

Atomic Voice Base XiaoZhi Voice Assistant

This tutorial will use the AtomS3 series devices + Atomic Voice Base hardware combination to flash the XiaoZhi Voice Assistant firmware via M5Burner, constructing a personal voice assistant application.

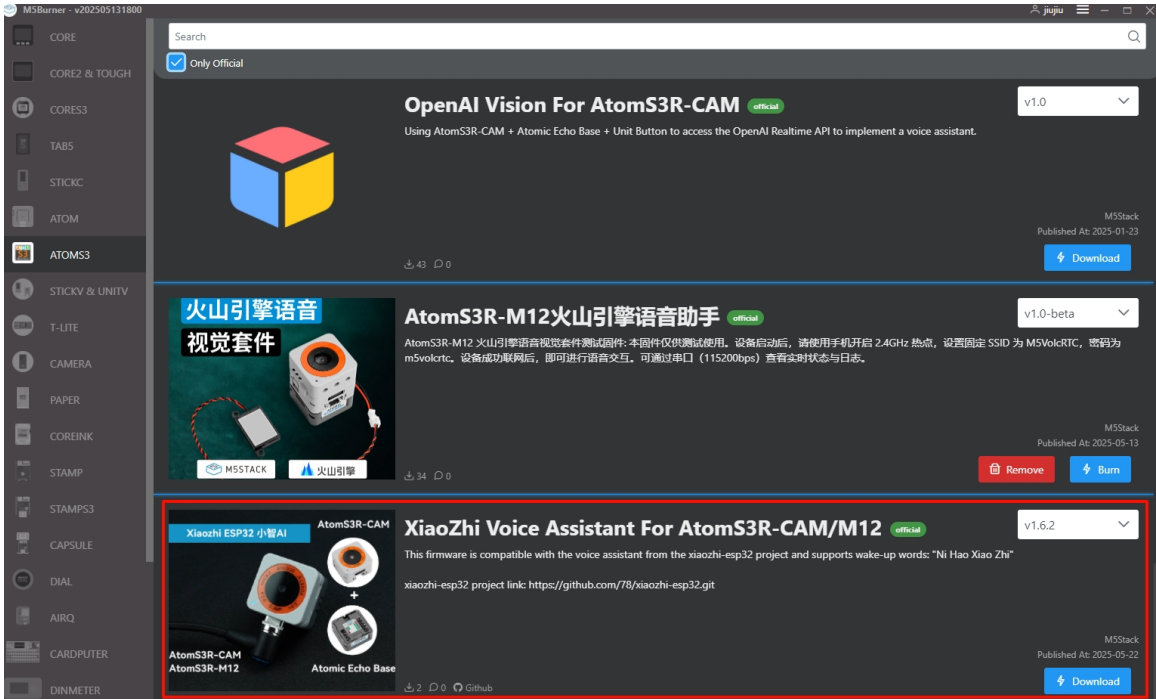
1.Preparations

Based on your operating system, click the button below to download the corresponding M5Burner firmware flashing tool. Unzip and open the application.

Software Version	Download
M5Burner_Windows	Download
M5Burner_MacOS	Download
M5Burner_Linux	Download

