the setting.

How to use the status indicator LEDs and Micro switch SW1?

After system boots completely, entering I/O space based address 480H and edit register values as following:

480H+28H	7	6	5	4	3	2	1	0
							Bit2	
	Bit2=	1	LED6 w	ill be	light o	n		
	Bit2=	0	LED6 w	ill be	light o	ff		
480H+09H	7	6	5	4	3	2	1	0
							Bit2	
	Bit2=	1	LED16	will be	e light	on		
	Bit2=	0	LED16	will be	e light	off		
480H+08H	7	6	5	4	3	2	1	0
						Bit3		
	Bit3=	1	LED17	will be	e light	on		
	Bit3=	0	LED17	will be	e light	off		



480H+08H	7	6	5	4	3	2	1	0
		Bit7						
	Wher	n press S	W1, Bi	t7=0				
	Wher	n SW1 be	e releas	ed, Bit	7=0 (de	efault)		
CN2.7-8pin GPIO								
480H+04H	7	6	5	4	3	2	1	0
			Bit6					
	Bit6=0, CN2.7 as an output port							
Bit6=1, CN2.7 as an input port								
480H+08H	7	6	5	4	3	2	1	0
			Bit6					

As output port, set Bit6=1, CN2.7 will put out High level As output port, set Bit6=0, CN2.7 will put out Low level As input port, feeding High level to CN2.7, automatically bit6 setting to 1 As input port, feeding Low level to CN2.7, automatically bit6 setting to 0



5. BIOS Setup Utility

5.1 Enter BIOS setup menu

When system adds power up, press F4 on keyboard of remote PC connected IPC100's serial port.



Figure-6 System power up

Notice: Press F1 when following picture appeared

AMIBIOS(C)2006 American Megatrends, Inc. BIOS Date: 12/29/09 17:46:39 Ver: 08.00.15 CPU : Intel(R) Atom(TM) CPU Z530 @ 1.60GHz Speed : 800MHz Press F11 for BBS POPUP (F3 on Remote Keyboard) Initializing USB Controllers .. Done. 1019MB OK Auto-detecting USB Mass Storage Devices .. 00 USB mass storage devices found and configured. CMOS Checksum Bad Press F1 to Run SETUP Press F2 to load default values and continue

Figure-7 Press F1 or F2

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System will show the main menu:

(1) Main menu

Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
* System	Overview	*********	*******	************	************************** * Use	[ENTER], [TAB] * [SHTET-TAB] to *
* AMIBIOS	S 00 . 00 . 11	_			* sele	ect a field. *
 version Build [)ate:12/29/09)			* Use	[+] or [-] to *
* 10 *	:1PU14006	5			* con1 *	rigure system lime. *
* Process * Intel(sor R) Atom(TM) (CPU Z530	@ 1.60G	Hz	*	*
* Count	:1				*	I *
* System * Size	Memory :1019MB				* *	Select Screen * Select Item *
* * System * System *	Time Date		[00:0] [Tue	1:59] 01/01/2002]	* +- * Tab * F1 * F10	Change Field * Select Field * General Help * Saue and Exit *
∗ CMC Lo∙ ∗	-Module:0D2.0	023x, Hi-	Module:0	D2.016×	* ESC *	Exit *
******	v02.61 ((C)Copyrigh	******** t 1985-2	88888888888888888888888888888888888888	********** n Megatrer	nds, Inc.

Figure-8 Main menu

(2) Press " " key, you will see submenus as following:

Advanced menu

Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit	
* Advanc	ed Settings	********			* Confi	igure CPU.	*
* *****	*******	********	******	*******	*** *		*
∗ WARNIN	G: Setting w	rong_value	s in bel	ow sections	*		*
*	may cause	system to	malfunc	tion.	*		*
*					*		*
* * UPU	Configuratio	n			*		*
* * 10E	configuratio	n ation			*		
* * Supe	waro Hoalth	Configurat	ion		*		*
* * ACPT	Configurati	on	1011		*		*
* * MPS	Configuratio	n			*		*
* * PCI	Express Conf	iguration			*		*
* * Smbi	os Configura	tion			* *	Select Screen	*
* * Remo	te Access Co	nfiguratio	n		* **	Select Item	*
* * USB	Configuratio	n			* Enter	• Go to Sub Scree	n *
*					* +1	General Help	*
*					* F10 	Save and Exit	*
*					* ESU	EXIL	*
*					*		*
*******	*****	*******	******	******	**********	******	
	u02_61_(C)Conuriah	+ 1985-2	2006 America	n Megatrend	ls Inc	

