FAQ-UPD-006: How to upgrade OS and firmware for the NAND Flash 512MB UA-2200/ UA-5200 series to V.1.4.0.0 or later version?

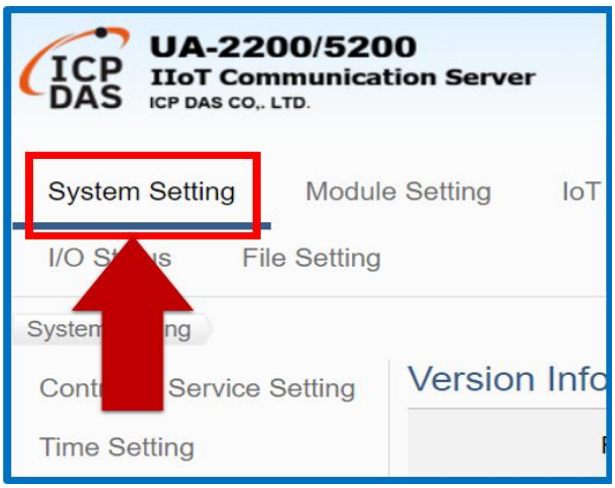
ICP DAS UA series provides new functions! Please upgrade the OS to provide more complete services.

When does the OS need to upgrade?

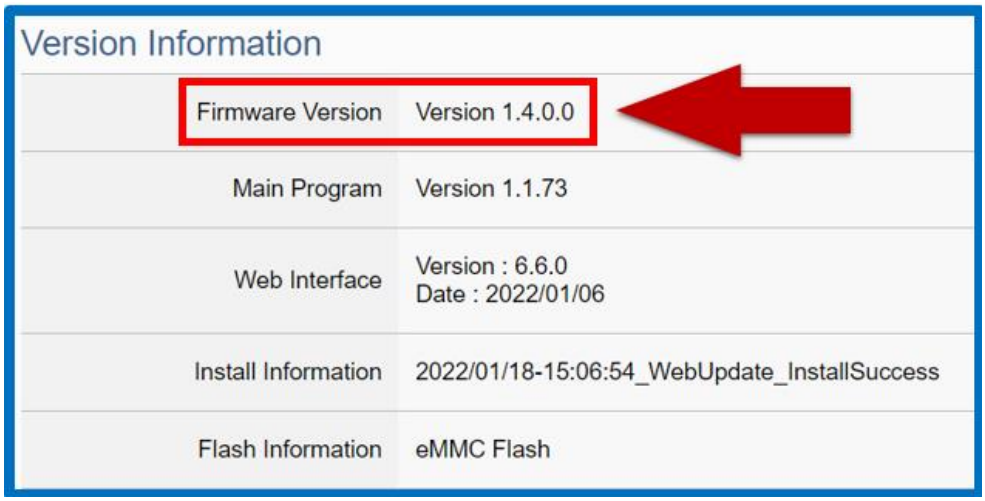
When the UA-2200 or UA-5200 NAND Flash 512MB version update the Firmware to a version above 1.4.0.0, but the current version is lower than 1.4.0.0, it needs to upgrade the OS and the Firmware.

1. Check the Firmware Version

Log in the UA-2200 or UA-5200 UI webpage, and click [System Setting].



Check the [Firmware Version] in [Version Information]. If it is lower than V.1.4.0.0 and you want to upgrade to V.1.4.0.0 or above, please go to the next step. If it is V. 1.4.0.0 or above, you can directly update the firmware without upgrading the OS.



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2. Check If the UA-2200 or UA-5200 Can Upgrade the OS?

[UA-2200 Series] All models are NAND Flash. If it is lower than V.1.4.0.0, upgrade the OS Firmware via this package.
[UA-5200 Series] Follow the steps below to check if to upgrade via this OS Firmware package.

(1) Check the casing mark to confirm if it is the UA-5200 8GB eMMC Flash hardware version.



