WizPro200XX

Programming Manual

V1.1

Directory

version	date changed	modify content
V1.1	2021.05.26	Six Chinese chip models were added
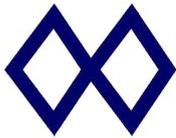
WizPro200XX PC Application Manual

1. Operating interface diagram:

① Operation button area, click to perform the function
②Specification, model and parameters of the chip
③ Setting up and control of burning function
④Equipment connection and selection.

⑤ Programmer name display area displays current device connection.
⑥ Information display area showing information and results of various operations.
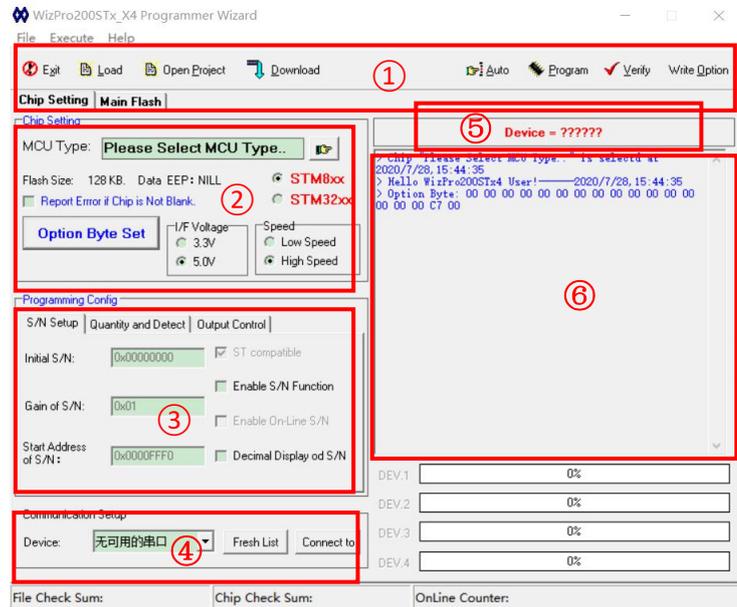
2. Offline programmer general operation:

(1) Start the WizPro200XX PC application and select the model of the target chip: Click the button [☞] then the system pops up all the MCU list for selection, the screen display interface is as follows
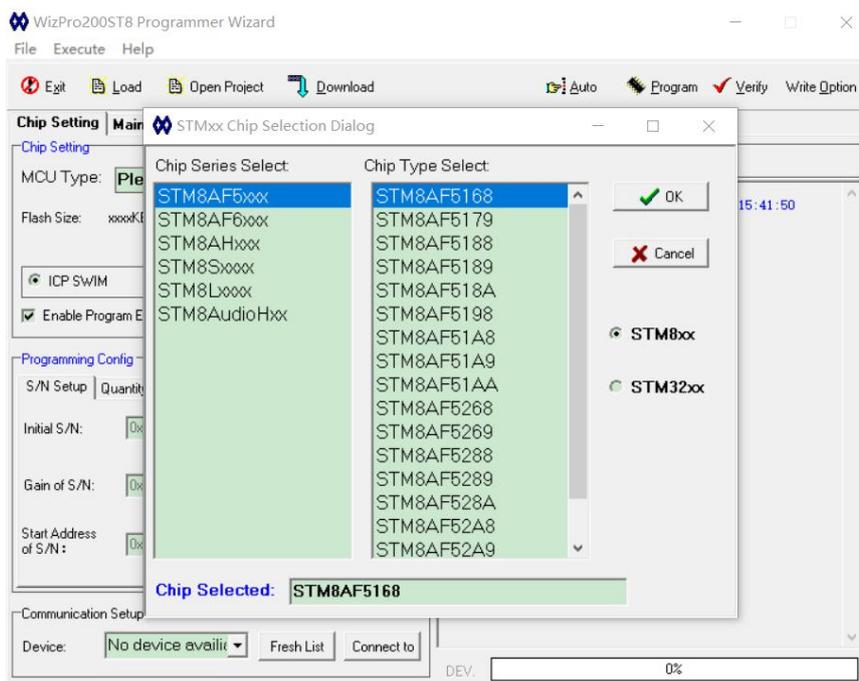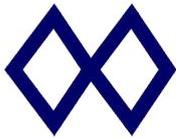
(2) After selecting the MCU, press the button to load the target binary file (default is. S19 format, also optional. HEX、. BIN format, etc.) The screen is shown below：
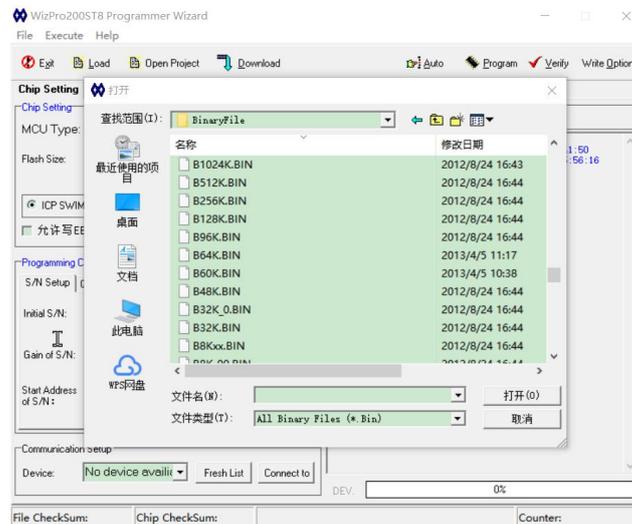
(3) Connect the corresponding signal lines as required and power the programmer (some chips need to be USB with the power cord to work properly)；