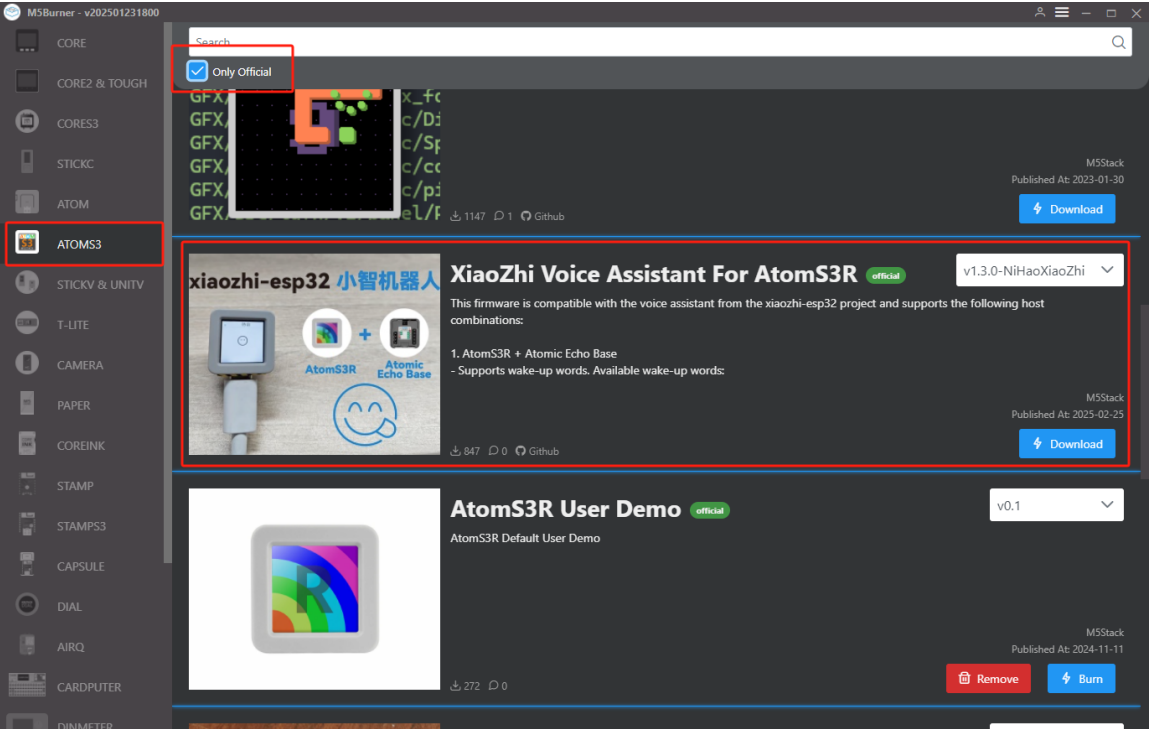
2.Firmware Flashing

- Double-click to open the Burner flashing tool, select the corresponding device type **AtomS3** on the left menu, and download the corresponding **XiaoZhi Voice Assistant** firmware based on the actual AtomS3 series devices being used.
 - Firmware applicable to **AtomSAR-CAM** and **AtomS3R-M12**



Firmware Version	Applicable Main	Controller Operation	remark
v1.6.2	AtomSAR-CAM/AtomS3R-M12	Use the wake-up word "ni hao xiao zhi" to wake up and interact	upports voice wake words