Figure-9 Advanced menu



(3) PCIPnP menu

	Main Advanced	PCIPnP	Boot	Security	Chip	oset	Exit	
**	*****	********	******	*********	*****	****	*****	****
*	Hdvanced PUI/PnP S	ettings			**	LHN	RUM Control	*
*	*************	******	******	*******	****			*
*	WHRNING: Setting w	rong values	s in bel	ow sections	**			*
*	may cause	system to	maltunc	tion.	**			*
*					**			*
*	PXE_KIL Control		LD1sa	bledl	**			*
*			LNOI		**			*
*	Plug & Play U/S		LNOI		**			*
*	Ollegate TDO to DC	тисо	[04]		**			*
	Balatta Spaaning	T AOH	[Picel	1.d1	**			
2	PCT THE Buckactor		Dica	blodl	**			2
2	OffRoard PCT/TSO T	DE Card	[Duto		**	*	Salact Scroop	2
*	01100010101713011		inuto	,	**	**	Select Item	
*	TR03		[Auai	lablol	**	+-	Change Ontion	*
*	TR04		[Auai	lablel	**	F1	General Heln	*
*	TRÔS		[Avai	lablel	**	FIO	Save and Exit	*
*	ŤRÔŽ		[Avai	lablel	**	FSC	Exit	*
*	TR09		[Avai	lablel	**	_		*
*	IR010		[Avai	lablel	**			*

Figure-10 PCIPnP menu

(4) Boot menu

	Main	Advanced	PCIPnP	Boot	Security	Chi	ipset	Exit	
* *	Boot	Settings	**********	*******	(*************************************	****) ; *** ;	• Confi • durin	gure Setti g System B	ngs * oot. *
* *	~ DUI	or seriings co	ni iyurativn			•	*		*
* *						9 9 9	e e		*
*							•		*
* *						ہ ب	* * * *	Select Scr	* * en *
* *						9 9 9	* ** * Enter * F1	Select It Go to Sub	em * Screen *
*						4	• F10 • ESC	Save and I Exit	xit *
*	*****	*****	******	******	*****) ; ****)	*	*******	* *

Figure-11 Boot menu



(5) Security menu

Security Settings Supervisor Password :Not Installed User Password :Not Installed Change Supervisor Password Change User Password Boot Sector Virus Protection [Disabled] * * * Select Screen * * Select Item * Enter Change * * Select Item * Enter Change * * * * * * * * * * * * *	Main Advanced	PCIPnP	Boot	Security	Chipset	Exit
* *	Security Settings Supervisor Password User Password Change Supervisor P. Change User Password Boot Sector Virus Pr	:Not Inst Not Inst assword d	alled alled [Disa	bled]	* Insta * passu * * * * * * * * * * * * * * * * * *	ill or Change the word. Select Screen Select Item Change General Help Save and Exit Exit

Figure-12 Security menu

(6) Chipset menu



Figure-13 Chipset menu

(7) Exit menu

Main Advanced	PCIPnP Boot	Security C	hipset <mark>Exit</mark>
* Exit Options * Save Changes and Exi * Discard Changes and Discard Changes * Load Optimal Default * Load Failsafe Defaul * *	********************* L Exit s ts	****	 Exit system setup after saving the changes. F10 key can be used for this operation. for this operation. Select Screen Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit

Figure-14 Exit menu





5.2 General BIOS Setup

5.2.1 Loading BIOS default value

- (1) Select "Exit" menu, press " " key to highlight "LOAD optimal Defaults" item. Then press "ENTER" key.
- (2) System will prompt as following, select "OK".



(4) Select "OK" to confirm the change.

5.2.2 Modify system DATE and TIME

- (1) Select "Main" menu, press " " key to highlight "system time" or "system date" item, input in a new time or date.
- (2) Press "Enter" key to confirm the new time or date.
- (3) Select "Exit" menu, and highlight "save changes and exit" item.

**	*****	***********	*******	****	****	******	**
*							*
*	Save	configuration	changes	and	exit	setup?	*
×							*
**	****	******	*******	****	****	******	**
×		[0k]		[Cano	cell		*
**	****	***********	*******	****	****	******	**

Figure-17 Save and Exit

(4) Select "OK" to confirm the change.

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5.2.3 Modify serial port baud rate

(1) Select "Advanced" menu and highlight "remote access configuration" item.

Advanced	
*****************************	****************
 Configure Remote Access type 	and parameters
* *********************************	******
 Remote Access 	[Enabled]
 Serial port number 	[COM1]
Base Address, IRO	[3F8h, 4]
• Serial Port Mode	[115200 8.n.1]
 Flow Control 	[None]
 Redirection After BIOS POST 	[Alwavs]
 Terminal Type 	LANSTI
 VI-UTE8 Combo Key Support 	[Enabled]
 Sredir Memory Display Delay 	[No Delay]

Figure-18 Remote access configuration

(2) System will display following options:

Advanced	
Configure Remote Access type	and parameters
Remote Access	[Enabled]
Serial port number Base Address, IRQ Serial Port Mode Flow Control Redirection After BIOS POST Terminal Type VT-UTF8 Combo Key Support Sredir Memory Display Delay	[COM1] [3F8h, 4] [115200 8,n,1] [None] [Always] [ANSI] [Enabled] [No Delay]

Figure-18 Advanced menu

(3) Highlight "serial port mode" item.



