



Guide to Optimize BIOS Setting & Ubuntu 20.04.2 OS Installation

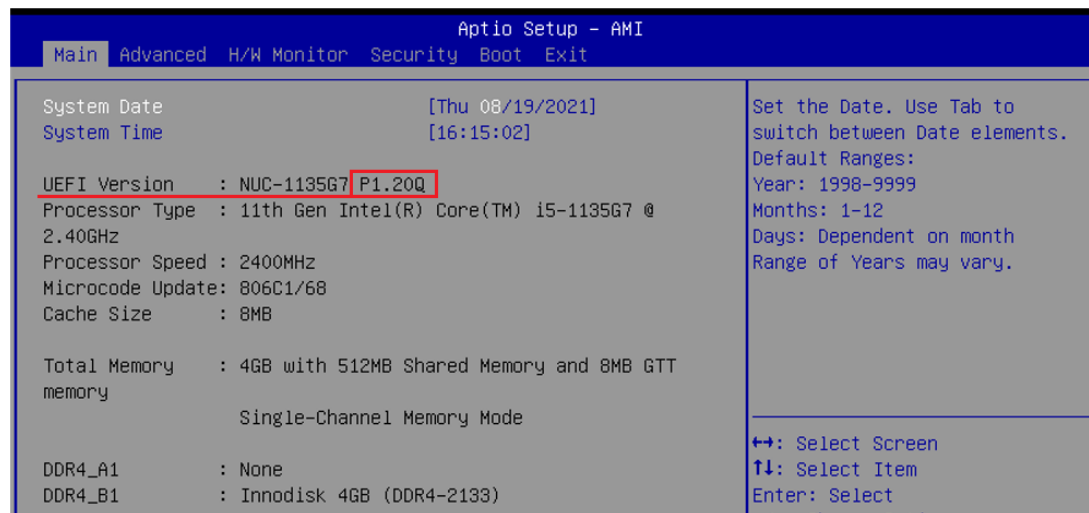
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Optimize the BIOS setting

ASRock Industrial builds a customized **BIOS P1.20Q** with all optimized BIOS settings for NUC BOX 1100 Series AI Development application.

Before doing BIOS update, please boot up system and press <F2> or into BIOS setup Main page, then refer to the following picture to check the current BIOS version of the system.



A. If it's BIOS P1.20Q, please skip the process of updating BIOS and go to page 5 directly.

B. If it's not BIOS P1.20Q, please refer to the following steps to flash customized **BIOS P1.20Q**, and then all optimized BIOS settings will be set in your system.

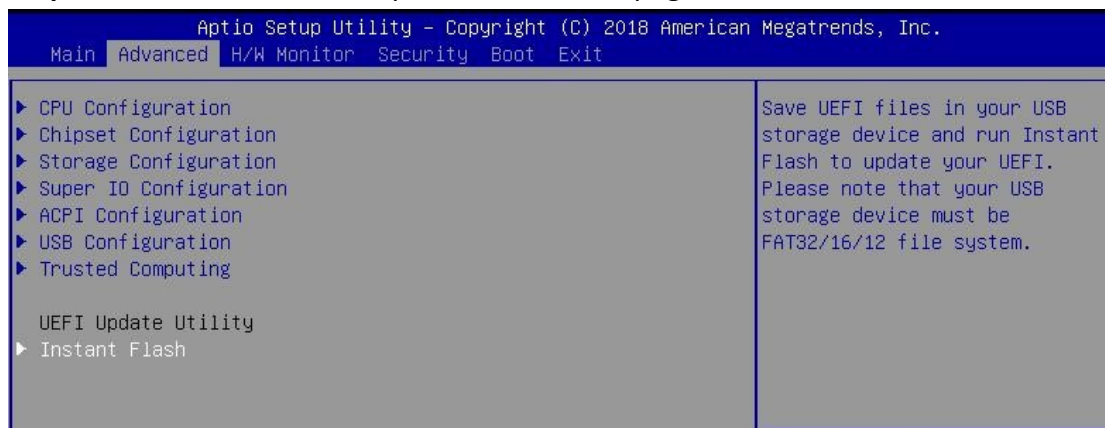
Step1. Please download the BIOS P1.20Q from the link.

BIOS P1.20Q download link: <https://download.asrock.com/IPC/BIOS/NUCTGL1.zip>

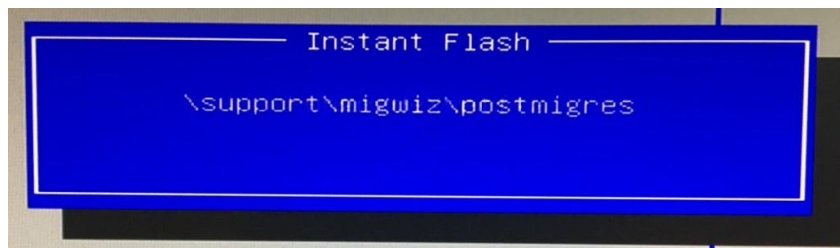
Step2. Extract the BIOS ROM file and save into FAT32 format USB stick.

