

**Fall Function ETX Baseboard with VGA/LVDS/
TTL,Audio, CF type II & Digital I/O**

IEM-DB-7S-RS

Quick Installation Guide

Version 3.0

May 25, 2007

Package Contents

IEM-DB-7S-RS-R30 package includes the following items:

- 1 x IEM-DB-7S-RS-R30 single board computer
- 1 x FDD cable
- 1 x HDD cable
- 1 x RS-232/422/485 cable
- 1 x Mini jumper pack
- 1 x User manual(QIG)



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Specifications

- CPU Module Interface: ETX Form Factor
- Display Interface: 1 x 30-pin 24-bit DFP for LVDS
1 x 40-pin for 18-bit TTL
- Expansions Slot: 4 x PCI, 3 x ISA
- SSD: CF Type II
- Audio: AC'97/HD Codec on ETX CPU Module
- Ethernet Connector: 1 x RJ-45
- RS-232: 1
- RS-232, 422, 485: 1
- KB/MS: 2
- LPT: 1
- VGA: 1
- USB2.0: 4
- IDE Connector: 2
- FDD: 1
- Digital I/O: 8 bit digital I/O, 4-input / 4-output for Programmable
- IR connector: 5 pin-header
- Power Supply: ATX

Ordering Information

IEM-DB-7S-RS-R30

ATX Size 7 Slots ETX Baseboard

Jumpers setting and Connectors

CN9: IDE Connector(Bule)(IDE40)			
PIN	Description	PIN	Description
1	RESET#	2	GND
3	D7	4	D8
5	D6	6	D9
7	D5	8	D10
9	D4	10	D11
11	D3	12	D12
13	D2	14	D13
15	D1	16	D14
17	D0	18	D15
19	GND		
21	DRQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	RDY	28	GND
29	ACK#	30	GND
31	INTR	32	NC
33	A1	34	CABLE_ID
35	A0	36	A2
37	HD_SELECT 0	38	HD_SELECT 1
39	ACTIVE#	40	GND

CN5: TV OUT Connector			
PIN	Description	PIN	Description
1	TVSYNC	2	TVY
3	GND	4	TVC
5	GND	6	TVCVBS

CN14: RS-232/RS-422/RS-485 Connector			
PIN	Description	PIN	Description
1	DCD#	2	DSR
3	RXD	4	RTS
5	TXD	6	CTS
7	DTR#	8	RI
9	GND	10	NC
11	TXD485+	12	TXD485#
13	RXD485+	14	RXD485#

JP15: Compact Flash Mode selcet	
JP15	Description
1-2	SLAVE
2-3	MASTER

JP15: Compact Flash Mode selcet	
JP15	Description
1-2	MASTER
2-3	SLAVE

* For Intel.Chipset mode

JP16: AT/ATX Power Mode Select	
JP16	Description
short	AT Mode
open	ATX Mode

CN7: IR Connector	
PIN	Description
1	VCC5
2	NC
3	IR-RX
4	GND
5	IR-TX

CN32: 6-pin Header Keyboard/Mouse Connector	
PIN	Description
1	VCC5
2	Mouse_Date
3	Mouse_Clock
4	Keyboard_Date
5	Keyboard_Clock
6	GND

CN12: Floppy Connector			
PIN	Description	PIN	Description
1	GND	2	RWC-
3	GND	4	NC
5	GND	6	NC
7	GND	8	INDEX#
9	GND	10	MOTEA#
11	GND	12	DRVB#
13	GND	14	DRVA#
15	GND	16	MOTEB#
17	GND	18	DIR#
19	GND	20	STEP#
21	GND	22	WDATA#
23	GND	24	WGDATA#
25	GND	26	TRK#
27	GND	28	WPT#
29	GND	30	RDATA#
31	GND	32	HEAD
33	LPY/FLPY#	34	DSKCHG#

CN17: USB Connector			
PIN	Description	PIN	Description
1	VCC5	2	GND
3	USB3-	4	USB4+
5	USB3+	6	USB4-
7	GND	8	VCC5

CN21: External Switches and Indicators			
PIN	Description	PIN	Description
1	PWRLED+	2	VCC5
3	PWRLED+	4	GND
5	PWRLED-	6	BUZZER
7	KBINH	8	PC_BEEP
9	GND	10	NC
11	GND	12	IDE_LED-
13	PWRBTN#	14	IDE_LED+
15	NC	16	NC
17	NC	18	RESET+
19	GND	20	RESET-