(4) Refresh all devices with buttons , Click the button to confirm the current device;

(5) Click "Option Byte" go to the Option Byte settings page (the specific setting parameters are set by the customer according to your project requirements, you can also use the default configuration);

(6) When the Option Byte is set, press the button to download the binary data and Option Byte to the internal Flash of the burner for offline burning;

(7) After the download is complete, cut off the burner power, re-power and connect the chip need ,then it can be burned offline;
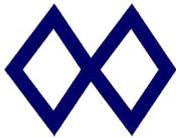
3. <u>General operation of PC online programmers</u>:

1. 1~4 steps to Offline programmer general operation;
2. To the temporary chip burning, such as R & D, you can use the online burning method，see the main screen 、 and and button, where the programming button will automatically perform the function of erasing, after the data programming, must use the check button to check the programmed data and Option Byte the writing function, otherwise Option Byte data will not be written (offline burning is different, the system will automatically do a series of burning including Option Byte writing)；
3. Can also click the button in the application menu the system began to automatically complete the operation of programming and verification, programming interface options for setting the level of the interface and Vout output voltage；
4. The device configuration option is used when there are multiple identical devices connected to a computer, the system may not be able to automatically identify the corresponding device, so you need to manually select, refresh all devices with the button before selecting, and then click the button to confirm the current device；
5. If the programmer USB unplugged and then connected, the above operation must be performed, otherwise the system will have abnormal operation；

4. Additional functional description：

(Different types of applications, operating interface differences)

①Chip not blank Error： Report Errror if Chip is Not Blank. Check to use, when there is data inside the target chip, error will be reported to prevent repeated burning (no special requirements need not check)。

②option Byte settings、 burn: Set Option Byte Click to enter the Option Byte settings page (the specific setting parameters set by the customer according to their own project requirements), can check Program Option Byte to burn write。

Online burning, data programming needs to click on the upper right corner of the interface function Write Option otherwise Option Byte data will not be written (offline burning is different, the system will automatically do a series of burning, including Option Byte writing).

