

Half-size PCISA SBC with Intel® Atom™ N270 1.6GHz processor, VGA/LVDS/HDTV-out, Dual PCIe GbE,USB2.0 and SATA

PCISA-945GSE

Quick Installation Guide

Version 1.1

Mar. 11, 2009

Package Contents:

PCISA-945GSE package includes the following items:

- 1 x PCISA-945GSE Single Board Computer
- 1 x Mini Jumper Pack
- 1 x LPT/RS-232 cable with bracket
- 2 x SATA cable
- 1 x USB cable with bracket
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)



©2006 Copyright by IEI Technology corp.
All rights reserved.

Specifications:

- CPU: On board Intel® Atom™ N270 1.6GHz/512KB L2 Cache with a FSB 533MHz
- System Chipset: Intel® 945GSE + ICH7M
- BIOS: AMI Flash BIOS
- System memory:
 - On board DDR2 533 MHz 512MB
 - One 200-pin 533/400 MHz DDR2 SDRAM SO-DIMM
- Ethernet: Dual PCIe interface Realtek RTL8111CP GbE Chipsets
- I/O Interface:
 - 1 x RS-232
 - 1 x RS-232/422/485
 - 1 x LPT
 - 1 x FDD
 - 1 x 6-pin header for KB/MS
 - 2 x SATA
 - 1 x IDE
 - 6 x USB 2.0 (2 on bracket, 4 on board)
 - 1 x Infrared Interface
- Digital I/O: 8-bit digital I/O, 4-bit input / 4-bit output
- Super I/O: ITE IT8718F
- Expansion: 4x PCI to Backplane
ISA to Backplane
- SSD: CF Type II
- Display interface:
 - VGA integrated in Intel® 945GSE
 - 18/24-bit Dual channel LVDS
 - HDVT/TV support NTSC/PAL/HDTV resolution (1080i max.) output
 - SDVO Interface (Option)
- Audio:
 - 5.1 Channel Audio Kit with Realtek ALC655 codec
 - 7.1 Channel HD Audio Kit with Realtek ALC883 supports dual audio stream
- Watchdog Timer: Software programmable supports 1~255 sec. system reset

- Power Supply: AT/ATX Power
- Power Consumption:
5V@2.79A,12V@0.2A(DDR2 667MHz 1GB) (Windows XP, 3D mark®2001SE)
- Temperature: 0 ~ 60°C (32 ~ 140°F)
- Humidity: Operation: 5%~95% non-condensing
- Dimension: 185mm x 127.6mm
- Weight: GW: 1000g

Ordering Information:

PCISA-945GSE-N270-512MB-R10:

Half-size PCISA SBC with Intel® Atom™ N270 1.6GHz processor, on-Board 512MB Memory, VGA/LVDS/HDTV-out, Dual PCIe GbE,USB2.0 and SATA

AC-KIT08R-R10: 5.1 channel AC'97 Audio Kit with Realtek ALC655 codec

AC-KIT883HD-R10: 7.1 channel HD Audio Kit with Realtek ALC883 codec support dual audio streams

HDTVCABLESET-01: HDTV cable Set with S-Video, composite and component Interfaces

32200-000058-RS: FDD cable w/o bracket

32200-000077-RS: RS-232/422/485 cable with bracket

19800-000075-RS: KB/MS cable with bracket

32200-000052-RS: ATA 66/100 Flat Cable

32100-088600-RS: SATA Power Cable

Jumpers setting and Connectors:

