



integration with integrity

Quick Installation Guide

ETX Module 3312550

Version 1.0, 2007

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# 3312550

## ETX CPU Module

### Quick Installation Guide

Version 1.1

<b>Form Factor</b> <i>ETX CPU Module</i>	<b>CPU</b> <i>mPGA 478 Socket for Intel® Core™ 2 Duo, Core™ Duo, Core™ Solo</i>	<b>Chipset</b> <i>Intel® 945GME Intel® ICH7M</i>
<b>VGA</b> <i>Dual Channel LVDS CRT</i>		
<b>LAN</b> <i>1 x Intel® 82562 10/100 Base-T Ethernet</i>	<b>Audio</b> <i>Realtek ALC655 AC'97 Codec, MIC- in/Line-in/Line-out</i>	<b>I/O</b> <i>PCI/ ISA/ SATAII/ USB IDE/ COM/ LPT (FDD)</i>



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## Packing List

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



1 x 3312550 ETX CPU Module



1 x CD-ROM



1 x Quick Installation Guide

## Ordering Information

3312550	ETX CPU module with mPGA 478 Socket for Intel® Core™ 2 Duo, Core™ Duo, Core™ Solo
1001010	ETX evaluation board in ATX form factor
Heatsink	2107820
Daughter board	SDVO to LVDS

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## Specification

Form Factor	ETX CPU Module
CPU	mPGA 478 socket for Intel® Core™ 2 Duo, Core™ Duo, Core™ Solo
Chipset	Intel® 945GME + Intel® ICH7M
System Memory	1 x 200-pin SO-DIMM Up to 2GB DDRII SDRAM
VGA/ LCD Controller	Intel® Graphics Media Accelerator (GMA) 950 graphics core w/ CRT/ Dual Channel LVDS (Dual independent display)
Ethernet	1 x Intel® 82562 10/100 Base-T Ethernet
BIOS	Phoenix-Award PnP Flash BIOS
Serial ATA	2 x Serial ATA II with 300MB/s
IDE Interface	1 x IDE (Ultra ATA 100/66/33), support 2 IDE devices
Serial Port	2 x COM ports
Parallel Port/ Floppy	1 x SPP/EPP/ECP mode 1 x Floppy connector, shared with Parallel Port #1
KBMS	Standard PS/2 Keyboard and Mouse
Universal Serial Bus	4 x USB 2.0
LCD	Dual Channel LVDS
Expansion Interface	4 x PCI ISA Bus
RTC	Real Time Clock
Operation Temp.	0°C - 60°C (32°F~140°F)
Watchdog Timer	255-level Reset
Dimension (L x W)	114 x 95 mm (4.5" x 3.7")

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## The Installation Paths of CD Driver

Driver	Path
CHIPSET	\\CHIPSET\INTEL\INF 8.1
VGA	\\GRAPHICS\INTEL_2K_XP_32\1431
AUDIO	\\AUDIO\REALTEK_AC97\WINDOWS_A401
LAN	\\ETHERNET\INTEL\82562