③Set the number of burners： This programmer supports the number Maximum Quantities: 0 Enable Quantity Limit control function of burning and writing，If you need to set the number of burn write, download the program to set the number of burn write，**After burning down the set number,** the programmer rings 2 short sounds, and the two indicator lights flicker alternately, when the programmer automatically forbids reprogramming, the program needs to be re-downloaded to continue programming;

④Automatic detection chip： Auto Chip Detection If the automatic chip detection function is turned on, the system automatically detects whether the chip is connected，When connected, the burning is started automatically. After the burning is successful, the LED state remains OK or NG, If the system detects that the chip is removed, both the OK and the NG LED are extinguished. In this way, it can effectively prevent the chip from burning empty, but also can greatly improve the efficiency of manual burning.

PS：After checking auto-burn, download the program, if connected to the chip, will do an offline burn, this time the burner will disconnect from the PC application, if you want to continue debugging, you need to re-click "connect device"

⑤Turn off power output after programming, start chip：

Click enter Signal Control , ☑ SHut VDD Out after programmed check the burner after burning a chip, the burner no longer power the chip ，**When checked,** tick ☐ Run Chip after programmed After burning a chip, the burner sends a reset signal to the chip to start the chip, which can be used when the chip is placed in the complete circuit (no special needs are not checked)。

⑥Big Endian Mode：choose ☐ Big Endian Use Large End Mode to burn, before using to determine whether the chip is supported, and whether the mode switch to large (most chips default to small end)。

⑦Serial Number Function:Serial number setting，Click ☑ Enable S/N Function

Initial S/N:	0x00000000
Gain of S/N:	0x01
Start Address of S/N:	0x0000FFF0

使 to use the burn serial number function, and then set the serial number storage address, initial value and increment。 Check ☐ S/N Decimal Display can be set and viewed in decimal, otherwise hexadecimal，if checked ☐ Enable On-Line S/N.，when connected to the computer burning, will also burn serial number。

⑧High Speed Low Speed Burning：Generally the default

is fast burning, if burning environment interference is large, can check low speed

```
┌─Speed──────┐
│ ○ Low Speed  │
│ ● High Speed │
└────────────┘
```

⑨Main Flash: Main Flash You can view the binary data of the loaded file。

⑩Ignoring chip ID matching：choose ☐ Ignore ID Match this option, no

longer matches the chip model, for special chips or can not find the model of the chip, you can use similar models (same communication timing) of the chip compilation.

For multiple file loading: click ▣ Load load the first file,
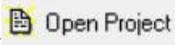
click ▣ Open Project load the second and subsequent multiple.

WizPro200RS Programmer Wizard - For Renesas RXxx/SH

File   Execute   Help

⊘ 退出   ▣ 加载   ▣ 打开工程   ⬇ 下载

Chip Setting | Program Flash

WizPro200XX MCU Programming Manual

1. chips supported：

- **WizPro200 XX-DP:** Means the burner has a screen；

- **WizPro200 APM:** APM32F0xx, APM32F1xx series MCU；

- **WizPro200 ART:** ARTERY MCU, AT32F4XX series MCU；

- **WizPro200 AT :** ATiny、AVR、ATMEGA、ATXMEGA and ATMEL SAM ARM series MCU；

- **WizPro200 BK:** BK3266 MCU；

- **WizPro200 BYD:** BF7106AM series Flash MCU；

- **WizPro200 CAR:** Original NEC V850x series, RH850xx series etc.

- **WizPro200 CY :** PSoC1，PSoC3，PSOC4，PSoC5，PSoC6, USB TypeC series，True Touch，Multi-Touch Series etc.

- **WizPro200 EFM:** EFM32xxx series, EFM8xxx series，EFR32xx series 和 EZR32xxx series MCUs；

- **WizPro200 EPS:** EPSON SIC31Dxx ARM series，Apollo ARM series etc.

