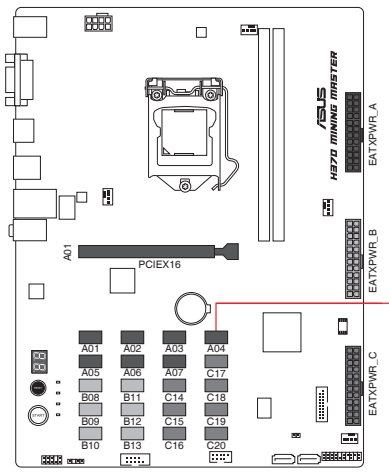
Motherboard

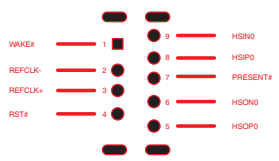
Mining Configuration Guide

- To make your build more stable when mining with 20 cards, we recommend that you install large capacity memory modules, change the size of the virtual memory and install the proper Graphics drivers, e.g., install 8GB memory modules and change the size of the virtual memory paging file to 100GB.
- We recommend that you install proper drivers for Graphics cards, e.g., driver version 391.35 for nVIDIA Graphics cards, driver version 17.10.2 or later for AMD Graphics cards. Please go to www.nVIDIA.com and www.AMD.com for more details.
- We recommend that you install Windows® 10 for better stability and compatibility when mining. If you encounter problems while mining under another OS, you can try to enter the BIOS to change the PCIE bandwidth from [Gen1] to [Gen2] and disable the options under **Above 4G Decoding**.

Vertical USB ports

This motherboard comes with twenty (20) USB 3.1 Gen 1 ports. The riser card with the following USB line sequence can be installed on the motherboard for mining.





USB line Sequence

All these (20) USB ports are used for GPU mining only. DO NOT connect your USB devices to these ports.

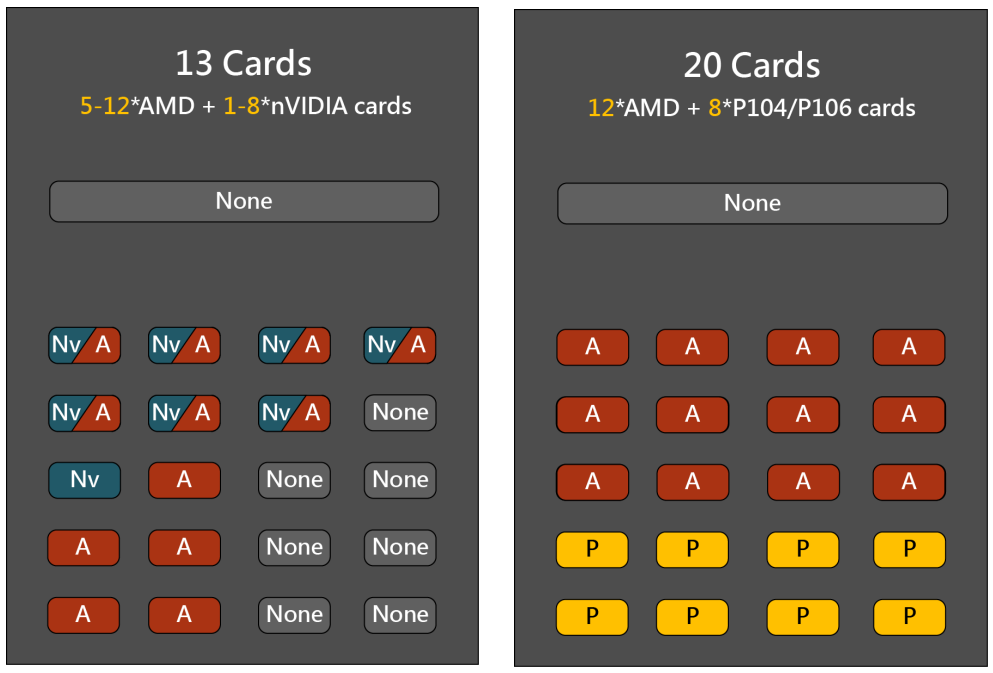
Refer to www.asus.com for the QVL (Qualified Vendor List) of riser cards.