## Connectors Quick Reference

SATA1, SATA2 Connectors

Board Layout Top View

Board Layout Bottom View

Board Side View

ETX1 Connector

ETX2 Connector

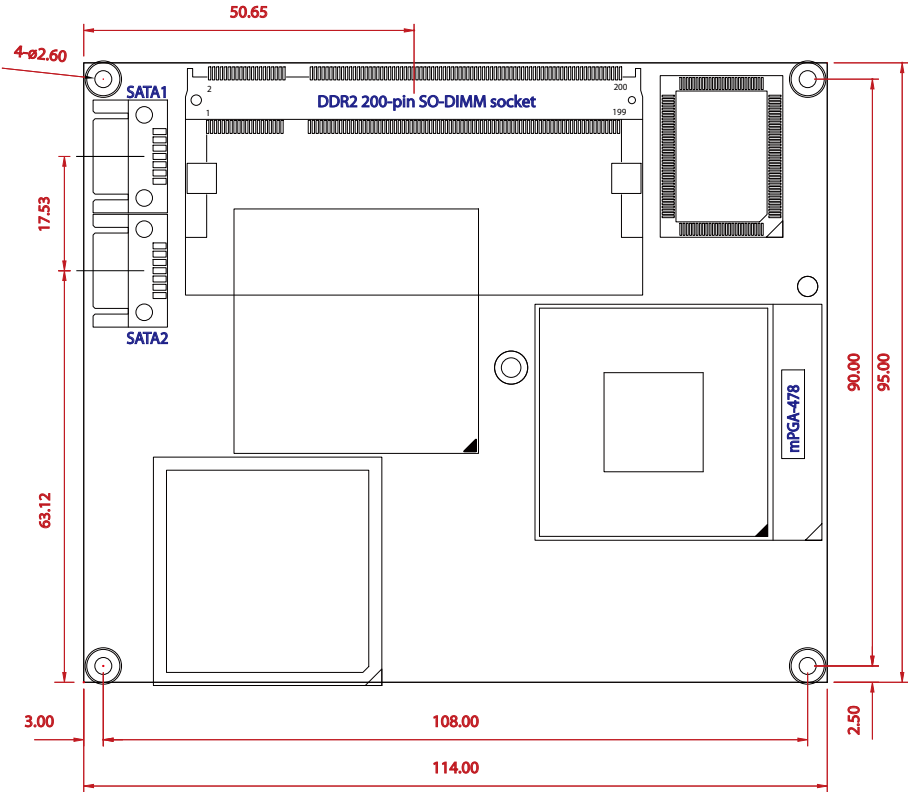
ETX3 Connector

ETX4 Connector

## SATA1, SATA2 Connectors

<b><i>Pin</i></b>	<b><i>Description</i></b>
1	GND
2	TX+
3	TX-
4	GND
5	RX+
6	RX-
7	GND