  WizPro200 GD: GigaDevice MCU, GD32F1xx, GD32F2xx, GD32F3xx, GD32F4xx, GD32E2xx series MCU；

- **WizPro200 HC:** HDSC MCU, HC32L0xx, HC32L1xx, HC32F0xx, HC32F1xx, HC32F4xx；

- **WizPro200 HK:** HK32F0xx, HK32F1xx, HK32F3xx series MCU；

- **WizPro200 MM:** MindMotion MCU, MM32L0xx, MM32L3xx, MM32F0xx, MM32F1xx series MCU；

- **WizPro200 MPS:** MPS28xx、MPS29xx、MPS65xxx etc., Si5391xx, 1n520xx、1N635xx、1N602xxx, HUS33x

- **WizPro200 MSP:** TI MSP430F1xx/2xx/4xx/5xxx series MCU；support JTAG support、BSL support and SBW Burn write support；

- **WizPro200 MT:** Mei Sheng MT5715、MT5725、MT5815 series Flash MCU；

- **WizPro200 NVT:** NuMicro M051 series, Mini51 series，N76E003 etc.

- **WizPro200 NX :** 78K0S, 78K0, 78K0R, R8Cx, M16x, RL78x, R7Fxx series

- **WizPro200 NFP:** PCF79xx series, Kinetis ARM-Cortex series, LPC ARM-Cortex series etc.

- **WizPro200 PIC:** Microchip PIC1xx series Flash MCU；
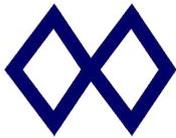
- **WizPro200 RS :** 32bit SupperH series, 32bit RX series, H8Sxx series

- **WizPro200 SH :** SH79F08xx，SH79F16xx series chip

- **WizPro200 SLB:** C8051Fxxx，SI10xx RF series,CPTxx Touch series,SI4010 RF etc.

- **WizPro200 ST8:** STM8Ax，STM8Sx，STM8L，STM32F1x，STM32F0x，STM32Lx,STM32F3x,STM32F4x,STM32Wx,BlueNRG etc.

- **WizPro200TW:** SINOWELTH SHxx series Flash MCU；

- **WizPro200 WL :** CC25xx,CC24xx,NRF518x2、NRF528x2、NRF24LExx、NRF24LU1xx、NRF31562、MXD2660，MXD27xx etc.

- **WizPro200 XF :** SPI Flash，I2C EEPROM，93Cxx，Special data chip series,customizable

- Serial number support function, serial number is 4 bytes length, its address stored in the Flash can be set by the user through the PC application at will, at the same time the initial value of the serial number and the accumulation of the set by the user at will；

2. Characteristics：

- Support 5 V、3.3V and 2.5 V interface levels；
- Support Chip Burn or PCB board burn (In-Circuit-Program、On-Board-Program)；
- Support offline burning writing, burning writing without connecting the computer, convenient production line use；
- USB communication interface, easy to connect compute；
- Automatic programming optimization, programming speed；
- Support serial number setting, address arbitrary selection；
- Support burn-write quantity control function,　Support for remote quantity upgrades and software upgrades；
- Simple operation, single key trigger, buzzer and LED prompt burning results；
- Support USB online　Upgrade Firmware, facilitate device update and expansion；
- Provide 1 to 1,1 tow 2 and 1 tow 4 product models；

3. Extended Key Interface Diagram：
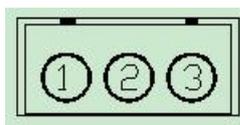
①Button
②Button
③GND
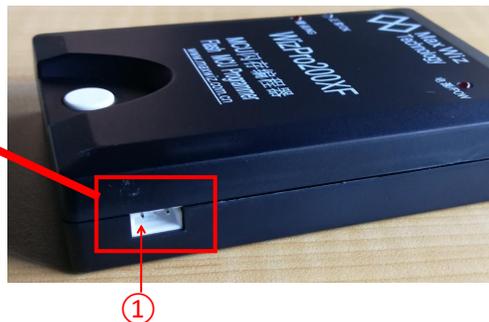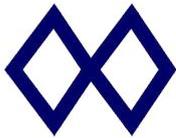
4. Description of use of extended interfaces:

