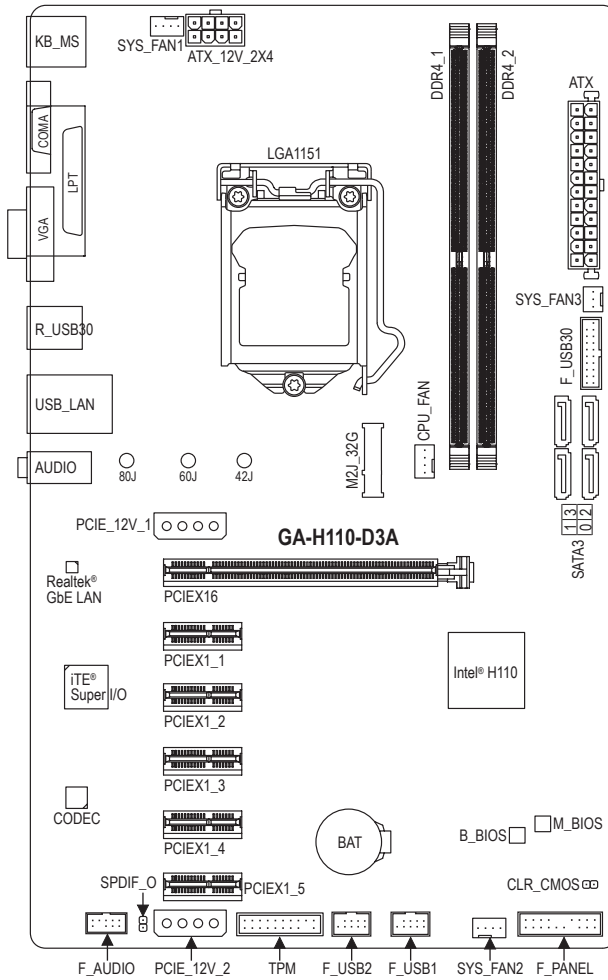


# GA-H110-D3A Motherboard Layout

















## Box Contents





- GA-H110-D3A motherboard
- Motherboard driver disk
- User's Manual
- Two SATA cables
- I/O Shield

\* The box contents above are for reference only and the actual items shall depend on the product package you obtain. The box contents are subject to change without notice.