LABEL	FUNCTION
J_CMOS1	CMOS state setting jumper
J_VLVDS1	LVDS1 Voltage Selection jumper
JP1	COM2 Port Mode setting jumper
JCF1	Configure CF Card type jumper
J_LCD_TYPE1	LVDS Panel Resolution Selection jumper
J_ATUOPWR1	AT Power Mode Setting jumper
ATXCTL1	AT Power Mode Setting jumper ATX Power Mode Control Connector
VGA1	VGA 15-PIN FEMALE CONNECTOR
USB_C4 USB_C5	2 Port USB Connectors
LAN1 LAN2	RJ-45 LAN Connectors
KB_MS1	6-pin Header KB/MS Connector
COM1	Internal Serial Port Connector (RS-232)
COM2	Internal Serial Port Connector (RS-232/422/485)
LPT1	Parallel Port Connector
USB01 USB23	Internal 4 Port USB Connectors
J_AUDIO1	Extend Audio Module Connector
S_ATA1 S_ATA2	Serial ATA Connectors
PIDE1	IDE Connector
FDD1	FDD Connector
IR1	Infrared Interface Connector
TV1	TV Out Connector
CPU_FAN1	Fan Connector
LVDS1	LVDS Panel Connector
INVERTER1	5-pin Header Inverter Connector
DIO1	Digital I/O Connector
F_PANEL1	PWR · RST Buttons · Indicators and Speaker
CF1	Compact Flash Slot
JSPI1	Flash SPI ROM connector
SDVO1(Optional)	SDVO Connector
BAT1	Battery connector
DIMM1	SO-DIMM Slot
CPU12V1(Optional)	CPU POWER Connector

J_CMOS1 : Clear CMOS Setup	
J_CMOS1	DESCRIPTION
Short 1-2 (default)*	Keep CMOS Setup (Normal Operation)
Short 2-3	Clear CMOS Setup

JCF1 : Configure CF Card type	
JCF1	DESCRIPTION
Open (default)	Slave
Short 1-2	Master

J_VLVDS1 : Set The Panel Voltage	
J_VLVDS1	DESCRIPTION
Short 1-2 (default)*	Set The Voltage Level Of Panel To VCC3(+3.3V)
Short 2-3	Set The Voltage Level Of Panel To VCC(+5V)

JP1 : Configure COM2 Mode	
JP1	DESCRIPTION
Short 1-2 (default)	RS - 232
Short 3-4	RS - 422
Short 5-6	RS - 485
Short 7-8	RS - 485 with RTS Control

J_LCD_TYPE1 : LVDS Panel Resolution Selection	
JP1	DESCRIPTION
OPEN	640 X 480 (18-bit)
1-2	800 X 480 (18-bit)
3-4 (Default)	800 X 600 (18-bit)
1-2 & 3-4	1024 X 768 (18-bit)
5-6	1280 X 1024 (36-bit)
1-2 & 5-6	1400 X 1050 (36-bit)
3-4 & 5-6	1400 X 900 (36-bit)
1-2 & 3-4 & 5-6	1600 X 1200 (36-bit)

ATXCTL1: AT Power Mode Setting	
Power	DESCRIPTION
AT (Default)	Short 1-2.
ATX	Connect "PS_ON# & 5VSB Cable".

ATXCTL1: ATX Power Mode Control Connector	
PIN	DESCRIPTION
1	GND
2	PS_ON#
3	5VSB

CPU12V1 : CPU POWER Connector (Option)			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	GND	2	GND
3	+12V	4	+12V

COM1: Internal Serial Port Connector(RS-232)			
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	NC

COM2 : Internal Serial Port Connector (RS-232/422/485)			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	DCD#	2	DSR#
3	RXD	4	RTS#
5	TXD	6	CTS#
7	DTR#	8	RI#
9	GND	10	GND
11	TXD485+	12	TXD485-
13	RXD485+	14	RXD485-

USB01 · USB23: Internal USB Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	VCC(+5V)	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	VCC(+5V)

F_PANEL1: PWR & RST Buttons and Indicators panel					
	PIN	DESCRIPTION	PIN	DESCRIPTION	
PWRBTN	1	PWR_BTN+	2	PWR_LED+	Power LED
	3	PWR_BTN-	4	PWR_LED-	
HDD LED	5	HDD_LED+	6	RESET+	RESET
	7	HDD_LED-	8	RESET-	