Check if the front casing of the UA-5200 series with the mark "**Rev B**"?

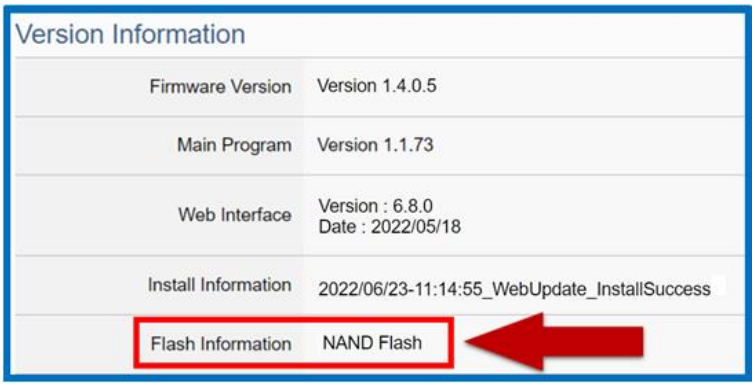
If there is, its Hardware version is 8GB eMMC Flash, firmware version 1.4.0.0 or later.

=> Firmware can be updated directly

(2) If there is no mark, check the UI Webpage to see the firmware and Flash information.

After entering the UA series UI webpage, click 【System Setting】. Check the [Flash Information] in [Version Information].





If the [Flash Information] is NAND Flash (512MB), you can upgrade this OS and Firmware to the v1.4.0.0 or later version by this burning package.

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3. How to Update Firmware by Re-burning the OS?

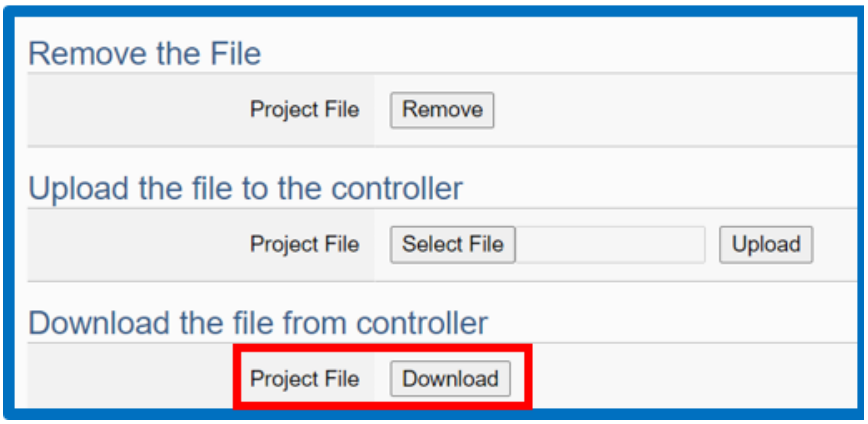
This method needs to update the bottom layer OS. If there is a project in the UA-2200 or UA-5200 controller, please **backup and save the project before re-burning the OS**.

3.1. How to Back-up the Project File?

After logging in the UA web UI, click the 【File Setting】 function.



Click the【Download】button as below, and save the project file to the folder you want.



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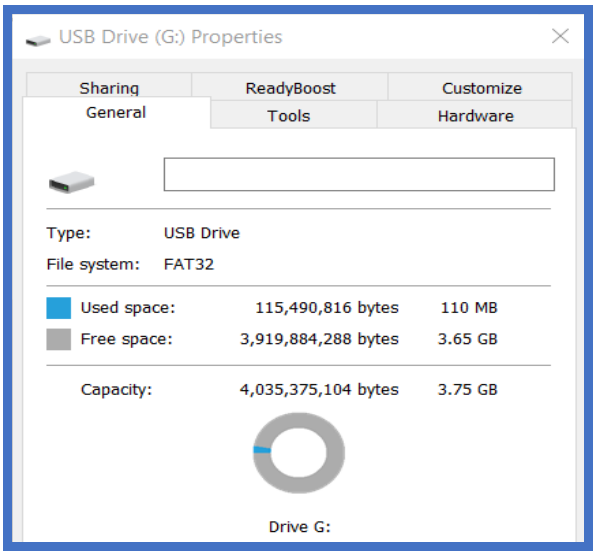
3.2. How to burn the Upgrade File into a MicroSD Card