Step3. Boot up system and press <F2> or into BIOS setup page

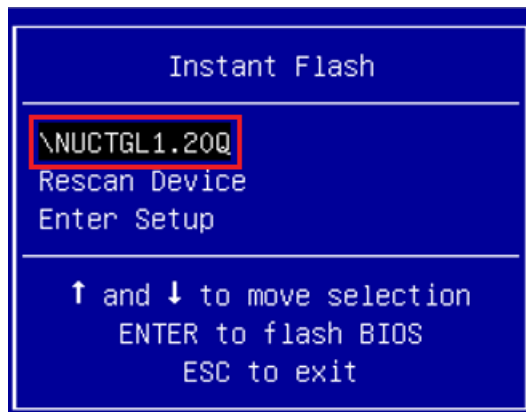
Step4. Select [Instant Flash] option in Advanced page.



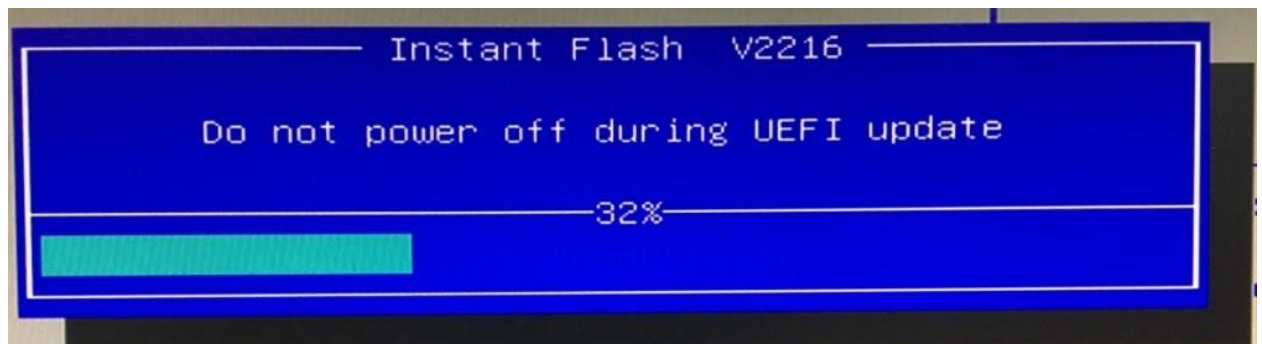
Step5. The system will start searching proper file and list them all.



Step6. Please choose the BIOS file [**NUCTGL1.20Q**] to begin updating process.



Step7. You will see BIOS is updating as below picture.



Step8. Please press Enter after the procedure is done and reboot system.



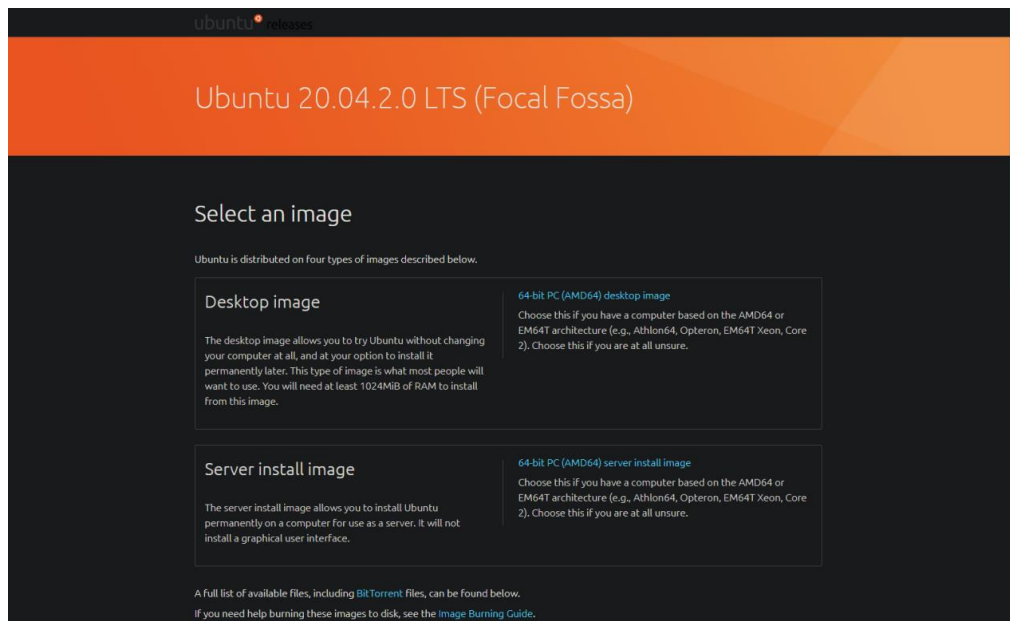
Step9. The BIOS update successfully after system reboot.

After finishing Step1 to Step 9, the system is working at the optimized BIOS setting.