● Signal definition and description: Key input low level effective (>100 ms), OK/NG: high level effective, burn write output low。

1：reserve	2：button
3：reserve	4：reserve
5：OK	6：NG
7：GND	8：3.3V
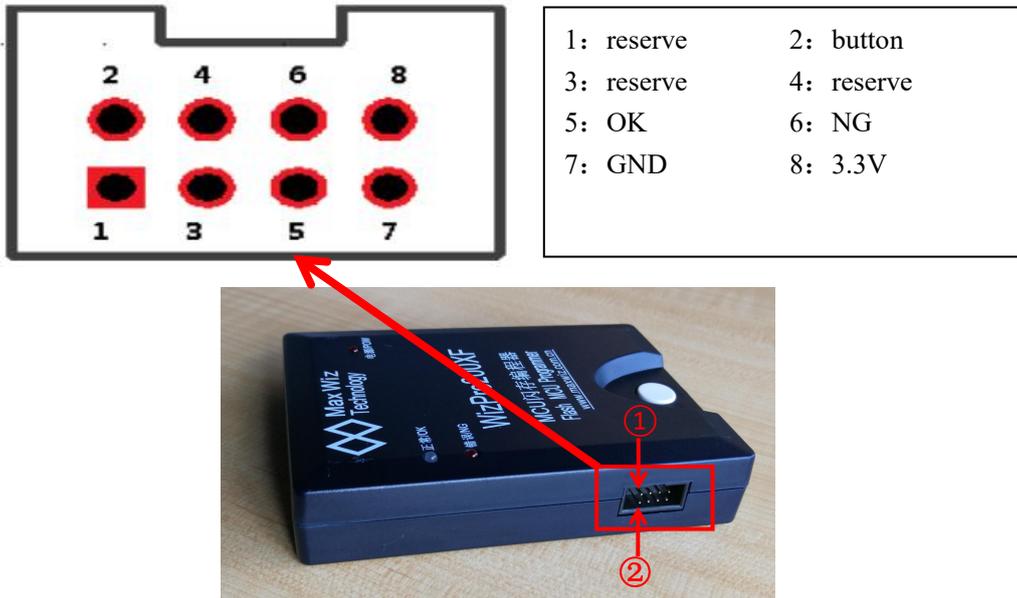
5. Indicator lights and bees：

5.1. Power indicator: The indicator lights up after the programmer turns on the power supply, indicating that the power supply is normal；

5.2. status indicator (red and blue LED lights)：

5.2.1. When the programmer connects to a computer through a USB, the blue and red LED lights turn on the programmer's PC software，The buzzer rings twice；

5.2.2. Programmers download the program and connect to power：

● Alternately flashing red and blue lights indicate that the system is performing internal data checks；

● The red light is on and the buzzer is ringing twice. It means that the internal data check fails and the computer must be connected to must be connected to download the program again to burn normally；

● The blue light is on and the buzzer is ringing for a long time It indicates that the internal data of the system is verified successfully and the chip can be burned；

● Buzzer Long 1 Sound (about 1 second): Indicates a Firmware problem inside the programmer，We need to download the latest Firmware or contact our website (our website: www.maxwiz.com. cn)

5.2.3. Programmers start programming after checking：

● The blue red indicator flashes alternately, indicating that the programmer is programming the target chip；

● red light and buzzer ring 3 times short sound: indicates the target chip programmer failed, please check accordingly；

● blue light and buzzer ring 1 long sound: indicates that the target chip programming success；

6. Key and interface instructions：

- white keys: programmer keys, press the key system to start the target chip programming；
- power interface: connect 9~12 V DC Adapter,>300 mA, randomly equipped with a DC power adapter；
- USB interface: for downloading programs or on-line programming, as well as programmer internal data update and settings；
- Programming interface: for programming MCU, the arrow in the line pointing to one end for the first foot, pay attention to the line insertion direction (with anti-freeze design)。

