

GES-BINIT02

Motherboard

Intel® Haswell-U or Broadwell-U Celeron, Pentium, Core® i3/i5/i7 CPU

Features

- Intel® Haswell-U or Broadwell-U Celeron, Pentium, Core® i3/i5/i7 CPU
- 1x SODIMM Slot, Supports Single-channel 1600/1333MHz DDR3L Memory, Up to 8GB
- VGA and HDMI Dual Outputs, or Dual HDMI Outputs
- 2x Realtek RTL8111H Gigabit Network Ports
- 1x Mini-PCIe (WIFI/4G) and 1x mSATA
- 4x USB 3.0 Ports and 2x USB 2.0 Ports
- 2x RS232 (Optional 2x RS485)
- Fanless Design

Appearance





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Revision Table

Date	Revision	Content	By
2024/10/11	0.1	Mother Board Datasheet	Leon

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Specification

Motherboard	
CPU	Intel® Haswell-U or Broadwell-U Celeron, Pentium, Core® i3/i5/i7 CPU
Memory	1x SO-DIMM Slot, Supports Single-channel 1600/1333MHz DDR3L/1.35V Memory, Maximum Support of 8GB
Graphics	Integrated Intel® UHD Graphics 600
Display	1x VGA 1x HDMI Supports VGA and HDMI Synchronous/ Asynchronous Display
Ethernet	2x Realtek RTL8111H Gigabit Network, supports Wake-on-LAN/PXE
Storage	1x SATA 3.0 1x mSATA 3.0 Slot
Audio	ALC897 7.1 Channel High-Definition Audio Controller, Supports MIC/Line-out (2 Ohms, 5W Dual-channel)
Expansion slot	1x Mini-PCIe slot, Supports WIFI/4G modules
Back I/O	1x HDMI 1x VGA 2x USB 2.0 2x RJ-45 Gigabit Network (Optional 1x RJ45 Change to USB2.0) 1x 12V DC Power Input
Front I/O	4x USB 3.0 1x Line-Out and MIC Combo 2x DB9 RS232 Serial (Optional COM1 and COM2 RS485 via jumper) 1x HDD Indicator LED 1x Power Switch Button with LED

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Specification

Internal I /O	1x USB 2.0 Pin Header Interface 1*4Pin (1x Additional USB2.0 supported when Dual Ethernet is selected without 4G) 1x Amplifier Interface 1*4Pin 2x COM Ports 2*5Pin (COM1-2: Front I/O) 1x 4 Pin 12V DC Power Connector 1x HDD Power connector 1x Front Panel Switch Button and Indicator 2* 5Pin
Fan connector	Back-mounted CPU Fanless cooling, reserved 1x 4 Pin CPU Fan housing
GPIO	Supports 4 Channels GPIO Inputs/Outputs
BIOS	64Mb Flash ROM
Watchdog	Supports Hardware Reset Function (256 levels, 0~255 seconds)
Support OS	Windows 7/ Windows 10/ Linux
Power Input	12V DC Power Input
Dimension	120* 120mm

Environmental Compliance

Operating Temp.	-20°C ~ 60°C
Storage Temp.	-20°C ~ 70°C
Humidity	5% to 95%RH, non-condensing