(1) After powering off, remove the MicroSD card of the UA-2200 or UA-5200 series (the location of the MicroSD card is as shown below)





Put the MicroSD card into the card reader on PC/NB, delete all files, and format to the FAT32 system. (Note: Please use UA-2200 or UA-5200 series MicroSD card.)

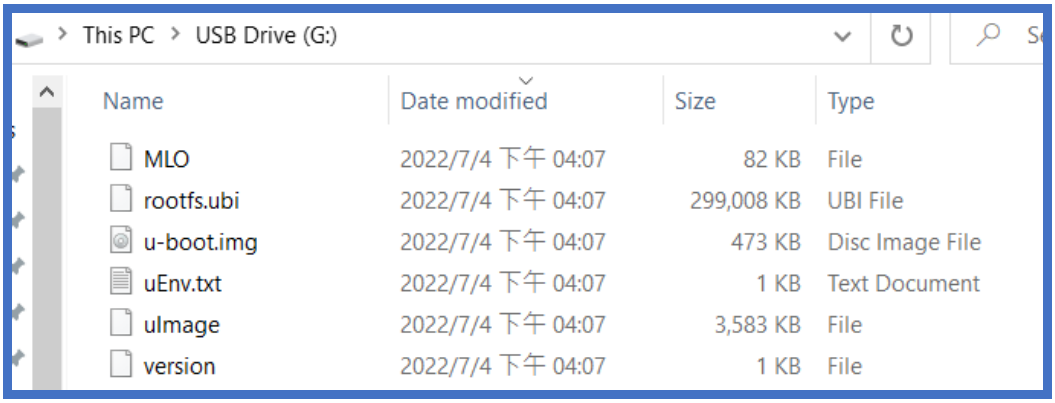


(2) Download the **FAQ attached file**, that is the UA-2200 or UA-5200 series (512MB NAND Flash) **burning file (zip file of OS and firmware),** or download the file from the following webpage:

UA-2200: https://www.icpdas.com/en/download/show.php?num=7996&nation=US&kind1=&model=&kw=ua-
UA-5200: https://www.icpdas.com/en/download/show.php?num=1135&nation=US&kind1=&model=&kw=ua-

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(3) copy the burning files into the MicroSD card (as the picture below)



(4) Put the burned MicroSD card into the card slot of the UA series (as the figures below)
If there is a MicroSD card in the card slot, take it out first.



The card slot of **UA-2200**



The card slot of **UA-5200**

(5) Connect **both LAN1 and LAN2** of the **UA-2200 series** to the Internet
Or Connect the **LAN1** ……. of the **UA-5200 series** to the Internet

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(6) Burn and check the status via the software Putty

Please download the Putty version that matches your system from the official Putty website.
https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

Preparations:





- One USB to RS-232 adapter cable
- The CA-0910 Cable in UA-5231/UA-2241 Accessories
- Putty software

a. Connect the CA-0910 Cable to the UA according to the following figures, then connect it to the USB to RS-232 adapter cable, and connect it to the computer.
If the product's pin assignment layout is blurred or different, please refer to the pin assignment diagram in chapter 1.5 of the manual. The manual webpage:
https://www.icpdas.com/tw/download/show.php?num=3798&model=UA-5231