7. Data line pin description:

16pin order is consistent with 14pin
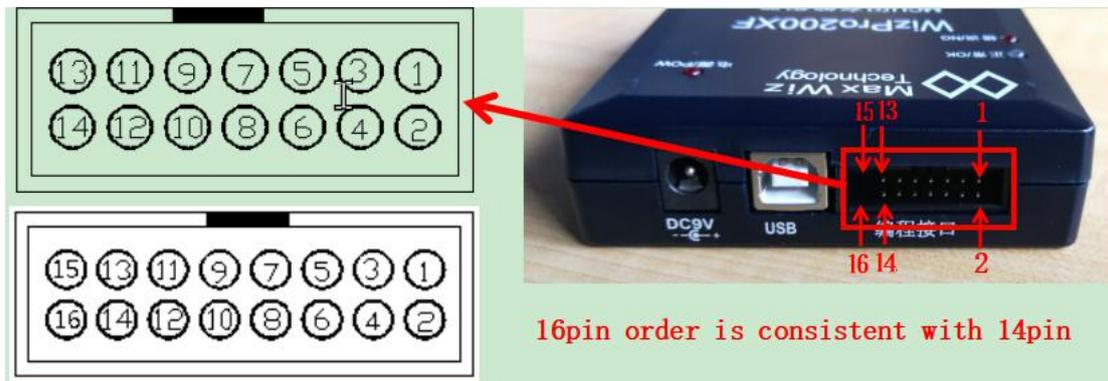
For more details see the " Programming Interface Signal Description" file

1. The LED_NG、LED_OK is used for the programmed LED indication output, which can be connected to the LED anode through a current limiting resistance, grounded LED the cathode, and lit at high level

2. VOUT：5V、3.3V or 1.8 V power supply output, the port output current is less than 150 mA, the user can set the VOUT output voltage through the application to meet the needs of different interfaces；

   - Baked burn write: Baked burn write need to configure the corresponding IC, the company provides different packages of IC seats to choose from. The interface level can be selected for 5 V、3.3V or 1.8 V；

   - On board burn: In board programming, the interface level must be matched due to different operating voltages of different boards, and 5 V、3.3V or 1.8 V. can be selected according to the actual operating voltage of the MCU on the board when used Furthermore, if the power consumption of the user's target board is large, it is suggested that the power supply of the target board should not be supplied by the VOUT output of the programmer, but by the external power supply, so as not to damage the programmer or affect the normal programming；

   - Signal connection in board programming: when board programming, only 5 signals need to be connected (when not VOUT, only 4 signal lines), respectively: DDIO,SCLK,RESET,GND and VOUT(optional)；

3. NIL signal is empty and no connection is required；

8. Programming instructions:

Offline programmer:

8.1. Start the WizPro200XX PC application, select the corresponding MCU and load the target binary (default is. S19 format, also optional. HEX、. BIN format, etc.), set the relevant Option Byte data, press the "download" button to download the target data and configuration data to the programmer's Flash. Dial the USB line after the download is complete and disconnect the programmer from the computer;

8.2. Connect the signal lines as required and power the programmer;

8.3. If the target board needs to be supplied separately, connect the target board power supply, and do not need to connect the external power supply when burning the bare piece;

8.4. When the program fails, the user can check the connection and the device on the target board and then try to reprogram it again. If the LED LED lights go out and the blue lights go out;

8.5. Remove the programmed MCU or target board and replace it with another chip or board to be programmed. Press the programming button repeatedly;

8.6. Programming time: Depending on the size of the MCU Flash and whether it is empty, several seconds to tens of seconds (e.g. offline burning 128 K Flash total time around 10 S)

8.7. Quantity Control Function: This programmer supports the number control function of burning and writing, if you need to set the number of burning and writing, you need to set the number of burning and writing before downloading the program, after burning the set number, the programmer rings 2 short sounds, while the two indicator lights flicker alternately, at this time the programmer automatically forbids reprogramming, you need to re-download the program before you can continue programming;