Refer to www.asus.com for the SOP (Standard Operating Procedure) of measuring USB line sequence.

Installing mining cards

Unplug the power cord before adding or removing expansion cards. Failure to do so may cause you physical injury and damage motherboard components.

- The illustrations are for reference only.
- When a GPU is installed on a USB A1 port, the PCIE x16 slot cannot be used.



Nv A — nVIDIA or AMD graphics cards

A — AMD graphics cards

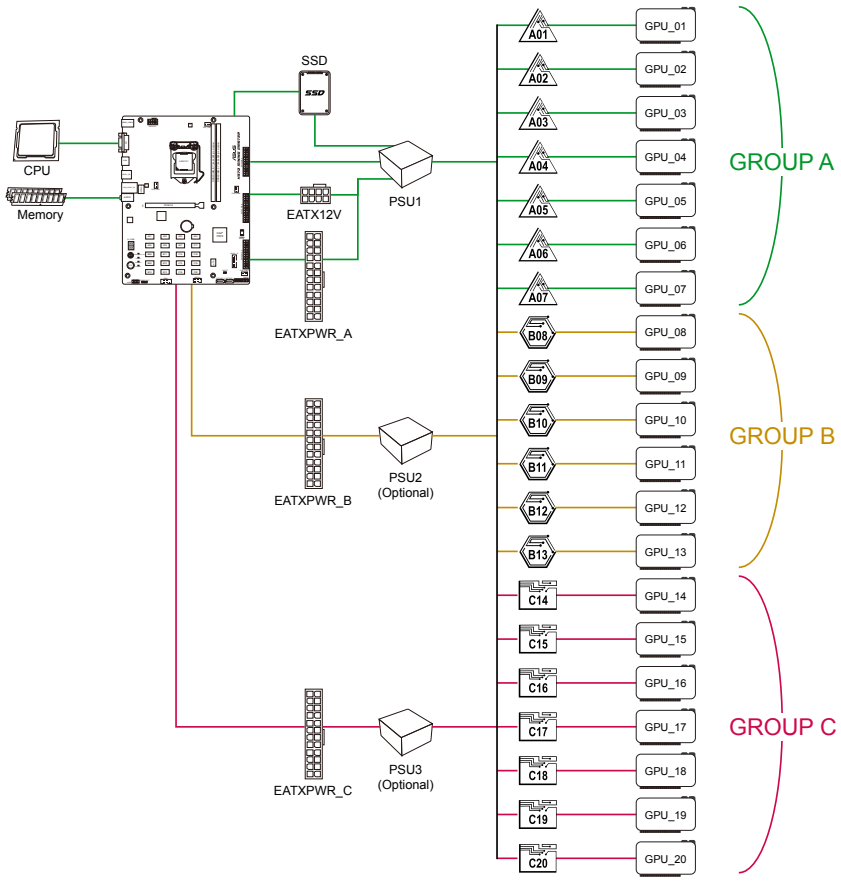
Nv — nVIDIA graphics cards

P — nVIDIA P104 or P106 mining cards

Installing Multiple Power Supplies

This section displays the way to install multiple power supplies. Ensure to plug the main power supply to the EATXPWR_A connector and supply power to other devices such as Graphics cards, CPU, memory, SSD and fans. Additional power supplies can be connected to EATXPWR_B and EATXPWR_C to supply power for Graphics cards only.

In order to fully support 20 graphics cards mining, we recommend that you use 3 power supply units (PSU) that are designed for mining with sufficient 12V power plugs and provide a minimum power of 3750W in total (2*1200W + 1*1350W are recommended).



