

IMB-BTL-H610

Micro- ATX Motherboard

Quick Installation Guide

Version 1.00

June, 2026

Features

- Supports LGA1700 Intel® Core™ i9/i7/i5/i3, Pentium®, and Celeron® processors, up to 65W TDP.
- Dual-channel DDR5 memory support, up to 96GB.
- Dual Intel® LAN design (1 x 2.5GbE, 1 x 1GbE)
- Triple independent display support via DisplayPort, HDMI, and iDPM for eDP/LVDS/VGA module expansion.
- Flexible expansion with PCIe x16 Gen4, PCIe x4/ x1 Gen3, and M.2 M Key 2280.
- Rich I/O connectivity including USB 3.2, SATA 6Gb/s, serial ports, TPM, SMBus, I2C, and digital I/O

Packing List

- 1 x IMB-BTL-H610 single board computer
- 1 x I/O Shielding
- 2 x SATA cables
- 1 x QIG (Quick Installation Guide)

Jumpers & Connectors

J_CMOS1: Clear CMOS jumper	
STATUS	DESCRIPTION
NC	Keep CMOS setup (normal operation)
Press button	Clear CMOS setup

J_ATX_AT1: AT/ATX Power Mode Setting	
PIN NO.	DESCRIPTION
A-B	ATX Power Mode (default)
B-C	AT Power Mode

F_PANEL1: External Switches and Indicators panel			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+5V	2	BEEP_PWR
3	NC	4	NC
5	GND	6	NC
7	PWRBTN_SW#	8	PC_BEEP
9	GND	10	NC
11	+5V	12	EXTRST-
13	SATA_LED#	14	GND

USB2_1: External USB2.0 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
11	USB_VCC	31	USB_VCC
12	D-	32	D-
13	D+	33	D+
14	GND	34	GND
21	USB_VCC	41	USB_VCC
22	D-	42	D-
23	D+	43	D+
24	GND	44	GND

LAN1_USB1: External RJ45+USB 3.1 GEN1 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VBUS	10	VBUS
2	D-	11	D-
3	D+	12	D+
4	GND	13	GND
5	RX-	14	RX-
6	RX+	15	RX+
7	GND	16	GND
8	TX-	17	TX-
9	TX+	18	TX+

20	MD0+	29	VCC
21	MD0-	30	ACT
22	MD1+	31	100-
23	MD1-	32	1000-
24	MD2+		
25	MD2-		
26	MD3+		
27	MD3-		

LAN2_USB2: External RJ45+USB 3.1 GEN2 Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VBUS	10	VBUS
2	D-	11	D-
3	D+	12	D+
4	GND	13	GND
5	RX-	14	RX-
6	RX+	15	RX+
7	GND	16	GND
8	TX-	17	TX-
9	TX+	18	TX+
20	MD0+	29	VCC
21	MD0-	30	ACT
22	MD1+	31	2500-
23	MD1-	32	1000-
24	MD2+		
25	MD2-		
26	MD3+		
27	MD3-		

USB2_CN1: Internal USB Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC	2	GND
3	USB_DATA-	4	USB_DATA+
5	USB_DATA+	6	USB_DATA-
7	GND	8	VCC

DIO1: Digital Input / Output Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	VCC
3	Output 5	4	Output 4
5	Output 3	6	Output 2
7	Output 1	8	Output 0
9	Input 5	10	Input 4
11	Input 3	12	Input 2
13	Input 1	14	Input 0

SATA1-4: Serial ATA 3.0 Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	5	SATA_RXNA
2	SATA_TXPA	6	SATA_RXPA
3	SATA_TXNA	7	GND
4	GND	8	GND
9	SATA_TXPB	10	SATA_TXNB
11	GND	12	SATA_RXNB
13	SATA_RXPB	14	GND

FRONT-PANEL1: Audio Source Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	LMIC2-L	2	GND
3	LMIC2-R	4	PRESENCE#
5	LLINE2-R	6	MIC2-JD
7	FRONT-IO	8	NC
9	LINE2-L	10	LINE2-JD

SYS_FAN1/2: System Fan Connector	
PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIO
4	PWM

CPU_FAN1: CPU Fan Connector	
PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIO
4	PWM

CPU12V1: +12V Power Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	5	+12V
2	GND	6	+12V
3	GND	7	+12V
4	GND	8	+12V

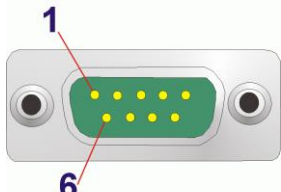
J_SMB1: SMBus Connector	
PIN NO.	DESCRIPTION
1	GND
2	SMB_DATA
3	SMB_CLK
4	+5V

J_I2C1: I2C Connector	
PIN NO.	DESCRIPTION
1	GND
2	I2C_DAT
3	I2C_CLK
4	+5V

JLED_LAN1: LAN Link LED Connector	
PIN NO.	DESCRIPTION
1	+3.3V
2	LAN1_LED_LNK#_ACT

JLED_LAN2: LAN Link LED Connector	
PIN NO.	DESCRIPTION
1	+3.3V
2	LAN2_LED_LNK#_ACT

CHASSIS1: Chassis Status Connector	
PIN NO.	DESCRIPTION
1	CHASSIS OPEN
2	GND

COM1/COM2: COM Port Connector				
PIN NO.	RS-232	RS-422	RS-485	
1	DCD	TXD422-	TXD485-	
2	RXD	TXD422+	TXD485+	
3	TXD	RXD422+	--	
4	DTR	RXD422-	--	
5	GND	--	--	
6	DSR	--	--	
7	RTS	--	--	
8	CTS	--	--	
9	RI	--	--	

COM3~6: Internal Serial Port Connectors	
PIN NO.	DESCRIPTION
1	DATA CARRIER DETECT (DCD)
2	DATA SET READY (DSR)
3	RECEIVE DATA (RXD)
4	REQUEST TO SEND (RTS)
5	TRANSMIT DATA (TXD)
6	CLEAR TO SEND (CTS)
7	DATA TERMINAL READY (DTR)
8	RING INDICATOR (RI)
9	GND
10	GND

ATX1: ATX Power Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	PWRGD_PS	20	NC
9	+5V	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

AUDIO1: Audio Line-in/Out MIC Connector	
PIN NO.	DESCRIPTION
FRONT-OUT (Green)	Connect this port to headphone or speaker
MIC-IN (Pink)	Connect this port to microphone

Get more information:



IMB-BTL-H610



IEI Resource Download Center

Safety Instructions



Warning! Read the user manual before connecting the system to the power source.

Warning! To prevent the system from overheating, do not operate it in an area that exceeds the maximum operating temperature described in the user manual.

Warning! Ultimate disposal of this product should be handled according to all national laws and regulations.

Support



IEI Support URL

http://new.ieiworld.com/tw/online_support_form

Compliance



This equipment has been tested and found to comply with specifications for CE marking. If the user modifies and/or installs other devices in the equipment, the CE conformity declaration may no longer apply.



This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the 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 instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



According to the requirement of the WEEE legislation, the following user information is provided to customers for all branded IEI Electronics products subject to the WEEE directive.

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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