8.8. automatic chip detection: if the automatic chip detection function is turned on, the system will automatically detect whether the chip has been connected. if the connection is good, it will automatically start the burning and write. after the burning is successful, the LED state remains OK or NG, if the system detects that the chip is removed, both the OK and the NG LED are extinguished. In this way, it can effectively prevent the chip from burning empty, but also can greatly improve the efficiency of manual burning。
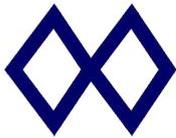
PC online programmer:

8.9. his programmer also supports PC online programming, connects the programmer to the PC computer, opens the WizPro200MG application software, selects the chip model, loads the target program file into the application software, sets the related parameters, then clicks the button in the application software menu with the mouse 自动 the system starts to complete the programming and checking operation automatically; after the programmer completes, displays "the operation is successful", indicates the programming is normal;

9. Automatic programming instructions:

① WizPro200xx series of programmers support automatic chip detection, that is, as long as the system detects that the chip has been connected, it begins to burn automatically, without pressing the write key, waiting for the user to take the chip and replace the next one after the burn is completed. The states are indicated by LED as follows:

② If the internal download data check on the burner is correct, then the blue LED bright means you can start burning, otherwise, the red LED bright means the check has need to download data again。

③ Put IC into the burn seat or connect the wire to the target board. Once the system detects that the IC is connected, start the burn, red and blue LED flicker alternately;

④ After the burn is finished, the blue LED bright and the beep means the burn is correct, otherwise the red LED bright and the beep 3 means the burn is wrong;

⑤ Remove the IC or disconnect the burner from the target board, and the system automatically extinguishes the blue and red LED, indicating that the burner interface is empty (i.e. nothing is connected);

⑥ When the new IC is placed in the IC seat or connected to the target board again, the system has the start of a new round of burning writing (2 LED alternately flashing and fixing a state, see ③、④;

⑦ Repeat ③、④、⑤operations;

⑧ Chip detection time can be set by PC application software to achieve a perfect fit with the operator;

⑨ Note: You can also start a new burn at any time。

10. Special note:

- when using USB online programming, since this burner supports 3.3 V and 1.8 V、5.0V two of these interface levels, if using 5 V or 1.8 electrical peacetime. Be sure to use external power to power the target board when programming, rather than just use USB power to power the system, otherwise it may cause programming irregularities or errors；

- When the interface level V 3.3 is selected, the bare chip burning can directly use the USB power supply, that is, can not connect the external power supply。

11. Packing List:

- WizPro200XX programmer host 1；

- 9V output transformer 1； （Accessories）

- Download USB Line 1； （Accessories）

- WizPro200XX instructions 1；

- Programming Data Line 1； （Accessories）

12. Electrical parameters:

- Programmer input voltage: DC 9~15 V；

- USB1.2 or above；

- Programmer interface signal :5 V、3.3V or 1.8 V level input and output；

- Programmer output power: DC 5V10%,<150 mA；

- programmer data saving :10 years > normal temperature；

- Working environment temperature :-20 C ~70 C；
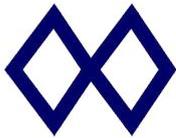
13. Frequently Asked Questions and Notes:

● command time-out prompt occurs when programming online: indicates that the connection between the programmer and the target board or target chip is problematic; check that all signal connections are normal

● There is an error prompt in offline burning: please first check whether the related signal line is connected properly. If the output power of the programmer is used to power the target board or chip, check that the VOUT output of the programmer is normal. can also disconnect the VOUT output of the programmer, while using external power supply to power the target board or chip, if the programming is normal, indicating that the VOUT output of the programmer has been damaged, please contact us to follow up;

14. After-sales service instructions:

● The mainframe is guaranteed free of charge within 1 year from the date of the factory, other parts are not covered by this warranty;

● Material cost for damage caused by human factors;

● For quality issues, please call 0755-84528863 or email to：
info@maxwiz.com.cn