# Board Layout Top View



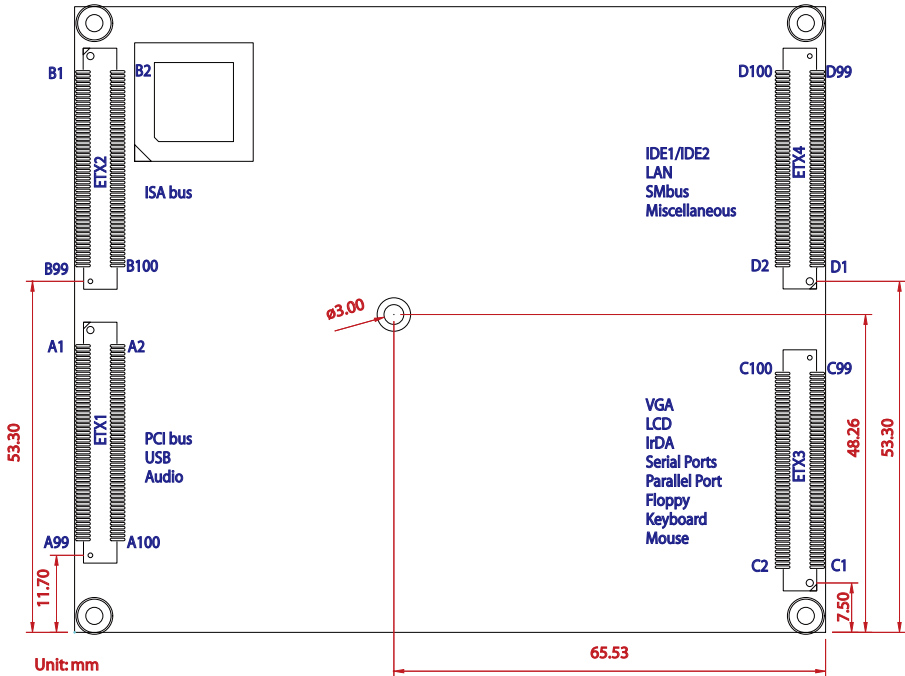
Unit: mm

# Board Side View



Unit: mm

# Board Layout Bottom View



## ETX1 Connector

A1	GND5	GND10	A2
A3	PCICLK3	PCICLK4	A4
A5	GND6	GND11	A6
A7	PCICLK1	PCICLK2	A8
A9	REQ#3	GNT#3	A10
A11	GNT#2	VCC32	A12
A13	REQ#2	GNT#1	A14
A15	REQ#1	VCC33	A16
A17	GNT#0	N.C1	A18
A19	VCC1	VCC4	A20
A21	SERIRQ	REQ#0	A22
A23	AD0	VCC34	A24
A25	AD1	AD2	A26
A27	AD4	AD3	A28
A29	AD6	AD5	A30
A31	CBE#0	AD7	A32
A33	AD8	AD9	A34
A35	GND7	GND12	A36
A37	AD10	AUXAL	A38
A39	AD11	MIC	A40
A41	AD12	AUXAR	A42
A43	AD13	ASVCC	A44
A45	AD14	SNDL	A46
A47	AD15	ASGND	A48
A49	CBE#1	SNDR	A50
A51	VCC2	VCC5	A52
A53	PAR	SERR#	A54
A55	PERR#	N.C2	A56
A57	PME#	USB2-	A58
A59	LOCK#	DEVSEL#	A60
A61	TRDY#	USB3-	A62
A63	IRDY#	STOP#	A64
A65	FRAME#	USB2+	A66
A67	GND8	GND13	A68
A69	AD16	CBE#2	A70
A71	AD17	USB3+	A72
A73	AD19	AD18	A74
A75	AD20	USB0-	A76
A77	AD22	AD21	A78
A79	AD23	USB1-	A80
A81	AD24	CBE#3	A82
A83	VCC31	VCC6	A84
A85	AD25	AD26	A86
A87	AD28	USB0+	A88
A89	AD27	AD29	A90
A91	AD30	USB1+	A92
A93	PCIRST#	AD31	A94
A95	INTR#C	INTR#D	A96
A97	INTR#A	INTR#B	A98
A99	GND9	GND14	A100

## ETX2 Connector

B1	GND	GND	B2
B3	SD14	SD15	B4
B5	SD13	MASTER#	B6
B7	SD12	DREQ7	B8
B9	SD11	DACK#7	B10
B11	SD10	DREQ6	B12
B13	SD9	DACK#6	B14
B15	SD8	DREQ5	B16
B17	MEMW#	DACK#5	B18
B19	MEMR#	DREQ0	B20
B21	LA17	DACK#5	B22
B23	LA18	IRQ14	B24
B25	LA19	IRQ15	B26
B27	LA20	IRQ12	B28
B29	LA21	IRQ11	B30
B31	LA22	IRQ10	B32
B33	LA23	IO16#	B34
B35	GND	GND	B36
B37	SBHE#	M16#	B38
B39	SA0	OSC	B40
B41	SA1	BALE	B42
B43	SA2	TC	B44
B45	SA3	DACK#2	B46
B47	SA4	IRQ3	B48
B49	SA5	IRQ4	B50
B51	VCC	VCC	B52
B53	SA6	IRQ5	B54
B55	SA7	IRQ6	B56
B57	SA8	IRQ7	B58
B59	SA9	SYSCLK	B60
B61	SA10	REFCH#	B62
B63	SA11	DREQ1	B64
B65	SA12	DACK#1	B66
B67	GND	GND	B68
B69	SA13	DREQ3	B70
B71	SA14	DACK#3	B72
B73	SA15	IOR#	B74
B75	SA16	IOW#	B76
B77	SA18	SA17	B78
B79	SA19	SMEMR#	B80
B81	IOCHRDY	AEN	B82
B83	VCC	VCC	B84
B85	SD0	SMEMW#	B86
B87	SD2	SD1	B88
B89	SD3	NOWS#	B90
B91	DREQ2	SD4	B92
B93	SD5	IRQ9	B94
B95	SD9	SD7	B96
B97	IOCHK#	RSTDRV	B98
B99	GND	GND	B100