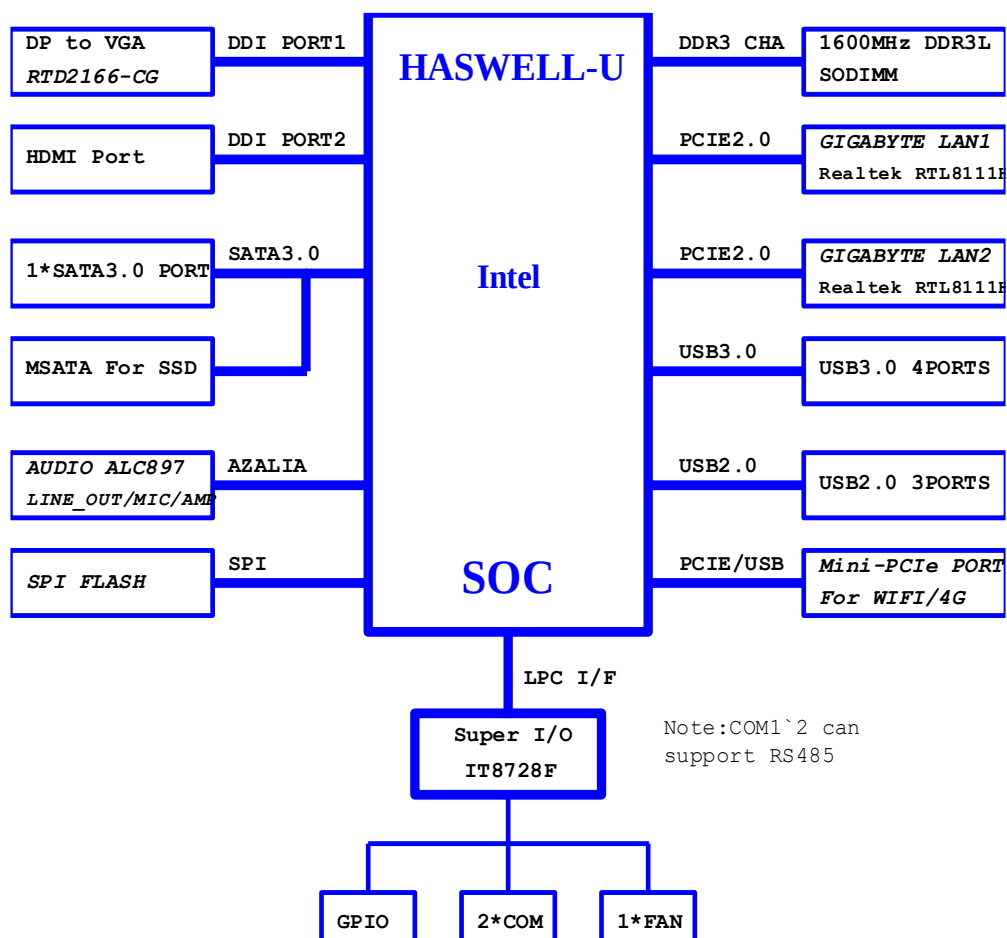
Environmental performance may vary according to the integration method or final integration scenario.

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Block Diagram



Interface Options

No.	Interface Options	CPU	Cores	Frequency	TDP	DDR	HDMI	VGA	LAN	USB	COM/485	POWER
1	-	I3-4030U	2	1.9Ghz	15W	DDR3L	1	1	2	7	2/2	12V
2	-	I5-4300U	2	1.9-2.9Ghz	15W	DDR3L	1	1	2	7	2/2	12V
3	-	I5-5200U	2	2.2-2.7Ghz	7.5W	DDR3L	1	1	2	7	2/2	12V

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Deliverables

1	Motherboard Intel® Haswell-U or Broadwell-U Celeron, Pentium, Core® i3/i5/i7 CPU
Others	Optional Assemblies as per Ordering Details

Ordering Details

GES-BINIT02 - P P P P P S M T C

Processor:

(4030U): i3-4030U
(4300U): i5-4300U
(5200U): i5-5200U

Storage

(N): None
(1): 8GB
(2): 16GB
(3): 32GB
(4): 64GB
(5): 120~128GB
(6): 240~256GB
(7): 480~512GB
(8): 960~1TB
(9): 2TB
(A): 4TB

Memory

(N): None
(1): 2GB
(2): 4GB
(3): 8GB

Telecommunication

(N): None
(F): 5G
(L): 4G/LTE
(S): 3G
(G): 2G

Connectivity (Wireless)

WIFI/GPS/BT

(N): None
(A): WIFI, BT, GPS
(B): BT
(C): WIFI, GPS
(D): BT, GPS
(E): WIFI, BT
(G): GPS
(W): WIFI

Example: GES-BINIT02-4030U43NN

Motherboard - Intel® Haswell-U or Broadwell-U Celeron, Pentium, Core® i3/i5/i7 CPU; with i3-4030U CPU, 64GB Storage, 8GB RAM

Optional Interfaces listed in the datasheet could be set upon request.

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