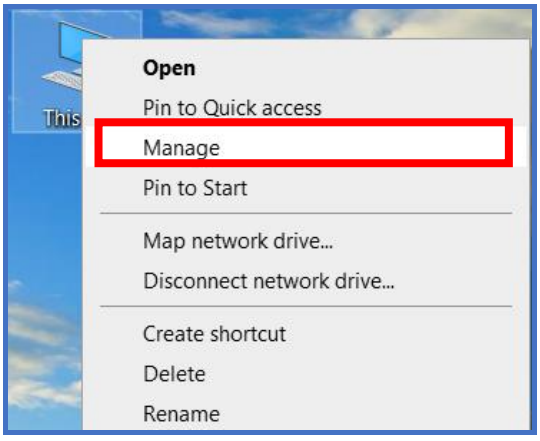


The wiring of **UA-2200**



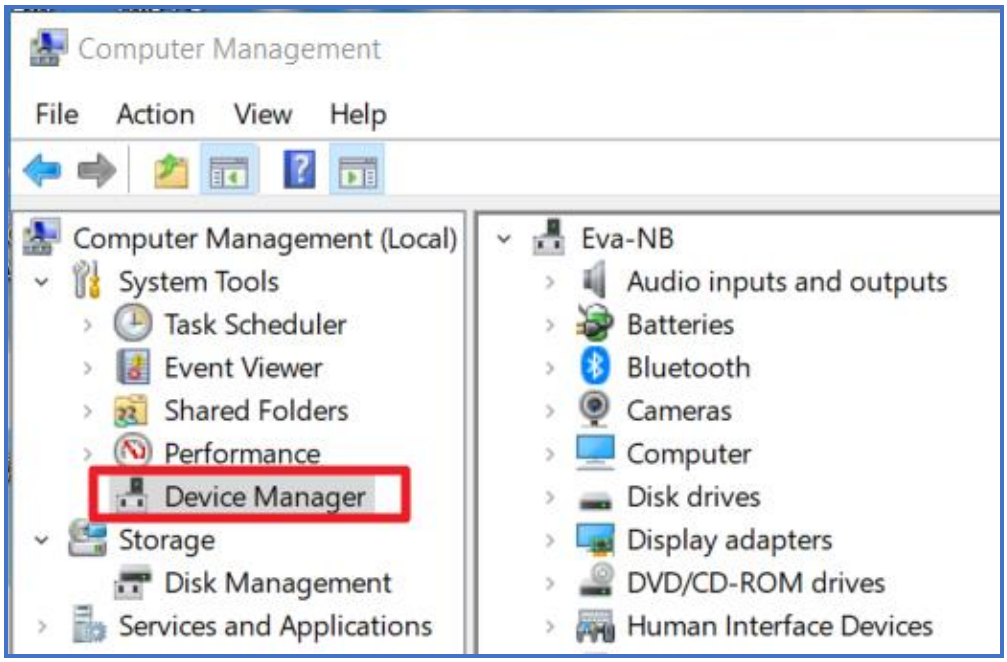
The wiring of **UA-5200**

b. Check whether the PC has captured the RS-232-related driver. Please right-click on "**This PC**" or "**My Computer**" and click "**Manage**", as follows.