## ETX3 Connector

C1	GND1	GND8	C2
C3	R	B	C4
C5	HSY	G	C6
C7	VSY	DDCK	C8
C9	DETECT#	DDDA	C10
C11	LCD16/B4	LCD18/SHFCLK	C12
C13	LCD17/B5	LCD19/EN	C14
C15	GND2	GND9	C16
C17	LCD13/B1	LCD15/B3	C18
C19	LCD12/B0	LCD14/B2	C20
C21	GND3	GND10	C22
C23	LCD8/G2	LCD11/G5	C24
C25	LCD9/G3	LCD10/G4	C26
C27	GND4	GND11	C28
C29	LCD4/R4	LCD7/G1	C30
C31	LCD5/R5	LCD6/G0	C32
C33	GND5	GND12	C34
C35	LCD1/R1	LCD3/R3	C36
C37	LCD0/R0	LCD2/R2	C38
C39	VCC1	VCC4	C40
C41	JILI_DAT	LTGIO0/VSYN	C42
C43	JILI_CLK	BLON#	C44
C45	BIASON/HSYN	DIGON	C46
C47	COMP	Y	C48
C49	SYNC	C	C50
C51	LPT/FLPY#	N.C2	C52
C53	VCC2	GND13	C54
C55	STB#/I.C	AFD#/DENSEL	C56
C57	N.C1	PD7/N.C	C58
C59	IRRX	ERR#/HSEL#	C60
C61	IRTX	PD6/N.C	C62
C63	RXD2	INIT#/DIR#	C64
C65	GND6	GND14	C66
C67	RTS#2	PD5/N.C	C68
C69	DTR#2	SLIN#/STEP#	C70
C71	DCD#2	PD4/DSKCHG#	C72
C73	DSR#2	PD3/RDATA#	C74
C75	CTS#2	PD2/WP#	C76
C77	TXD#2	PD1/TRK0#	C78
C79	RH#2	PD0/INDEX#	C80
C81	VCC3	VCC5	C82
C83	RXD1	ACK#/DRV	C84
C85	RTS#1	BUSY#/MOT	C86
C87	DTR#1	PE/WDATA#	C88
C89	DCD#1	SLCT#/WGATE#	C90
C91	DSR#1	MSCLK	C92
C93	CTS#1	MSDAT	C94
C95	TXD#1	KBCLK	C96
C97	RH#1	KBDAT	C98
C99	GND7	GND15	C100

## ETX4 Connector

D1	GND1	GND5	D2
D3	5V_SB	PWGIN	D4
D5	PS_ON	SPEAKER	D6
D7	PWERBTN#	BATT	D8
D9	KBINH	LILED	D10
D11	RSMRST#	ACTLED	D12
D13	ROMKBCS#	SPEEDLED	D14
D15	EXT_PRG	I2CLK	D16
D17	VCC1	VCC4	D18
D19	OVC#	GPCS#	D20
D21	EXTSM#	I2DAT	D22
D23	SMBCLK	SMBDAT	D24
D25	SIDE_CS3#	SMBALRT#	D26
D27	SIDE_CS1#	DASP_S	D28
D29	SIDE_A2	PIDE_CS3#	D30
D31	SIDE_A0	PIDE_CS1#	D32
D33	GND2	GND6	D34
D35	PDIAG_S	PIDE_A2	D36
D37	SIDE_A1	PIDE_A0	D38
D39	SIDE_INTRQ	PIDE_A1	D40
D41	BATLOW#	GPE1#	D42
D43	SIDE_ACK#	PIDE_INTRQ	D44
D45	SIDE_RDY	PIDE_ACK#	D46
D47	SIDE_IOR#	PIDE_RDY	D48
D49	VCC2	VCC5	D50
D51	SIDE_IOW#	PIDE_IOR#	D52
D53	SIDE_DRQ	PIDE_IOW#	D54
D55	SIDE_D15	PIDE_DRQ	D56
D57	SIDE_D0	PIDE_D15	D58
D59	SIDE_D14	PIDE_D0	D60
D61	SIDE_D1	PIDE_D14	D62
D63	SIDE_13	PIDE_D1	D64
D65	GND3	GND7	D66
D67	SIDE_D2	PIDE_D13	D68
D69	SIDE_D12	PIDE_D2	D70
D71	SIDE_D3	PIDE_D12	D72
D73	SIDE_D11	PIDE_D3	D74
D75	SIDE_D4	PIDE_D11	D76
D77	SIDE_D10	PIDE_D4	D78
D79	SIDE_D5	PIDE_D10	D80
D81	VCC3	VCC6	D82
D83	SIDE_D9	PIDE_D5	D84
D85	SIDE_D6	PIDE_D9	D86
D87	SIDE_D8	PIDE_D6	D88
D89	GPE2#	CBLID_P#	D90
D91	RXD-	PIDE_D8	D92
D93	RXD+	SIDE_D7	D94
D95	TXD-	PIDE_D7	D96
D97	TXD+	HDRST#	D98
D99	GND4	GND8	D100

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