*Pin6-8 Short Onboard Buzzer

JP5: COM2 Serial Port RI and Voltage selection	
JP5	Description
1-2	COM2 RI PIN USE RI
3-4	COM2 RI PIN USE +5V
4-5	COM2 RI PIN USE +12V

JP14: LCD Panel Voltage and BL_ADJ Select	
JP14	Description
1-2	Panel Voltage 3.3V
2-3	Panel Voltage 5V
5-6	BL_ADJ pull VCC5
6-7	BL_ADJ pull GND

JP17: Serial Port (COM2) MODE RS-232/RS-422/RS-485 Select	
JP17	Description
1-2	RS-232
3-4	RS-485
5-6	RS-422

JP11: CLEAR CMOS	
JP11	Description
1-2	Normal
2-3	CLEAR CMOS

CN41: FAN Connector	
PIN	Description
3	NC
2	VCC12
1	GND

CN42: FAN Connector	
PIN	Description
3	NC
2	VCC12
1	GND

CN11: IDE Connector(IDE44)			
PIN	Description	PIN	Description
1	RESET#	2	GND
3	D7	4	D8
5	D6	6	D9
7	D5	8	D10
9	D4	10	D11
11	D3	12	D12
13	D2	14	D13
15	D1	16	D14
17	D0	18	D15
19	GND		
21	DRQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	RDY	28	GND
29	ACK#	30	GND
31	INTR	32	NC
33	A1	34	CABLE_ID
35	A0	36	A2
37	HD_SELECT 0	38	HD_SELECT 1
39	ACTIVE#	40	GND
41	VCC5	42	VCC5
43	GND	44	NC

CN37: Inverter Connector	
PIN	Description
1	BL_ADJ
2	GND
3	+12V
4	GND
5	BL_EN

CN34: GPIO Connector			
PIN	Description	PIN	Description
1	VCC5	2	GND
3	GPIO0	4	GPIO1
5	GPIO2	6	GPIO3
7	GPIO4	8	GPIO5
9	GPIO6	10	GPIO7

CN10: Print Connector			
PIN	Description	PIN	Description
1	STB#	14	AFD#
2	PD0	15	ERROR#
3	PD1	16	INIT#
4	PD2	17	SLCTIN#
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	SELECT		

CN39: ATX POWER Conector			
PIN	Description	PIN	Description
11	+3.3V	1	+3.3V
12	-12V	2	+3.3V
13	GND	3	GND
14	PS_ON	4	VCC5
15	GND	5	GND
16	GND	6	VCC5
17	GND	7	GND
18	-5V	8	NC
19	VCC5	9	5VSB
20	VCC5	10	+12V

CN36: Flat Panel TTL Conector (Hirose DF13-40DP-1.25V)			
PIN	Description	PIN	Description
2	VCC_FP	1	VCC_FP
4	GND	3	GND
6	VCC_FP	5	VCC_FP
8	GND	7	SMB_SDA / I_SDA
10	B1	9	B0
12	B3	11	B2
14	B5	13	B4
16	NC	15	NC
18	G1	17	G0
20	G3	19	G2
22	G5	21	G4
24	NC	23	NC
26	R1	25	R0
28	R3	27	R2
30	R5	29	R4
32	NC	31	NC
34	GND	33	GND
36	FP_VS	35	FP_CLK
38	FP_HS	37	FP_DE
40	FP_ENVEE	39	SMB_SCL / I_SCL

CN35: Flat panel Dual (two) Channe;LVDS Conector (Hirose DF13-30DP-1.25V)			
PIN	Description	PIN	Description
2	GND	1	DENSEL#
4	LVDSA_0-	3	LVDSA_0+
6	LVDSA_1-	5	LVDSA_1+
8	LVDSA_2-	7	LVDSA_2+
10	LVDSA_CLK-	9	LVDSA_CLK+
12	LVDSA_3-	11	LVDSA_3+
14	GND	13	GND
16	LVDSB_0-	15	LVDSB_0+
18	LVDSB_1-	17	LVDSB_1+
20	LVDSB_2-	19	LVDSB_2+
22	LVDSB_CLK-	21	LVDSB_CLK+
24	LVDSB_3-	23	LVDSB_3+
26	GND	25	GND
28	VCC_LVDS	27	VCC_LVDS
30	VCC_LVDS	29	VCC_LVDS