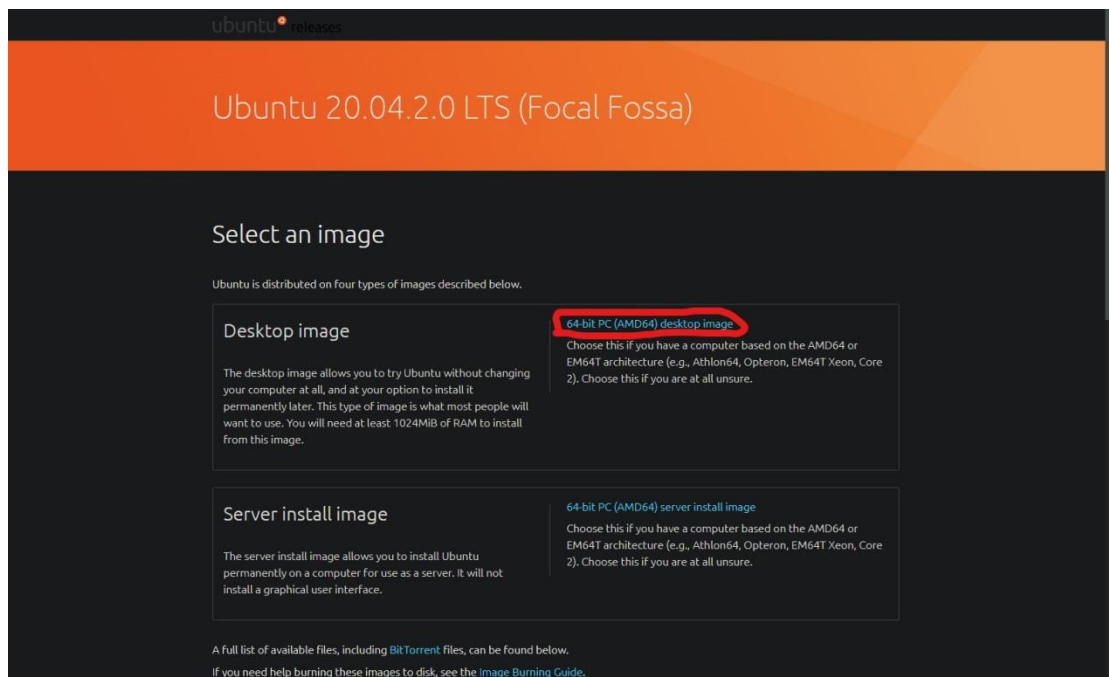
CPU is set at [Performance Mode] and CPU fan speed is working at full speed.

How to install the Ubuntu 20.04.2 OS

1. Go to Ubuntu's official website (<http://www.releases.ubuntu.com/20.04/>) for release of Ubuntu 20.04.2.



2. Click on "64-bit PC (AMD64) desktop image" to download **Ubuntu 20.04.2**.



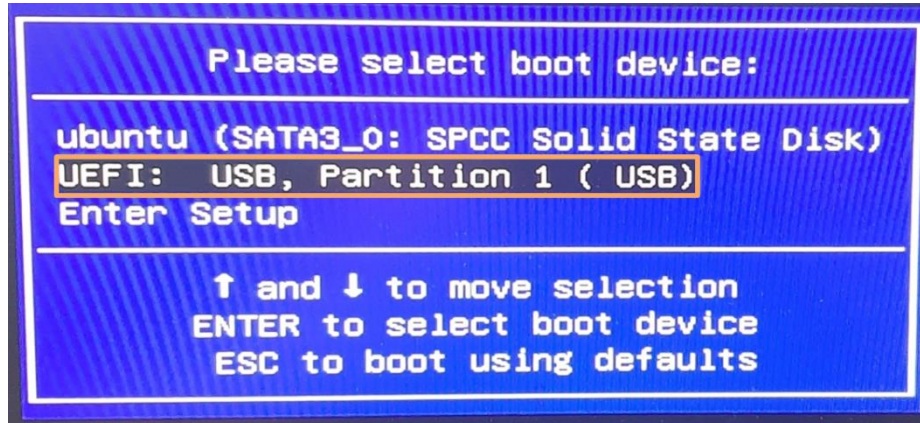
3. Create a bootable Ubuntu USB startup disk.

Here is a website showing how to use a tool to create a bootable Ubuntu USB startup disk.

Instructions website:

["https://ubuntu.com/tutorials/create-a-usb-stick-on-windows#1-overview"](https://ubuntu.com/tutorials/create-a-usb-stick-on-windows#1-overview)

4. To install Ubuntu, first plug in the bootable Ubuntu-install-USB-stick to the USB port on your computer. Then turn on the computer and press F11 repeatedly until the "choose boot-up menu" appears. Choose the Ubuntu install USB stick as the device used to boot up.



5. Then installation process of Ubuntu 20.04.2 starts. Ubuntu installation will be completed in about 2 to 5 minutes.
6. Refer to the video link below to learn how to run Ubuntu on your system.



Reference

Intel® Edge Software Hub (Edge Computing Software and Packages)

<https://www.intel.com/content/www/us/en/edge-computing/edge-software-hub.html>