KB_MS1: 6-pin Header KB/MS Connector	
PIN	DESCRIPTION
1	VCC5_KBMS
2	Mouse DATA
3	Mouse CLK
4	Keyboard DATA
5	Keyboard CLK
6	GND

J_AUDIO1: External Audio Module Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	SYNC	2	BITCLK
3	SDOUT	4	PCBEEP
5	SDIN	6	RST#
7	VCC	8	GND
9	+12V		

INVERTER1: 5-pin Header Inverter Connector	
PIN	DESCRIPTION
1	BRIGHTNESS
2	GND
3	+12V
4	GND
5	BACKLIGHT ENABLE

IR1: IrDA connector	
PIN	DESCRIPTION
1	VCC
2	NC
3	IR-RX
4	GND
5	IR-TX

LVDS1: LVDS Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND1	2	GND2
3	A_Y0	4	A_Y0#
5	A_Y1	6	A_Y1#
7	A_Y2	8	A_Y2#
9	A_CK	10	A_CK#
11	A_Y3	12	A_Y3#
13	GND3	14	GND4
15	B_Y0	16	B_Y0#
17	B_Y1	18	B_Y1#
19	B_Y2	20	B_Y2#
21	B_CK	22	B_CK#
23	B_Y3	24	B_Y3#
25	GND5	26	GND6
27	VCC1	28	VCC2
29	VCC3	30	VCC4

TV1: Video output for television			
S-Video Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	AGREEN_Y
3	GND	4	ARED_C
RCA Connector (only video signal)			
5	GND	6	ABLUE_CVBS

CF1: Compact Flash Connector			
PIN	DESCRIPTION	PIN	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	A10	33	VS1#
9	OE#	34	IOR#
10	A9	35	IOW#
11	A8	36	WE#
12	A7	37	IRQ
13	VCC1	38	VCC2
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
21	D0	46	BVD1
22	D1	47	D8
23	D2	48	D9
24	IOCS16#	49	D10
25	CD2#	50	GND2

CPU_FAN1: CPU Fan Connector	
PIN	DESCRIPTION
1	GND
2	+12V
3	Sense

BAT1 : Battery Connector	
PIN	DESCRIPTION
1	BAT+
2	BAT-(GND)

SDVO1:SDVO CONNECTOR (Option)			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	SDVOC_CLK-
3	SDVOC_CLK+	4	GND
5	SDVOC_GREEN-	6	SDVOC_GREEN+
7	GND	8	SDVOB_CLK-
9	SDVOB_CLK+	10	GND
11	SDVOB_GREEN-	12	SDVOB_GREEN+
13	GND	14	SDVOC_INT+
15	SDVOC_INT+	16	GND
17	SDVOB_INT+	18	SDVOB_INT+
19	GND	20	SDVOC_BLUE-
21	SDVOC_BLUE+	22	GND
23	SDVOC_RED-	24	SDVOC_RED+
25	GND	26	SDVOB_BLUE-
27	SDVOB_BLUE+	28	GND
29	SDVOB_RED-	30	SDVOB_RED+
31	GND	32	SDVO1_STALL-
33	SDVO1_STALL+	34	GND
35	SDVO_TVCLKIN-	36	SDVO_TVCLKIN+
37	GND	38	SDVO_CLK
39	SDVO_DATA	40	PCIRST
41	+5VS	42	+5VS
43	+5VS	44	N/C
45	N/C	46	GND
47	GND		

DIO1: Digital Input / Output Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	GND	2	VCC
3	OUTPUT 3	4	OUTPUT 2
5	OUTPUT 1	6	OUTPUT 0
7	INPUT 3	8	INPUT 2
9	INPUT 1	10	INPUT 0

JSPI1:FlashSPI ROM			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	3.3V	2	GND
3	CS0	4	CLK
5	SO0	6	SI
7	N/C	8	N/C

Board Layout: Jumper and Connector Locations