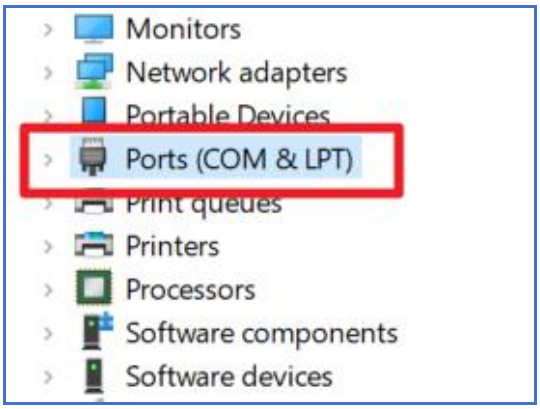


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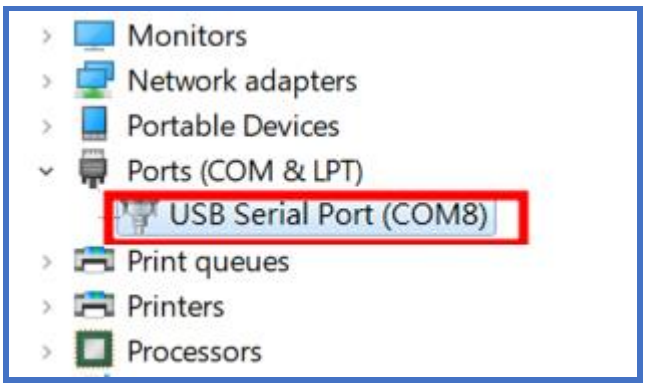
c. Click “**Device Manager**” on the left side



d. Click “**Ports(COM & LPT)**”

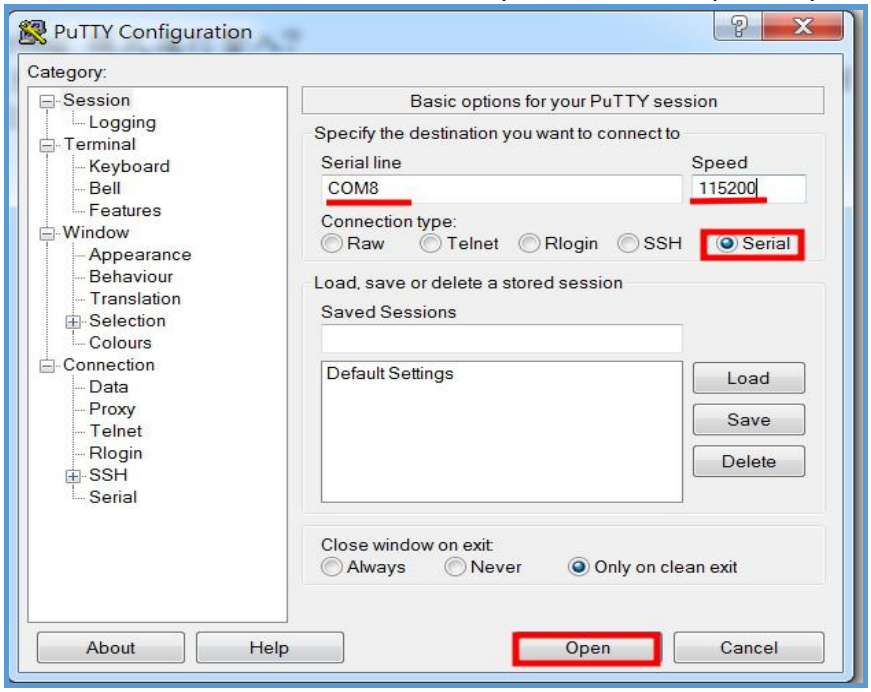


e. Remember the port number, in this example is “COM8”.



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f. Run the software Putty. Click "Serial" and enter the COM port number get from the previous step into the "Serial line", in this case "COM8". And enter Speed "115200", press Open.



g. A black screen will pop up.



(7) Connect the UA to the power and turn on the power, it will start to burn the OS.
(WARNING! DO NOT power off during the burning process. Otherwise, the upgrade will fail and cause hardware failure.)

(8) Check the messages of the Putty, when the message below appears, it means the burning process is complete.

```
[    2.187900] Please append a correct "root=" boot option; here are the available partitions:
[    2.187928] 1f00              256 mtdblock0  (driver?)
[    2.187944] 1f01              256 mtdblock1  (driver?)
[    2.187959] 1f02              256 mtdblock2  (driver?)
[    2.187974] 1f03              256 mtdblock3  (driver?)
[    2.187989] 1f04             3840 mtdblock4  (driver?)
[    2.188005] 1f05              256 mtdblock5  (driver?)
[    2.188020] 1f06             5120 mtdblock6  (driver?)
[    2.188035] 1f07           514048 mtdblock7  (driver?)
[    2.188049] b300          3887104 mmcblk0  driver: mmcblk
[    2.188071]   b301          3886080 mmcblk0p1 00000000-0000-0000-0000-000000000000
[    2.188089] Kernel panic - not syncing: VFS: Unable to mount root fs on unknown-block(179,2)
```

(9) **Power off the UA series, and then take out the OS MicroSD card (burned). (WARNING! If forgot to remove the burning card will result in repeated burning.)** Put the MicroSD card into the card reader on PC/NB, delete all the files, and then put it back into the UA card slot.