## 1-2 Product Specifications

	CPU	<ul style="list-style-type: none"> <li>◆ Support for 7th and 6th Generation Intel® Core™ i7 processors/ Intel® Core™ i5 processors/Intel® Core™ i3 processors/ Intel® Pentium® processors/Intel® Celeron® processors in the LGA1151 package (Go to GIGABYTE's website for the latest CPU support list.)</li> <li>◆ L3 cache varies with CPU</li> </ul>
	Chipset	<ul style="list-style-type: none"> <li>◆ Intel® H110 Express Chipset</li> </ul>
	Memory	<ul style="list-style-type: none"> <li>◆ 2 x DDR4 DIMM sockets supporting up to 32 GB of system memory               <ul style="list-style-type: none"> <li>* Due to a Windows 32-bit operating system limitation, when more than 4 GB of physical memory is installed, the actual memory size displayed will be less than the size of the physical memory installed.</li> </ul> </li> <li>◆ Dual channel memory architecture</li> <li>◆ Support for DDR4 2133 MHz memory modules</li> <li>◆ Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules (operate in non-ECC mode)</li> <li>◆ Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules</li> <li>◆ Support for Extreme Memory Profile (XMP) memory modules               <ul style="list-style-type: none"> <li>* To support 2400 MHz or XMP memory, you must install a 7th generation processor. (Go to GIGABYTE's website for the latest supported memory speeds and memory modules.)</li> </ul> </li> </ul>
	Onboard Graphics	<ul style="list-style-type: none"> <li>◆ Integrated Graphics Processor-Intel® HD Graphics support:               <ul style="list-style-type: none"> <li>- 1 x D-Sub port, supporting a maximum resolution of 1920x1200@60 Hz</li> </ul> </li> <li>◆ Maximum shared memory of 1 GB</li> </ul>
	Audio	<ul style="list-style-type: none"> <li>◆ Realtek® ALC887 codec</li> <li>◆ High Definition Audio</li> <li>◆ 2/4/5.1/7.1-channel               <ul style="list-style-type: none"> <li>* To configure 7.1-channel audio, you have to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver.</li> </ul> </li> <li>◆ Support for S/PDIF Out</li> </ul>
	LAN	<ul style="list-style-type: none"> <li>◆ Realtek® GbE LAN chip (10/100/1000 Mbit)</li> </ul>
	Expansion Slots	<ul style="list-style-type: none"> <li>◆ 1 x PCI Express x16 slot, running at x16 (The PCI Express x16 slot conforms to PCI Express 3.0 standard.)</li> <li>◆ 5 x PCI Express x1 slots (All of the PCI Express x1 slots conform to PCI Express 2.0 standard.)</li> </ul>
	Storage Interface	<ul style="list-style-type: none"> <li>◆ Chipset:               <ul style="list-style-type: none"> <li>- 1 x M.2 connector (Socket 3, M key, type 2242/2260/2280 SATA SSD support)</li> <li>- 4 x SATA 6Gb/s connectors</li> <li>* Refer to "1-7 Internal Connectors," for the installation notices for the M.2 and SATA connectors.</li> </ul> </li> </ul>
	USB	<ul style="list-style-type: none"> <li>◆ Chipset:               <ul style="list-style-type: none"> <li>- 4 x USB 3.1 Gen 1 ports (2 ports on the back panel, 2 ports available through the internal USB header)</li> <li>- 6 x USB 2.0/1.1 ports (2 ports on the back panel, 4 ports available through the internal USB headers)</li> </ul> </li> </ul>

	Internal Connectors	<ul style="list-style-type: none"> <li>◆ 1 x 24-pin ATX main power connector</li> <li>◆ 1 x 8-pin ATX 12V power connector</li> <li>◆ 2 x PCIe power connectors</li> <li>◆ 1 x CPU fan header</li> <li>◆ 3 x system fan headers</li> <li>◆ 4 x SATA 6Gb/s connectors</li> <li>◆ 1 x M.2 Socket 3 connector</li> <li>◆ 1 x front panel header</li> <li>◆ 1 x front panel audio header</li> <li>◆ 1 x S/PDIF Out header</li> <li>◆ 1 x USB 3.1 Gen 1 header</li> <li>◆ 2 x USB 2.0/1.1 headers</li> <li>◆ 1 x Trusted Platform Module (TPM) header</li> <li>◆ 1 x Clear CMOS jumper</li> </ul>
	Back Panel Connectors	<ul style="list-style-type: none"> <li>◆ 1 x PS/2 mouse port</li> <li>◆ 1 x PS/2 Keyboard port</li> <li>◆ 1 x parallel port</li> <li>◆ 1 x serial port</li> <li>◆ 1 x D-Sub port</li> <li>◆ 2 x USB 3.1 Gen 1 ports</li> <li>◆ 2 x USB 2.0/1.1 ports</li> <li>◆ 1 x RJ-45 port</li> <li>◆ 3 x audio jacks (Line In, Line Out, Mic In)</li> </ul>
	I/O Controller	<ul style="list-style-type: none"> <li>◆ iTE® I/O Controller Chip</li> </ul>
	Hardware Monitor	<ul style="list-style-type: none"> <li>◆ Voltage detection</li> <li>◆ Temperature detection</li> <li>◆ Fan speed detection</li> <li>◆ Overheating warning</li> <li>◆ Fan fail warning</li> <li>◆ Fan speed control</li> </ul> <p style="margin-left: 40px;">* Whether the fan speed control function is supported will depend on the cooler you install.</p>
	BIOS	<ul style="list-style-type: none"> <li>◆ 2 x 64 Mbit flash</li> <li>◆ Use of licensed AMI UEFI BIOS</li> <li>◆ Support for DualBIOS™</li> <li>◆ PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0</li> </ul>