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To install mining cards:

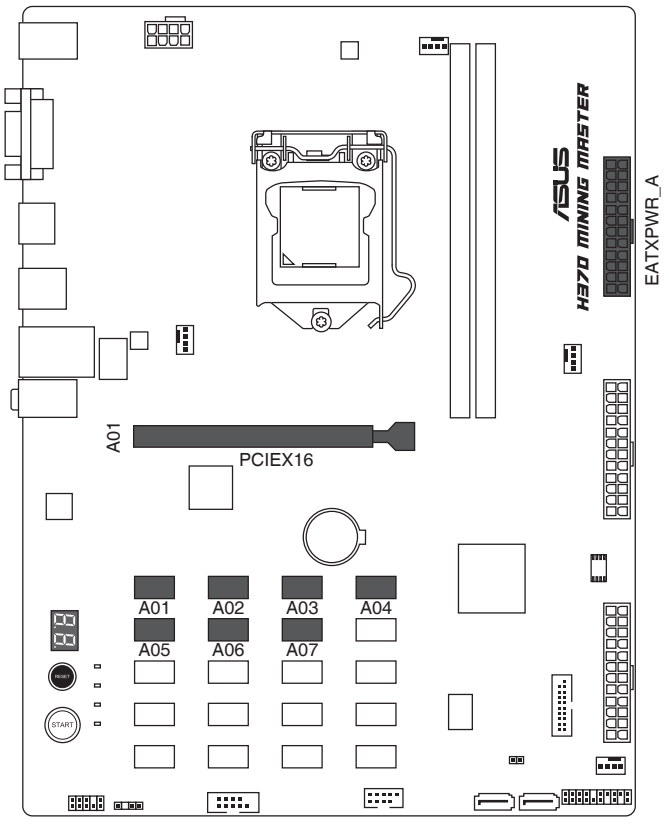
Ensure that a power supply unit (PSU) is plugged into the main power connector EATXPWR_A before plugging into EATXPWR_B and EATXPWR_C.

- In order to manage your Graphics cards on your motherboard, we recommend that you install your Graphics cards and connect the power connectors to corresponding areas on the motherboard.
- We recommend that you use high quality power supplies for stable mining performance.

- **Seven (7) or less mining cards**

1. Install your mining cards into the connectors labeled Axx in sequential order A01~A07.
2. Connect your power supply unit (PSU) to the 24-pin EATX power connector labeled ***EATXPWR_A***.

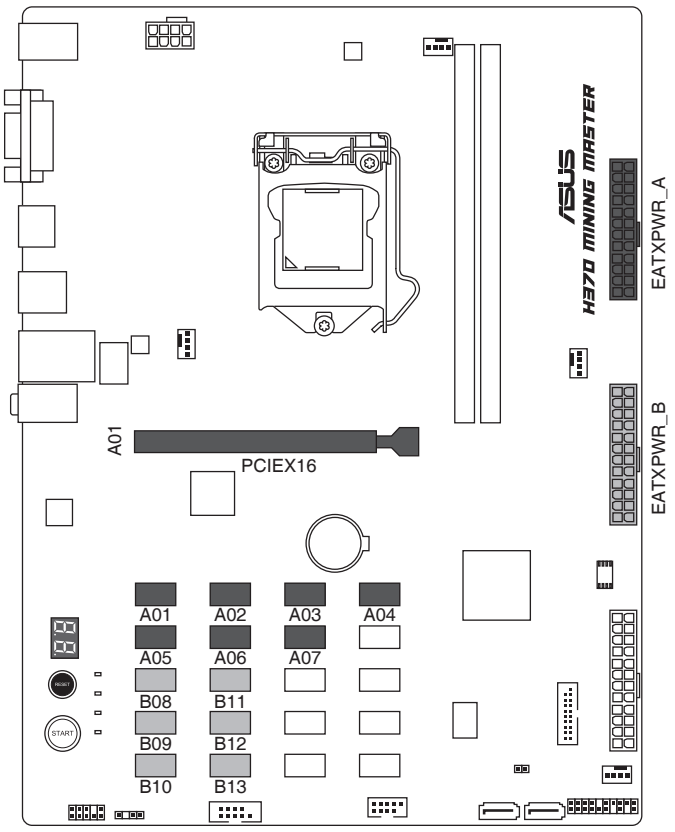
When a GPU is installed in a USB A1 port, the PCIE x16 slot can not be used.