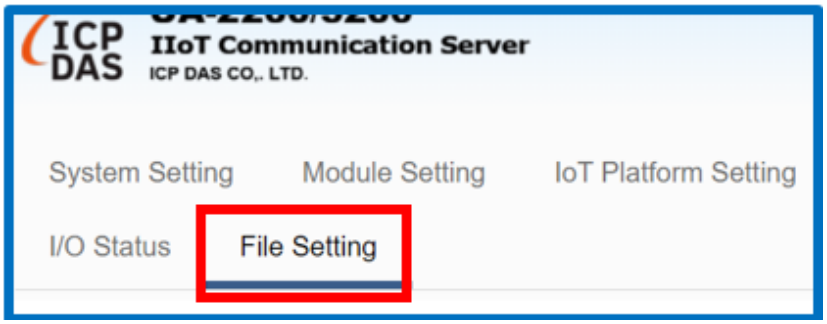
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3.3. How to know the UA-2241 or UA-5231 IP address after the OS burning?

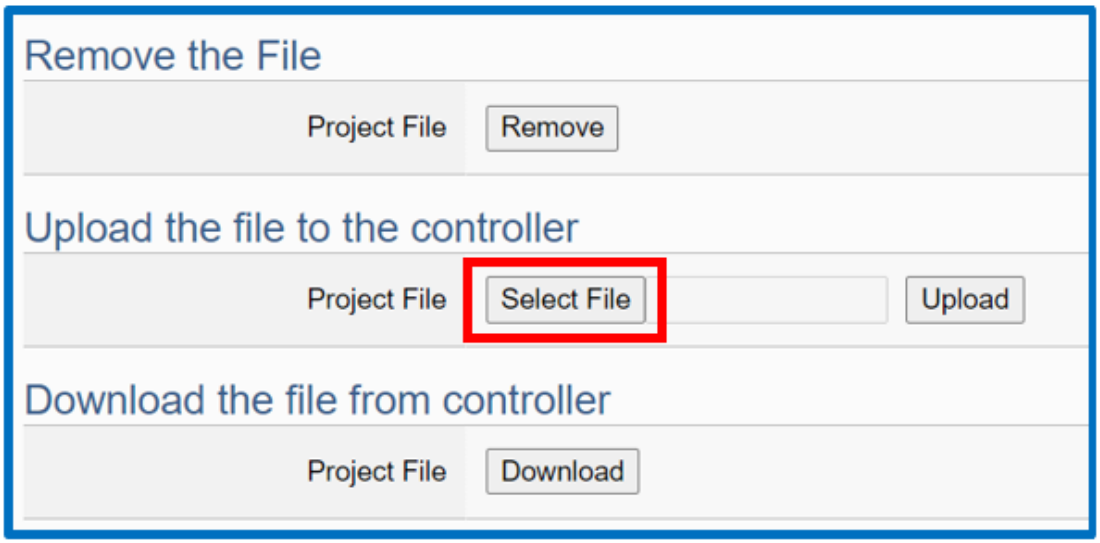
After burning, Default IP is 192.168.255.1
Default webpage Account: root
Default webpage Password: root

3.4. How to Restore the Backup Project File?

After logging in to the UA-2200/5200 UI webpage, click the 【File Setting】 function.



Click 【Select File】, select the previously backed up project file, and click【Upload】.



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