

GES-BINIT03

Motherboard

Intel® Celeron J4125 or Intel® Gemini Lake-R Series CPU

Features

- Integrated Intel® Celeron J4125 2.0GHz quad-core processor, compatible with Intel® Gemini Lake-R Series CPUs.
- 1x SODIMM slot, Supports single-channel 2400MHz DDR4 Memory, Up to 16GB.
- 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 3 x USB 2.0 Ports.
- 2x RS232 Serial Ports (optional 2x RS485 or 4x RS232).
- Fanless Design
- AT and ATX Modes Switching, Support 12-19V DC Power Input

Appearance





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Revision Table

Date	Revision	Content	By
2024/9/19	0.1	Mother Board Datasheet	Leon

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Specification

Mother board	
CPU	Integrated Intel® Celeron J4125 2.0GHz quad-core processor, compatible with Intel® Gemini Lake-R Series CPUs
Memory	1x SODIMM slot, Supports Single-channel 2400MHz DDR4 Memory, Up to 16GB(default)
Graphics	Intel® UHD Graphics 600
Display	1x VGA and 1x HDMI; (Optional 2x HDMI Display Interfaces) Support Sync/Async Display
Ethernet	2x Realtek RTL8111H Gigabit Network Ports (Optional Single Port), Supports Wake-on-LAN/PXE.
Storage	1x SATA 3.0 1x mSATA slot (long card).
Audio	AL897 7.1 Channel High-Fidelity Audio Controller, Supports MIC In/Line-out
Expansion slot	1x Mini-PCIe slot (Supports both Half-Length and Full-Length cards), Supports WIFI/4G modules
Back panel I/O	1x HDMI 1x VGA (Either VGA or HDMI 1.4, Default is VGA) 2x USB 2.0 2x RJ-45 Gigabit Network (LAN2 is Optional with Dual USB 2.0 Ports, Default is Network Port) 1x 12V~19V DC Power Input
Front I/O	4x USB 3.0 1x Line-out and MIC Combo 2x DB9 (Default RS232, COM1 and COM2 Can be Configured for RS485) 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 (Supports 2 x USB 2.0 If Dual Network and No 4G Support) 2x COM Ports (COM1~2 same signal as front I/O, COM3~4 optional) 1x 4 Pin ATX Power Connector 1x HDD Power Connector 1x Front Panel Switch Button and Indicator 2*5Pin.
Fan connector	Fanless cooling design with CPU cooling on the back
GPIO	Supports 4 Channels GPIO Inputs/Outputs
BIOS	64Mb Flash ROM
Watchdog	Supports Hardware Reset Function (256 levels, 0~255 seconds)
Support OS	Windows 10/Linux
Power Input	Supports 12~19V DC Power Supply

Environmental Compliance

Operating Temp.	-20°C ~ 60°C
Storage Temp.	-20°C ~ 70°C
Humidity	5% to 95%RH, non-condensing
Dimension	120mm x 120mm

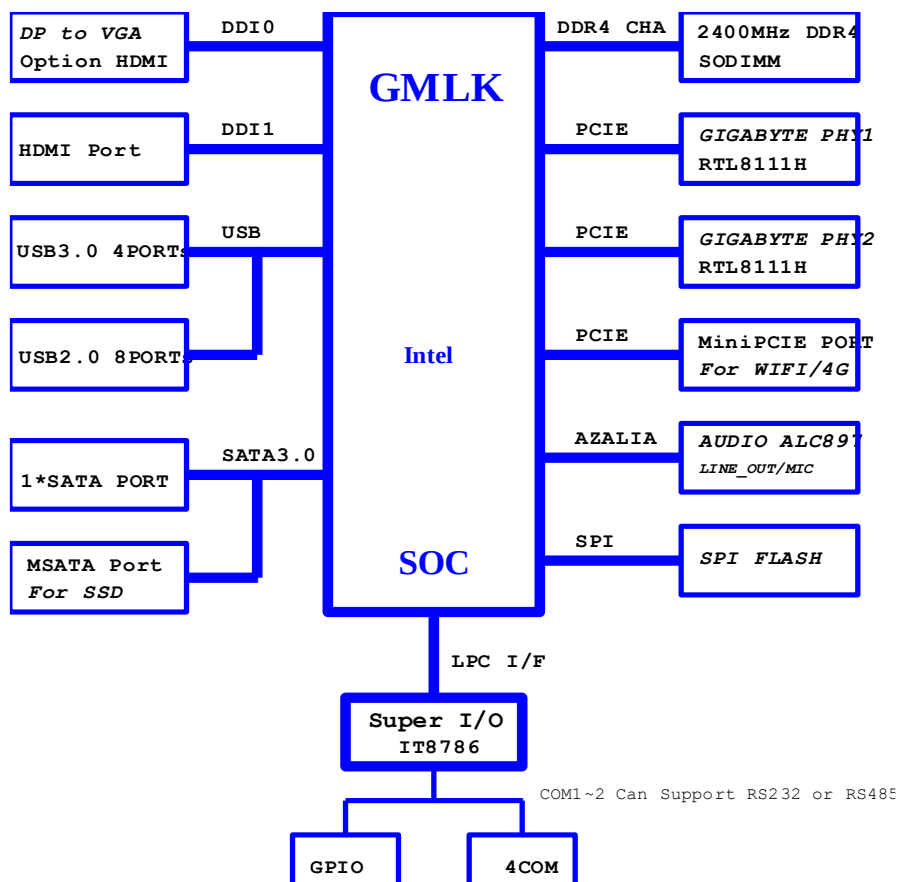
Environmental performance may vary according to the integration method or final integration scenario.

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Block Diagram



Ordering Information

No.	Interface Options	CPU	Cores	Frequency	DDR	HDMI	VGA	LAN	USB	COM/485	POWER
1	-	J4125	4	2.0Ghz	DDR4	1	1	2	7	2/2	12v~19V

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Deliverables

1	Motherboard Intel® Celeron J4125 or Intel® Gemini Lake-R Series CPU
Others	Optional Assemblies as per Ordering Details

Ordering Details

GES-BINIT03 - P P P P P S M T C

Processor:
(J4125): J4125

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
(4): 16GB

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-BINIT03-J412544NN

Motherboard - Intel® Celeron J4125 or Intel® Gemini Lake-R Series CPU; with J4125CPU, 64GB Storage, 16GB RAM

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

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