PCI Slot Connector					
SIGNAL	PIN NO.	PCI SLOT1	PCI SLOT2	PCI SLOT3	PCI SLOT4
REQ#	B18	REQ0#	REQ1#	REQ2#	REQ3#
GNT#	A17	GNT0#	GNT1#	GNT2#	GNT3#
CLOCK	B16	PCI CLK1	PCI CLK2	PCI CLK3	PCI CLK4
IDSEL	A26	AD19	AD20	AD21	AD22
INTA#	A6	A	B	C	D
INTB#	B7	B	C	D	A
INTC#	A7	C	D	A	B
INTD#	B8	D	A	B	C

X1 :USB, AUDIO, PCI

PIN	Description	PIN	Description	PIN	Description	PIN	Description
2	GND	1	GND	52	VCC5	51	VCC5
4	PCICLK4	3	PCICLK3	54	SERR#	53	PAR
6	GND	5	GND	56	NC	55	PERR#
8	PCICLK2	7	PCICLK1	58	USB2-	57	PME#
10	GNT3#	9	REQ3#	60	DEVSEL#	59	LOCK#
12	VCC3	11	GNT2#	62	USB3-	61	TRDY#
14	GNT1#	13	REQ2#	64	STOP#	63	IRDY3
16	VCC3	15	REQ1#	66	USB2+	65	FRAME#
18	NC	17	GNT0#	68	GND	67	GND
20	VCC5	19	VCC5	70	CBE2#	69	AD16
22	REQ0#	21	NC	72	USB3+	71	AD17
24	VCC3	23	AD0	74	AD18	73	AD19
26	AD2	25	AD1	76	USB0-	75	AD20
28	AD3	27	AD4	78	AD21	77	AD22
30	AD5	29	AD6	80	USB1-	79	AD23
32	AD7	31	CBE0#	82	CBE3#	81	AD24
34	AD9	33	AD8	84	VCC5	83	VCC5
36	GND	35	GND	86	AD26	85	AD25
38	LINEINL	37	AD10	88	USB0+	87	AD28
40	MIC	39	AD11	90	AD29	89	AD27
42	LINEINR	41	AD12	92	USB1+	91	AD30
44	VCCAUD	43	AD13	94	AD31	93	PCIRST#
46	LINEOUTL	45	AD14	96	INTD#	95	INTC#
48	GNDAUD	47	AD15	98	INTB#	97	INTA#
50	LINEOUTR	49	CBE1#	100	GND	99	GND

X2 : ISA, GPIO							
PIN	Description	PIN	Description	PIN	Description	PIN	Description
2	GND	1	GND	52	VCC5	51	VCC5
4	SD15	3	SD14	54	IRQ5	53	SA6
6	MASTER#	5	SD13	56	IRQ6	55	SA7
8	DREQ7	7	SD12	58	IRQ7-	57	SA8
10	DACK7#	9	SD11	60	SYSCLK	59	SA9
12	DREQ6	11	SD10	62	REFSH#	61	SA10
14	DACK6#	13	SD9	64	DRQE1	63	SA11
16	DREQ5	15	SD8	66	DACK1#	65	SA12
18	DACK5#	17	MEMW#	68	GND	67	GND
20	DREQ0	19	MEMR#	70	DREQ3	69	SA13
22	DACK0#	21	LA17	72	DACK3#	71	SA14
24	IRQ14	23	LA18	74	IOR#	73	SA15
26	IRQ15	25	LA19	76	IOW#-	75	SA16
28	IRQ12	27	LA20	78	SA17	77	SA18
30	IRQ11	29	LA21	80	SMEMR#	79	SA19
32	IRQ10	31	LA22	82	AEN	81	IOCHRDY
34	IOCS16#	33	LA23	84	VCC5	83	VCC5
36	GND	35	GND	86	SMEMW#	85	SD0
38	MCS16#	37	SBHE#	88	SD1	87	SD2
40	OSC	39	SA0	90	OWS#	89	SD3
42	BALE	41	SA1	92	SD4	91	DREQ2
44	TC	43	SA2	94	IRQ9	93	SD5
46	DACK2#	45	SA3	96	SD7	95	SD6
48	IRQ3	47	SA4	98	RSTDRV	97	IOCHK#
50	IRQ4	49	SA5	100	GND	99	GND