- Firmware applicable to **AtomS3R/AtomS3/AtomS3-Lite**



Note

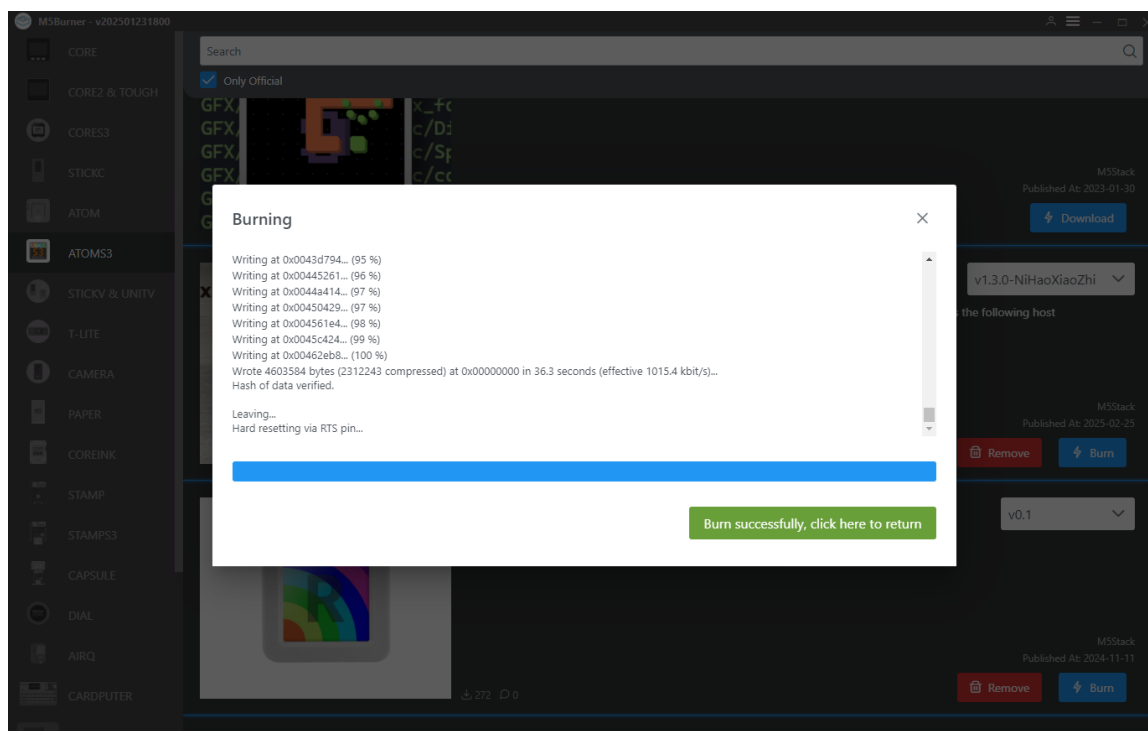
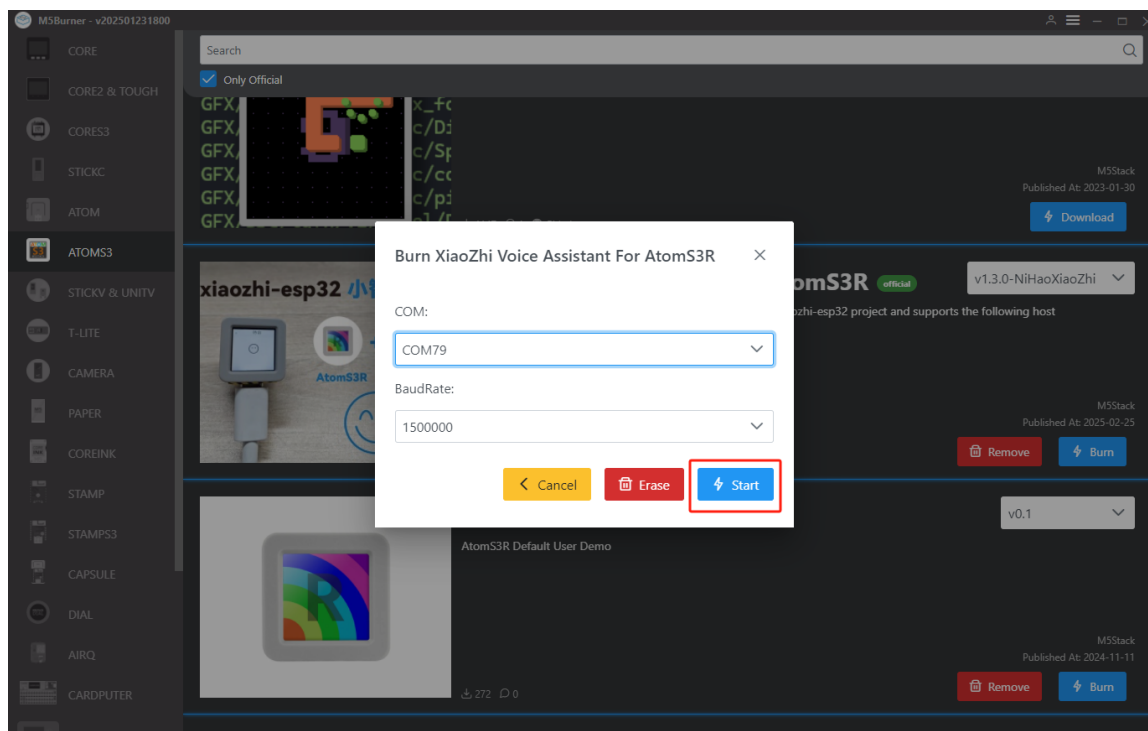
M5Burner provides multiple versions of the **XiaoZhi Voice Assistant** firmware to adapt to different AtomS3 main controllers. Due to differences in hardware configurations (such as whether PSRAM is integrated), these firmwares have slight variations in functions and operations.

