

GES-BIOTH

Motherboard

Intel® Sandy Bridge-U, Ivy Bridge-U Celeron, Pentium
Core® i3/i5/i7

Features

- Supports Sandy Bridge-U or Ivy Bridge-U Celeron, Pentium, Core® i3/i5/i7 CPUs
- Single-channel 1600/1333MHz DDR3 SO-DIMM memory, up to 8GB
- Display supports VGA, HDMI, and LVDS interfaces
- 2x Gigabit Ethernet ports (optional single network port)
- 1x Mini-PCIe (WIFI/4G) and 1x MSATA
- Supports 8 USB ports
- Built-in 6x RS232 serial ports, with support for 2x RS485
- Supports XP, WIN7, WIN10, and Linux operating systems

Appearance





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Revision Table

Date	Revision	Content	By
2024/11/11	0.1	Mother Board Datasheet	Leon

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Specification

Mother board	
CPU	Compatible With Intel Celeron, Pentium, Core® i3/i5/i7 Sandy/Ivy Bridge-U Series Processors
Memory	1x SO-DIMM Slot, Single-Channel 1600/1333MHz DDR3L/1.35V Memory, With a Maximum Support of 8GB
Graphics	Intel HD Graphics 4000 1x VGA, 1x HDMI Interface, 1x LVDS Interface Supports VGA, HDMI, and LVDS for Synchronous/Asynchronous Dual Display
Ethernet	2x Realtek RTL8111H Gigabit Ethernet Ports (Optional Single Ethernet), Supports Wake-on-LAN/PXE
Storage	1x SATA 2.0 Interface 1x mSATA 3.0 Slot (Full-Size)
Audio	Onboard ALC897 7.1-Channel High-Definition Audio Controller, Supports MIC/Line-Out, Amplifier (Supports 2x 5W Dual-Channel)
Expansion Slot	1x Mini-PCle Slot, Supports WiFi/4G Modules
Back panel I/O	1x HDMI Display Interface 1x VGA Display Interface 2x USB 3.0 2x USB 2.0 or LAN 2x RJ-45 Gigabit Ethernet Ports, LAN1 and USB2 Being Mutually Exclusive 1x Line-Out Interface (Green) 1x HDD/Power Indicator LED 1x 12V DC Power Input

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Internal I /O	1x LVDS Interface 215Pin, Supports Dual-Channel 24-Bit 1x Screen Backlight Power Supply Interface 1*6Pin 3x USB 2.0 Pin Header Interfaces 2*5Pin, Dual Ethernet Supports Expansion to 6x USB 2.0 Ports, Single Ethernet Supports Expansion to 4x USB 2.0 Ports 1x Front Audio Interface (Supports Line-Out and Mic) 2*5Pin 1x Amplifier Interface 1*4Pin 6x COM Interfaces (COM1 and COM2 Default to Support RS232, Can Be Configured to Support 2x RS485 Via Jumper) 1x PS2 Interface 1*6Pin 1x HDD Power Supply Interface 1*4Pin 1x 2-Pin DC 12V Power Input Interface 1x Front Panel Power Switch and Indicator Interface 2*5Pin
Fan Connector	Reserved 1* 4-Pin CPU Fan Connector
GPIO	Supports 4 GPIO Inputs/Outputs
BIOS	32Mb Flash ROM
Watchdog	Supports Hardware Reset Function (256 Levels, 0~255 Seconds)
Support OS	Window XP/Windows 7/Windows 10/Linux
Power Supply	Supports DC 12V

Environment Compliance

Operating Temp.	-10°C ~ 60°C
Storage Temp.	-20°C ~ 70°C
Humidity	5% to 95%RH, Non-Condensing
Dimension	146mm x 102mm

Environmental performance may vary according to the integration method or final integration scenario.

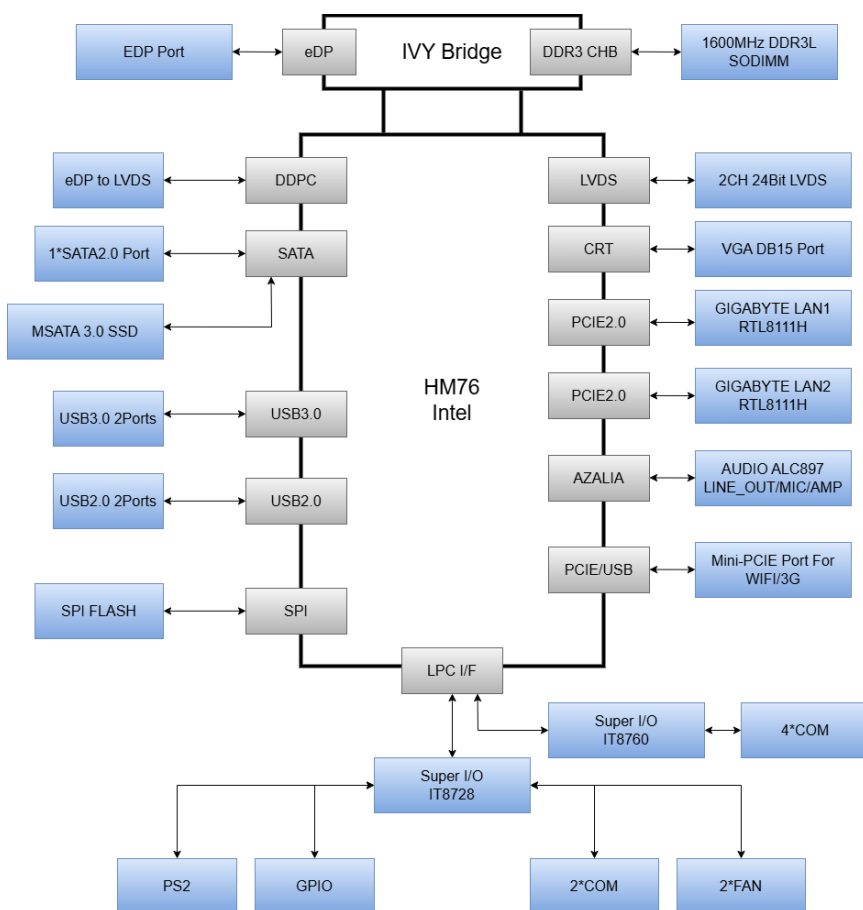
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Block Diagram



Ordering Information

No.	Model	CPU	Cores	Frequency	DDR	HDMI	VGA	LVDS	LAN	USB	PS2	COM/485	POWER
1	GES-BIOTH-3217	I3-3217U	2	1.8Ghz	DDR3	1	1	1	2	8	1	6/2	12v
2	GES-BIOTH-3317	I5-3317U	2	1.7Ghz	DDR3	1	1	1	2	8	1	6/2	12v



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Deliverables

1	Intel Intel® Sandy Bridge-U Mother Board
2	

Ordering Details

GES-BIOTH- 3 3 1 7

CPU/SOC:

Only take the digits

Example:

I3-3217U – 3217

I5-3317U – 3317

Example: GES-BIOTH-3317

Intel Intel® Sandy Bridge-U Mother Board