X3 : Serial Port, Print, LCD, TV OUT,							
PIN	Description	PIN	Description	PIN	Description	PIN	Description
2	GND	1	GND	52	NC	51	LPT/FLPY#
4	CRT_B	3	CRT_R	54	GND	53	VCC5
6	CRT_G	5	CRTHSYNC	56	AFD#	55	STB#
8	DDCSCL	7	CRTVSYNC	58	PD7	57	NC
10	DDCSDA	9	LCD_PLUG#	60	ERR#	59	IRRX
12	LSY3#/FPCLK	11	LSCLK#/B4	62	PD6	61	IRTX
14	LSY3+/LCDEN	13	LSCLK+/B5	64	INIT#	63	U_RXD2
16	GND	15	GND	66	GND	65	GND
18	LSY2+/B3	17	LSY1+/B1	68	PD5	67	U_RTS2#
20	LSY2#/B2	19	LSY1#/B0	70	SLIN#	69	U_DTR2#
22	GND	21	GND	72	PD4	71	U_DCD2#
24	LSY0+/G5	23	LFY3#/G2	74	PD3	73	U_DSR2#
26	LSY0#/G4	25	LFY3+/G3	76	PD2	75	U_CTS2#
28	GND	27	GND	78	PD1	77	U_TXD2
30	L_FCLK+/G1	29	LFY2#/R4	80	PD0	79	U_RI2#
32	L_FCLK#/G0	31	LFY2+/R5	82	VCC5	81	VCC5
34	GND	33	GND	84	ACK#	83	U_RXD1
36	L_FY1+/R3	35	LFY0+/R1	86	BUSY	85	U_RTS1#
38	L_FY1#/R2	37	LFY0#/R0	88	PE	87	U_DTR1#
40	VCC5	39	VCC5	90	SLCT	89	U_DCD1#
42	LCD_VSYNC	41	JILI_DAT	92	MSCLK	91	U_DSR1#
44	FPENABKL	43	JILI_CLK	94	MSDATA	93	U_CTS1#
46	FPENAVDD	45	LCD_HSYNC	96	KBCLK	95	U_TXD1
48	TV_Y	47	TV_CVBS	98	KBDATA	97	U_RI1#
50	TV_C	49	TV_SYNC	100	GND	99	GND

X4 : IDE, Compact Flash, LAN, Power

PIN	Description	PIN	Description	PIN	Description	PIN	Description
2	GND	1	GND	52	IDEPIORX	51	IDESIOWX
4	PWGIN	3	5VSB	54	IDEIOWX	53	IDESDREQR
6	PCBEEP	5	PS_ON	56	IDEPDREQR	55	IDESDR15
8	VBAT	7	PWRBTN#	58	IDEPDR15	57	IDESDR0
10	L1_LINK#	9	KBINH	60	IDEPDR0	59	IDESDR14
12	L1_ACT#	11	NC	62	IDEPDR14	61	IDESDR1
14	NC	13	NC	64	IDEPDR1	63	IDESDR13
16	SMB_SCL/NC	15	NC	66	GND	65	GND
18	VCC5	17	VCC5	68	IDEPDR13	67	IDESDR2
20	NC	19	USB_OC#	70	IDEPDR2	69	IDESDR12
22	SMB_SDA/NC	21	NC	72	IDEPDR12	71	IDESDR3
24	NC	23	NC	74	IDEPDR3	73	IDESDR11
26	NC	25	IDESCS1X	76	IDEPDR11	75	IDESDR4
28	DASP_S	27	IDESCS0X	78	IDEPDR4	77	IDESDR10
30	IDEPCS1X	29	IDESA2	80	IDEPDR10	79	IDESDR5
32	IDEPCS0X	31	IDESA0	82	VCC5	81	VCC5
34	GND	33	GND	84	IDEPDR5	83	IDEPDR9
36	IDEPA2	35	PDIAG_S	86	IDEPDR9	85	IDEPDR6
38	IDEPA0	37	IDESA1	88	IDEPDR6	87	IDEPDR8
40	IDEPA1	39	IDESINTR	90	PCABLE66#	89	RINGWAKE#
42	NC	41	NC	92	IDEPDR8	91	L1_RXIN-
44	IDEPINTR	43	IDESDACKX	94	IDEPDR7	93	L1_RXIN+
46	IDEPDACKX	45	IDESIORDYR	96	IDESDR7	95	L1_TXD-
48	IDEPIORDYR	47	IDESIORX	98	IDEPRSTX	97	L1_TXD+
50	VCC5	49	VCC5	100	GND	99	GND

Board Layout: Jumper and Connector Locations