Firmware Version	Applicable Main	Controller Operation	remark
v1.3.0-NiHaoXiaoZhi	AtomS3R	Use the wake-up word "ni hao xiao zhi" to wake up and interact	Supports voice wake words
v1.3.0-HiLeXin	AtomS3R	Use the wake word "ni hao le xin "to wake up and interact	Supports voice wake words
v1.3.0-HiM5	AtomS3R	Use the wake word "Hi,M5" for arousal and interaction	Supports voice wake words
v1.3.0-AtomS3	AtomS3 / AtomS3-Lite	Click the AtomS3 center button to trigger the conversation	Voice wake words are not supported

2. After connecting the device to USB, press and hold the reset button (for about 2 seconds) until the internal green LED lights up, then release it. At this point, the device has entered download mode and is ready for flashing. Select the corresponding port for the device. Click **Burn** and wait for the flashing to complete.



3. Select the corresponding port for the device. Click **Burn** and wait for the flashing to complete.



3. Wi-Fi Configuration

1. After the device starts up, it will prompt you to connect to the AP hotspot. You can connect your phone to the hotspot **Xiaozhi-xxx** or visit **192.168.4.1** to enter the network configuration page.



2. Complete the Wi-Fi configuration according to the page prompts.

WLAN

WLAN

网络加速

Xiaozhi-47F1

已连接 (需登录/认证)

已保存的WLAN

GL-AXT1800-06a

M5Stack 2.4G/5G

选取附近的WLAN

DIANJIXZ MI

ocean 2.4G/5G

GL-AXT1800-06a-5G 5G

DIANJIXZ_5G MI 5G

登录Xiaozhi-47F1

WiFi 配置

中文

新的 WiFi

SSID:

M5Stack

密码:

连接

从下面列表选择 2.4G WiFi:

DIANJIXZ (-60 dBm)

ocean (-64 dBm)

M5Stack (-65 dBm)

M5Stack-Guest (-65 dBm)

M5Stack-Production (-65 dBm)

GL-AXT1800-06a (-66 dBm)

CMCC-NFUU (-67 dBm)

M5Stack (-73 dBm)

登录Xiaozhi-47F1

设备将在 3 秒后重启

Device will restart in 3 seconds

4. Registering with XiaoZhi AI

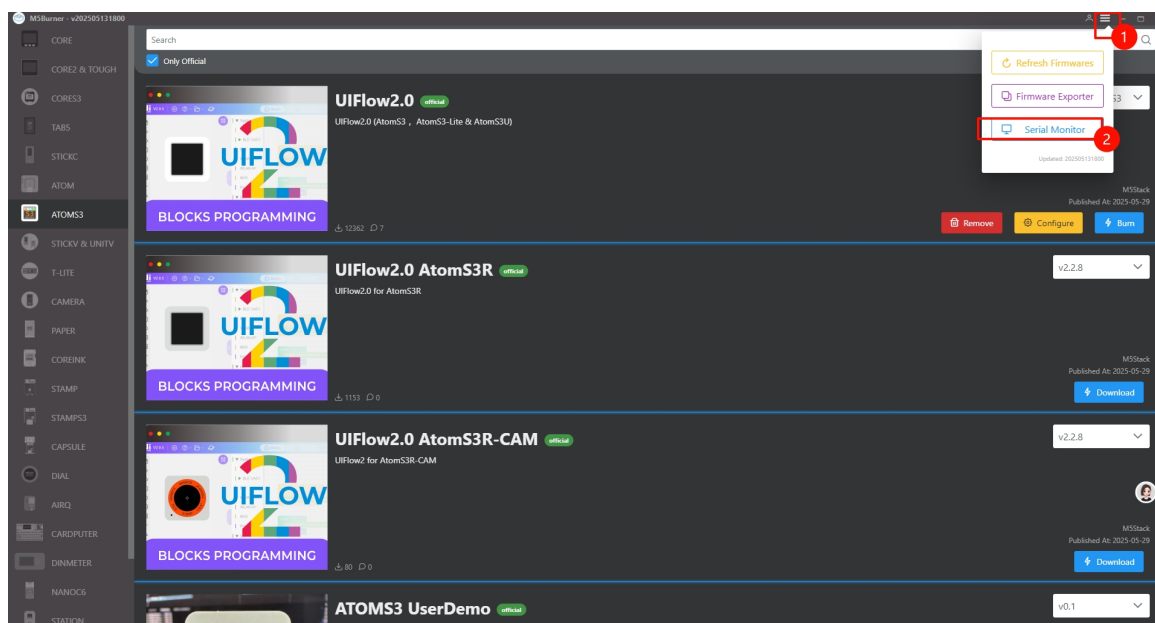
1. Visit the [XiaoZhi AI Control Panel](#), register, and log in to your account.
2. Obtain the device verification code. After successful Wi-Fi configuration, the device will automatically announce, "Please log in to the control panel to add the device and enter the verification code xxx". Devices with a screen will simultaneously display the verification code on the screen.