	<b>Unique Features</b>	<ul style="list-style-type: none"> <li>◆ Support for APP Center <ul style="list-style-type: none"> <li>* Available applications in APP Center may vary by motherboard model. Supported functions of each application may also vary depending on motherboard specifications.</li> <li>- 3D OSD</li> <li>- @BIOS</li> <li>- Ambient LED</li> <li>- AutoGreen</li> <li>- Cloud Station</li> <li>- EasyTune</li> <li>- Fast Boot</li> <li>- ON/OFF Charge</li> <li>- Smart Backup</li> <li>- Smart Keyboard</li> <li>- Smart TimeLock</li> <li>- System Information Viewer</li> <li>- USB Blocker</li> </ul> </li> <li>◆ Support for Q-Flash</li> <li>◆ Support for Xpress Install</li> </ul>
	<b>Bundled Software</b>	<ul style="list-style-type: none"> <li>◆ Norton® Internet Security (OEM version)</li> <li>◆ cFosSpeed</li> </ul>
	<b>Operating System</b>	<ul style="list-style-type: none"> <li>◆ Support for Windows 10 64-bit (for 7th Generation Intel® processors)</li> <li>◆ Support for Windows 10 64-bit/Windows 8.1 64-bit/Windows 7 32-bit/64-bit (for 6th Generation Intel® processors) <ul style="list-style-type: none"> <li>* Please download the "Windows USB Installation Tool" from GIGABYTE's website and install it before installing Windows 7.</li> </ul> </li> </ul>
	<b>Form Factor</b>	<ul style="list-style-type: none"> <li>◆ ATX Form Factor; 30.5cm x 19.0cm</li> </ul>

\* GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice.

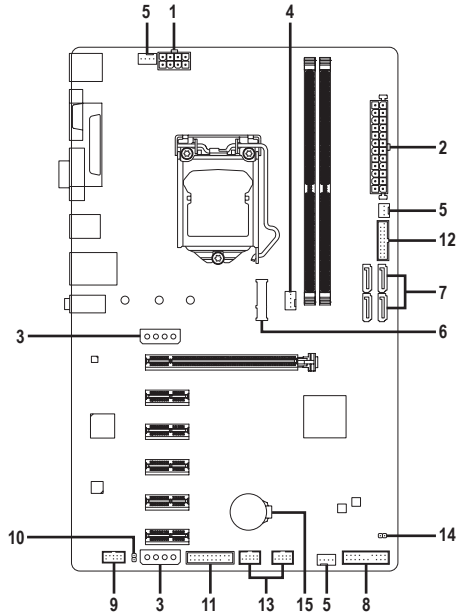


Please visit GIGABYTE's website for support lists of CPU, memory modules, SSDs, and M.2 devices.



Please visit the **SupportUtility List** page on GIGABYTE's website to download the latest version of apps.

## 1-7 Internal Connectors



1) ATX_12V_2X4	9) F_AUDIO
2) ATX	10) SPDIF_O
3) PCIe_12V_1/2	11) TPM
4) CPU_FAN	12) F_USB30
5) SYS_FAN1/2/3	13) F_USB1/F_USB2
6) M2J_32G	14) CLR_CMOS
7) SATA3 0/1/2/3	15) BAT
8) F_PANEL	



Read the following guidelines before connecting external devices:

- First make sure your devices are compliant with the connectors you wish to connect.
- Before installing the devices, be sure to turn off the devices and your computer. Unplug the power cord from the power outlet to prevent damage to the devices.
- After installing the device and before turning on the computer, make sure the device cable has been securely attached to the connector on the motherboard.