- **8 ~ 13 mining cards**

1. Install your mining cards into the connectors labeled Axx and Bxx in sequential order A01~B13.
2. Connect your power supply unit (PSU) to the 24-pin EATX power connectors labeled ***EATXPWR_A*** and ***EATXPWR_B***.

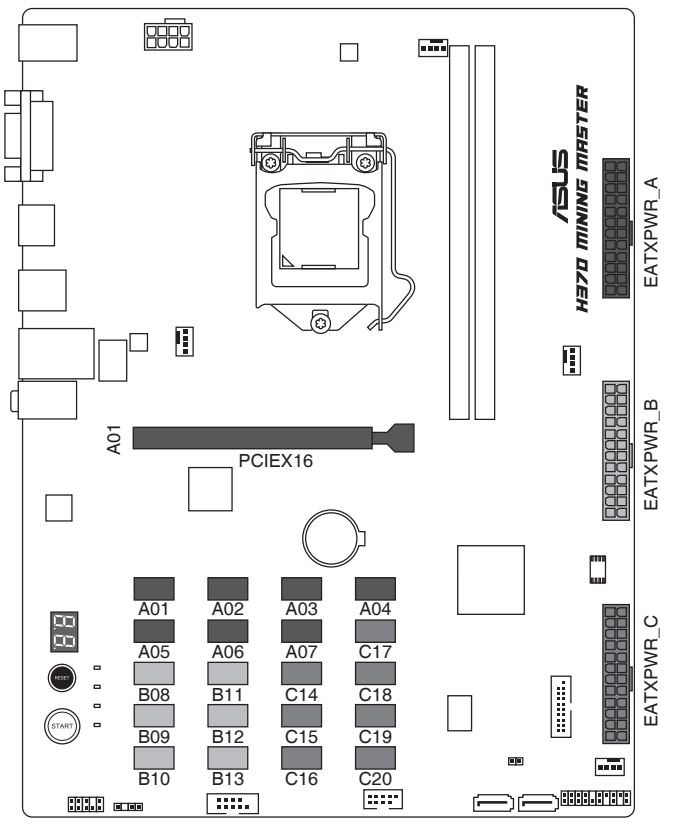
To make the power consumption in balance, connect the 6-pin/8-pin power connectors of your mining cards in area A to the power supply unit (PSU) plugged in EATXPWR_A, and mining cards in area B to the power supply unit (PSU) plugged in EATXPWR_B.



- **14 ~ 20 mining cards**

1. Install your mining cards into the connectors labeled Axx, Bxx, Cxx in sequential order A01~C20.
2. Connect your power supply unit (PSU) to 24-pin EATX power connectors labeled ***EATXPWR_A***, ***EATXPWR_B*** and ***EATXPWR_C***.

To make the power consumption in balance, connect the 6-pin/8-pin power connectors of your mining cards in area A to the power supply unit (PSU) plugged in EATXPWR_A, mining cards in area B to the power supply unit (PSU) plugged in EATXPWR_B, and mining cards in area C to the power supply unit (PSU) plugged in EATXPWR_C.