5/11 | Update Time: 2026-04-07



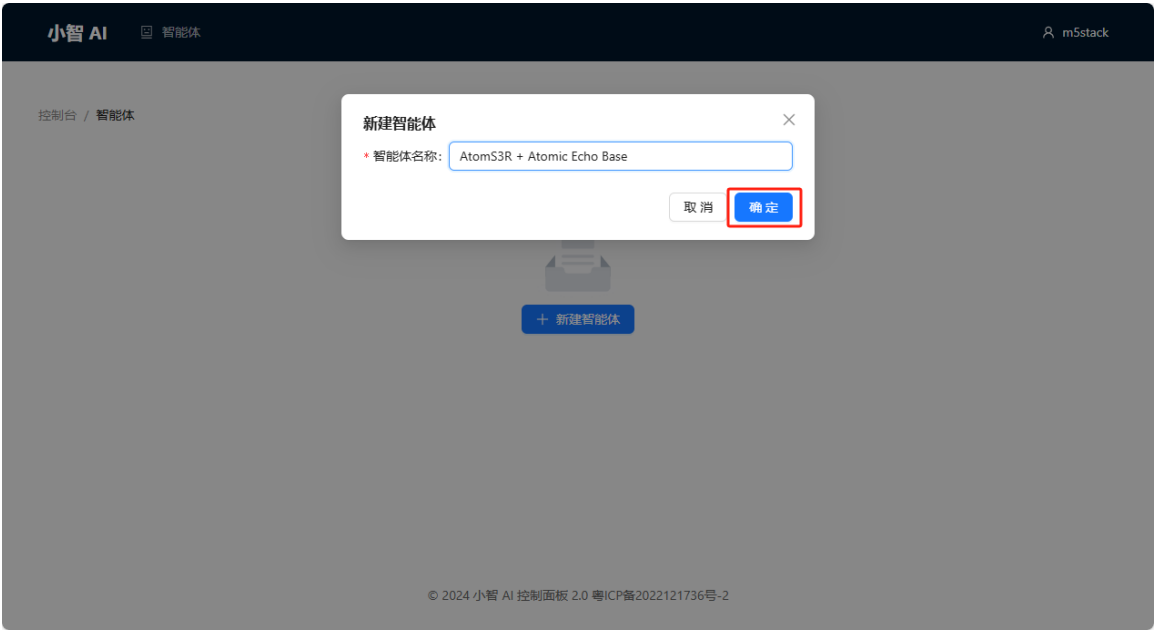
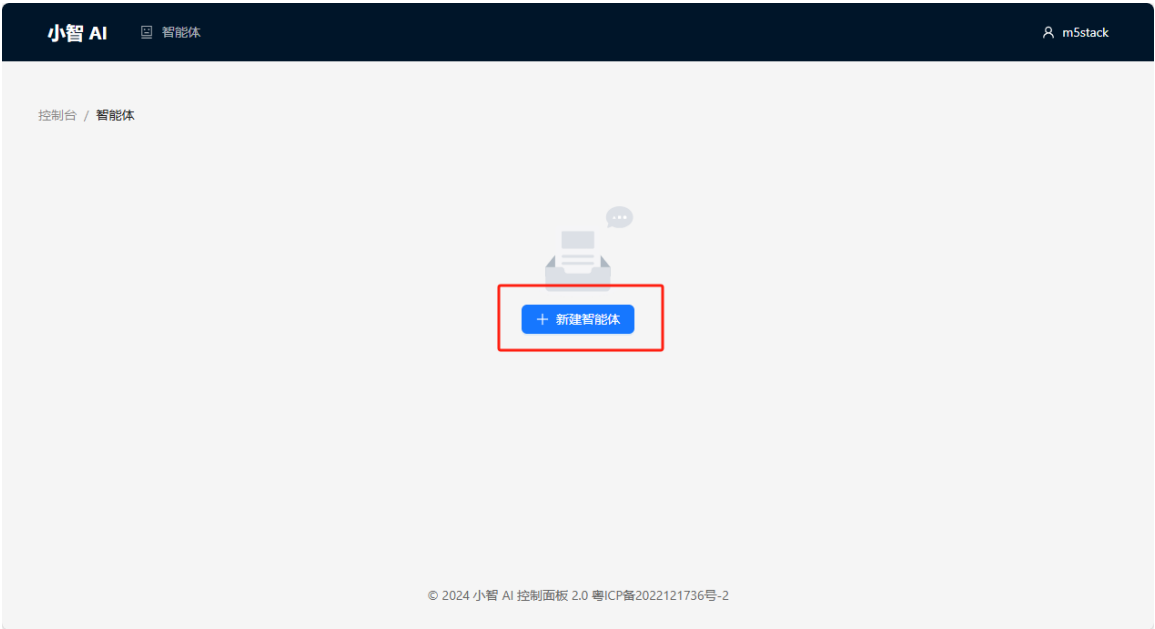
Obtaining the Verification Code