Figure-19 Serial port mode

- (4) Press the enter key, and then select an option you want to edit.
- (5) Select "Exit" menu, and highlight "save changes and exit" item.

**	*****	*****	*******	****	*****	******	**
×							*
×	Save	configuration	changes	and	exit	setup?	*
×		-					*
**	****	******	******	****	****	******	**
×		[0k]		[Cane	cell		*
**	*****	***********	*******	****	****	*******	**

Figure-20 Save and Exit

(6) Select "OK" to confirm the change.





5.2.4 PXE remote boot function setup

- (1) Select "PCIPnP" menu.
- (2) Highlight "PXE_RTL control" item.
- (3) Press "Enter" key, system will prompt as following.

Main	Advanced	PCIPnP	Boot	Security	C
Advanc	ed PCI/PnP S	ettings	*******		
WARNIN	G: Setting w may cause	rong value system to	s in belo malfunct	ow sections tion.	****
PXE_RT Clear Plug & PCI La Alloca Palett PCI ID OffBoa	L Control NVRAM Play O/S tency Timer te IRQ to PC e Snooping E BusMaster rd PCI/ISA I	I VGA * DE Card	[Disal [No] [No] ** Opt Disabled Enabled ********	oled] tions ** d **********	** * *

Figure-21 PXE_RTL Control

- (4) Select "Enabled" to open PXE function.
- (5) Select "Exit" menu and highlight "save changes and exit" item, select "OK" to confirm the change.

5.2.5 PCI slot IRQ setup

IPC100 series board provides two mini PCI slots (3.3v). You can install standard mini PCI card. The IRQ can be relocated as following.

(1) Select "PCIPnP" menu

	Main Advanced	PCIPnP	Boot	Security	Chip
*	Palette Spooning	******	IDisa	hledl	**
*	PCI IDE BusMaster	•	[Enab	ledl	₩ ₩
*	OffBoard PCI/ISA	IDE Card	[Auto	1	₩ ₩
*					₩ ₩
*	IR03		[Avai	lable]	¥ ₩
*	IR04		[Avai	lablel	**
*	IR05		[Avai	lablel	**
*	IRQ7		[Avai	lable]	**
*	IRQ9		[Avai	lable]	**
*	IRQ10		[Avai	lablel	**
*	IRQ11		[Avai	lable]	**
*	IRQ14		[Avai	lable]	**
*	IRQ15		[Avai	lable]	**
*					**
*					**
*	Reserved Memory S	lize	[Disa	bled]	**
*	PCI Slot-1 IRQ Pr	eference	[Auto]	**
×	PCI Slot-2 IRQ Pr	eference	[Auto	d.	**
*	PCI Slot-3 IRQ Pr	eference	[Auto	1	**
×	PCI Slot-4 IRQ Pr		[Auto		**

Figure-21 PCI slot IRQ

(2) Press " " key to highlight "PCI Slot-x IRQ preference" item. Slot-3 is CN16; slot-4 is CN15.



(3) Press ENTER key, system will show a list for IRQs

	Main	Advance	d PCIPr	P Boo	ot Sec	curity (
* 3	*******	******	********	*******	*******	*********
×	Palette	Snoopin	a]])isabled	
×	PCT TDF	BusMast	er	11	lisabled	i
*	OffBoard	4 PCT/TS	D THE Card	i i	Jutol	•
	orribuard	1 1 017 10	I IDE GUI (-	Option	
	TDOO			. 0	options	5
-	TROS			* Hute	2	
×	IRU4			* 3		*
×	TR02			* 4		₩
×	IRQ7			* 5		*
æ	IR09			* 7		*
×	TR010			* 9		*
*	TROII			* 10		*
	TROIA			* 11		*
*	TRÔIS			* 12		*
*	THOTO			* 16		*
-				· 15		
	Denewice	I. Manager	0:	~ 1J		
-	neserved	1 Memory	orze			******
×	PUL 5101	t-T TRO	Preference		lutol	
×	PUL Slot	t-2 1RQ	Preference	e lf	lutol	
*	PCI Slot	t−3 IRQ	Preference	e [f	Autol	
*	PCI Slot	t-4 IRQ	Preference	e [f	Autol	
-	*******		********			

Figure-22 PCI slot IRQ Options

(4) Select new value that you want.

Notice: if selecting an IRQ system reserved, the IRQ will fail for PCI device. IRQs system reserved:

IRQ3: Serial port

IRQ14: Primary IDE channel

IRQ12: PS/2 mouse

(5) Press the enter key

(6) Select "Exit" menu, and highlight "save changes and exit" item.



Figure-23 Save and Exit

(7) Select "OK" to confirm the change.