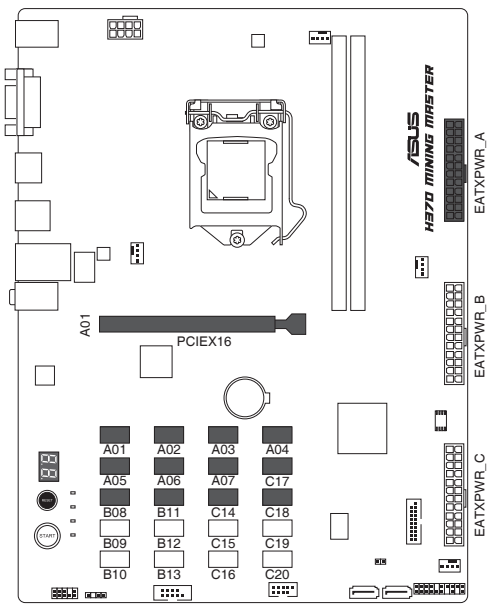


Customizing server and PC's power supplies for mining

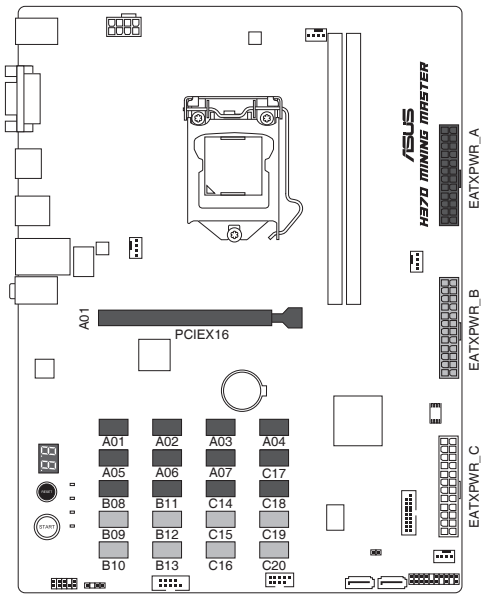
You can combine a server's and a desktop PC's power supply for mining, take a motherboard with twenty (20) connectors for mining Graphics cards for example:

1. Prepare a customized 2400W power supply and an ordinary 1200W power supply.
2. Connect the 2400W power supply to EATXPWR_A connector as the main power supply for the system and Graphics cards.
3. Connect twelve (12) Graphics cards to the 2400W power supply and insert the twelve (12) cards into the vertical USB ports separately.

When a GPU is installed on a USB A1 port, the PCIE x16 slot cannot be used.



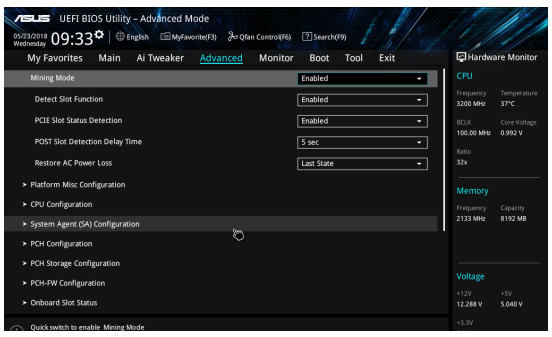
4. Connect the 1200W power supply to the EATXPWR_B or EATXPWR_C connector.
5. Connect the rest eight (8) Graphics cards to the 1200W power supply and inserted them to the rest eight (8) vertical USB ports.



Changing the mining mode in BIOS

To change the mining mode in BIOS:

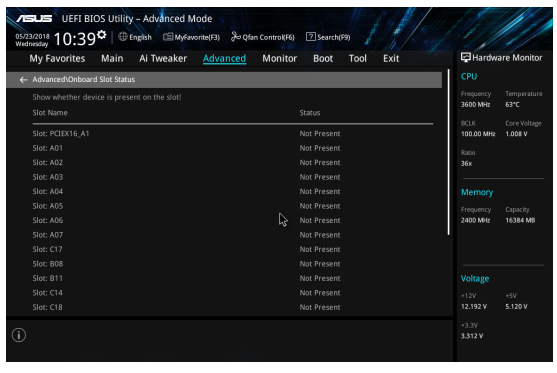
1. Press <Delete> or <F2> during POST to enter BIOS Setup.
2. Go to the **Advanced** menu > **Mining Mode**. This item is set to [Enabled] by default. You can change this item by yourself.



Viewing the mining card status

To view the mining card status in BIOS:

1. Press <Delete> or <F2> during POST to enter BIOS Setup.
2. Go to the **Advanced** menu > **On Board Slot States**, then press <Enter> to display the status of the expansion cards.



To view the mining card status during POST:

An image appears during POST to display the status of the mining cards.

- Green slot: The mining card works normally.
- Red slot: There is an error with the mining card.
- Gray slot: Your system failed to detect the mining card.