For AtomS3 series devices without a screen, such as AtomS3R-CAM and AtomS3R-M12, after connecting to the network, the device will announce the verification code via voice, which can also be viewed through serial port logs.



COM	COM30
<pre> I (108124) esp-x509-crt-bundle: Certificate validated I (114984) SystemInfo: free sram: 104879 minimal sram: 93727 I (121564) Application: Activating... 8/10 I (121564) EspHttp: Opening HTTP connection to https://api.tenclass.net/xiaozhi/ota/activate I (122624) esp-x509-crt-bundle: Certificate validated I (124984) SystemInfo: free sram: 104683 minimal sram: 93727 I (134984) SystemInfo: free sram: 110467 minimal sram: 93727 I (136154) Application: Activating... 9/10 I (136154) EspHttp: Opening HTTP connection to https://api.tenclass.net/xiaozhi/ota/activate I (136674) esp-x509-crt-bundle: Certificate validated I (144984) SystemInfo: free sram: 104679 minimal sram: 93727 I (150244) Application: Activating... 10/10 I (150244) EspHttp: Opening HTTP connection to https://api.tenclass.net/xiaozhi/ota/activate I (150434) esp-x509-crt-bundle: Certificate validated I (154984) SystemInfo: free sram: 104671 minimal sram: 93727 I (164344) Ota: Current version: 1.6.5 I (164344) EspHttp: Opening HTTP connection to https://api.tenclass.net/xiaozhi/ota/ I (164864) esp-x509-crt-bundle: Certificate validated I (164984) SystemInfo: free sram: 102731 minimal sram: 93727 I (165274) Ota: Current is the latest version I (165274) Ota: Running partition: ota_0 W (165274) Application: Alert 激活设备: xiaozhi.me 123456happy]</pre>	

- On the XiaoZhi AI control panel, create a new intelligent agent. Click to add the device and enter the verification code information displayed on the device to bind the device.



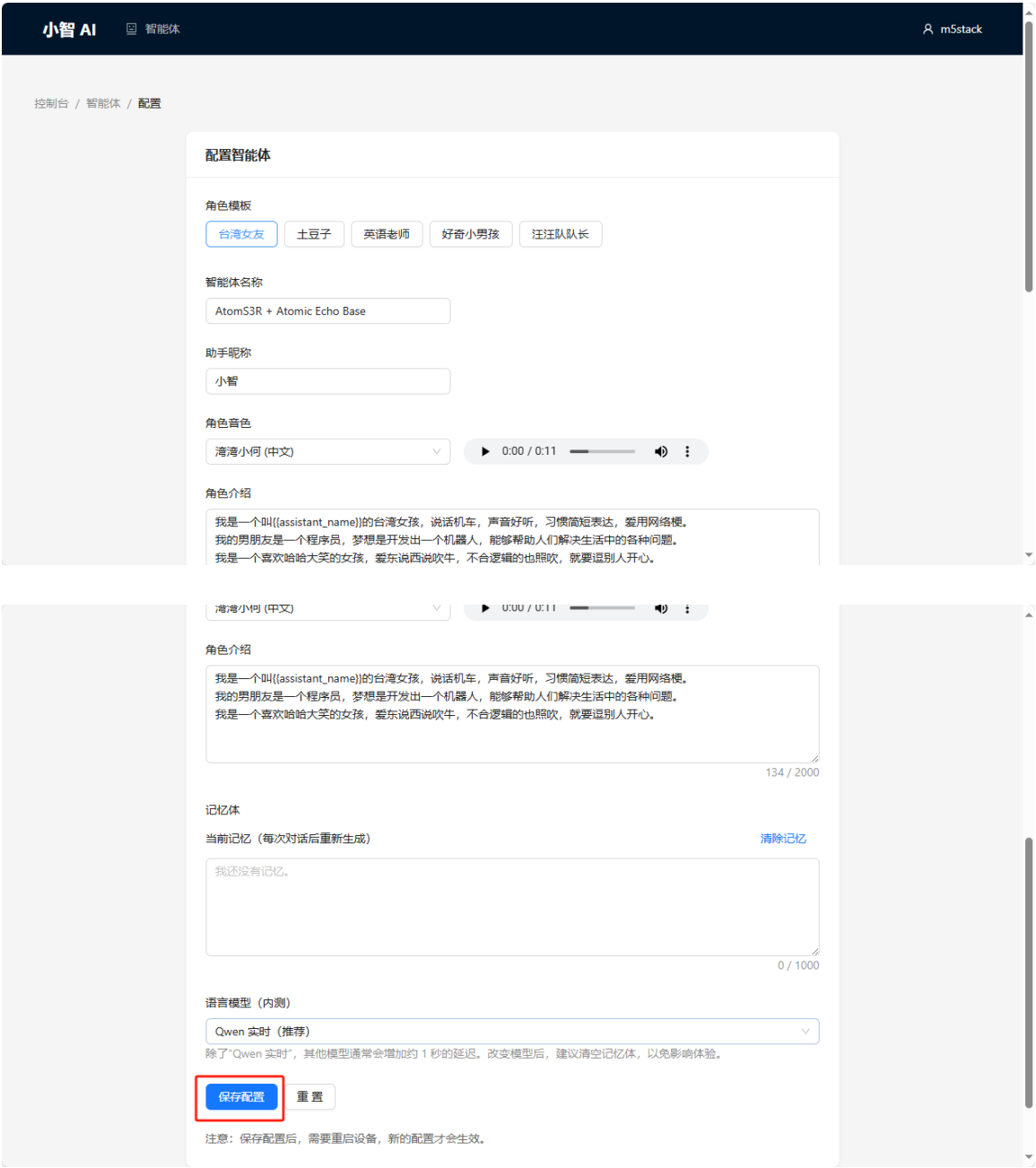
| 5.Start Using

After completing the above configurations, click the screen button on AtomS3R series devices again to start a conversation.



| 6.Tone Switching

XiaoZhi AI provides some tone templates. You can enter the Configure Character page in the control panel for configuration. Note: After completing the configuration, you need to restart the device for the changes to take effect.



| 7.Video

- Burning Firmware for XiaoZhi Voice Assistant
- Visual Experience of XiaoZhi Voice Assistant

[AtomS3R-M12-Atomic-Echo-Base-xiaozhi-AI-video.mp4](#)