WizPro200XX-X8
User Manual V1.0

WizPro200XX-X8 User Manual

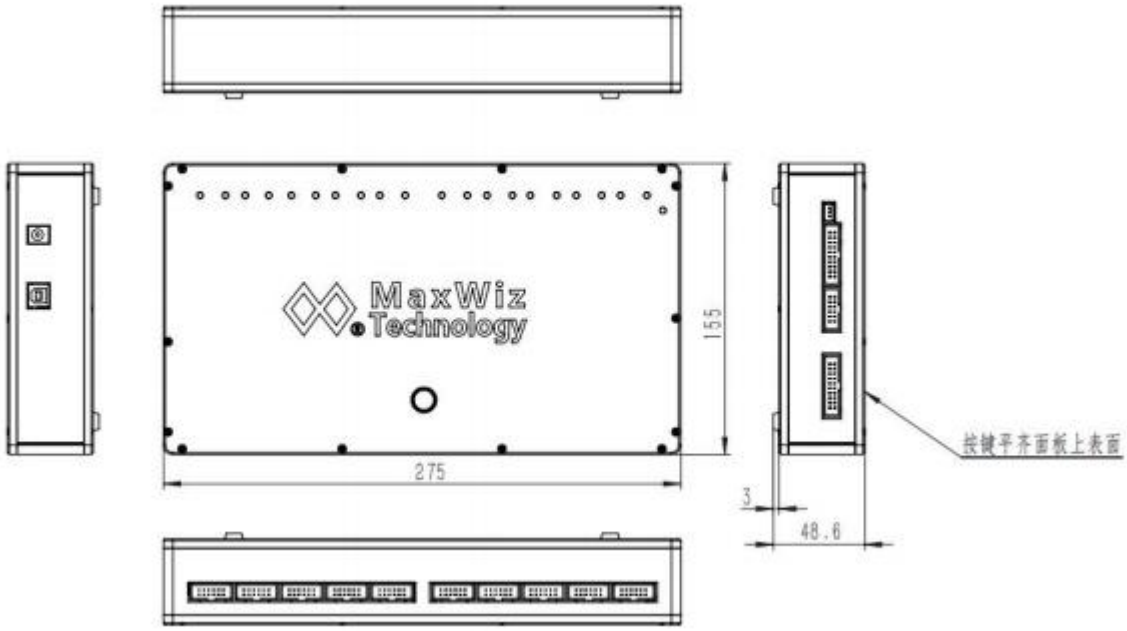
1. Supported chips:

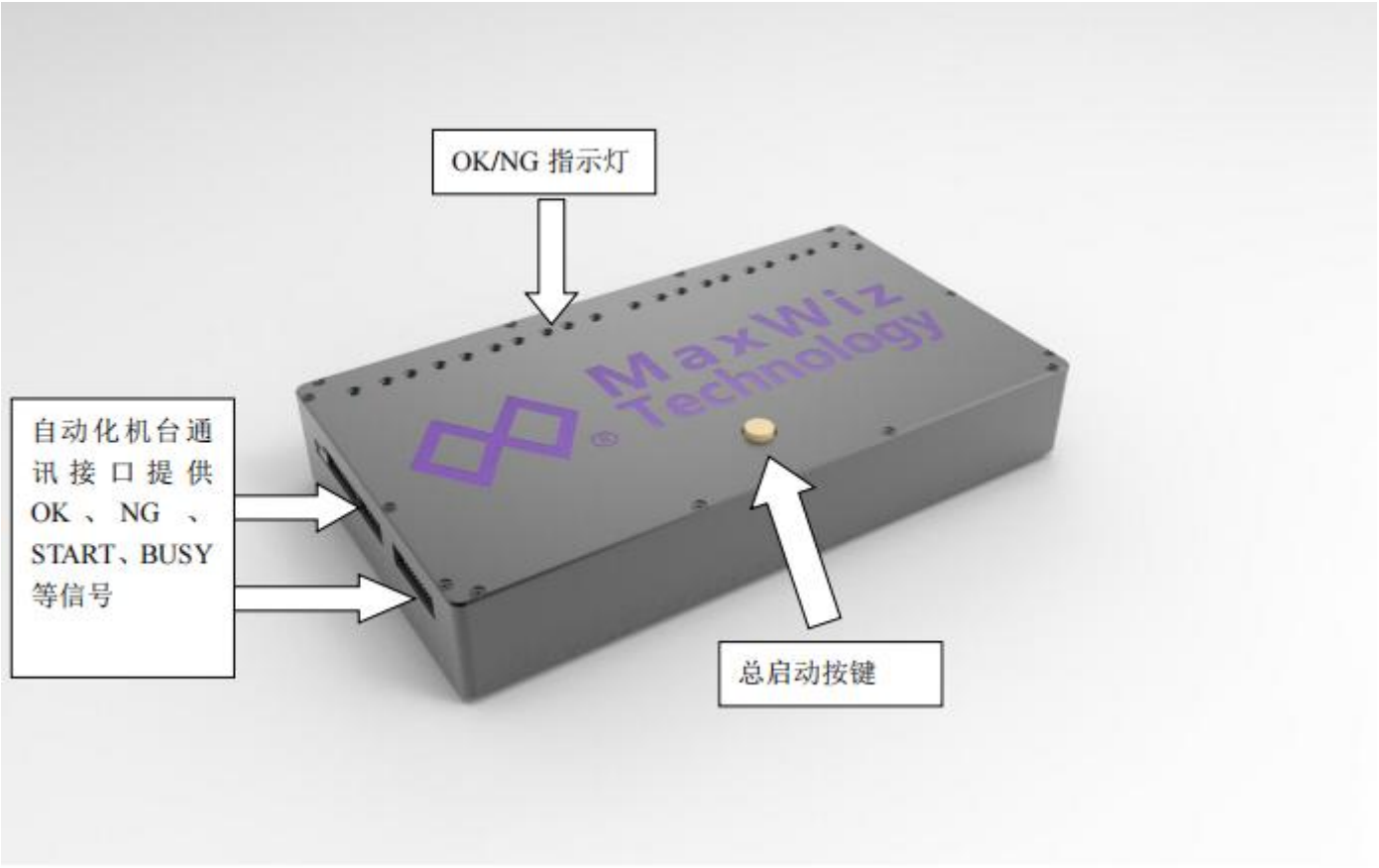
Support continuous upgrading and improvement of brands and models; Supports serial number functionality. The serial number is 4 bytes long and stored in Flash.

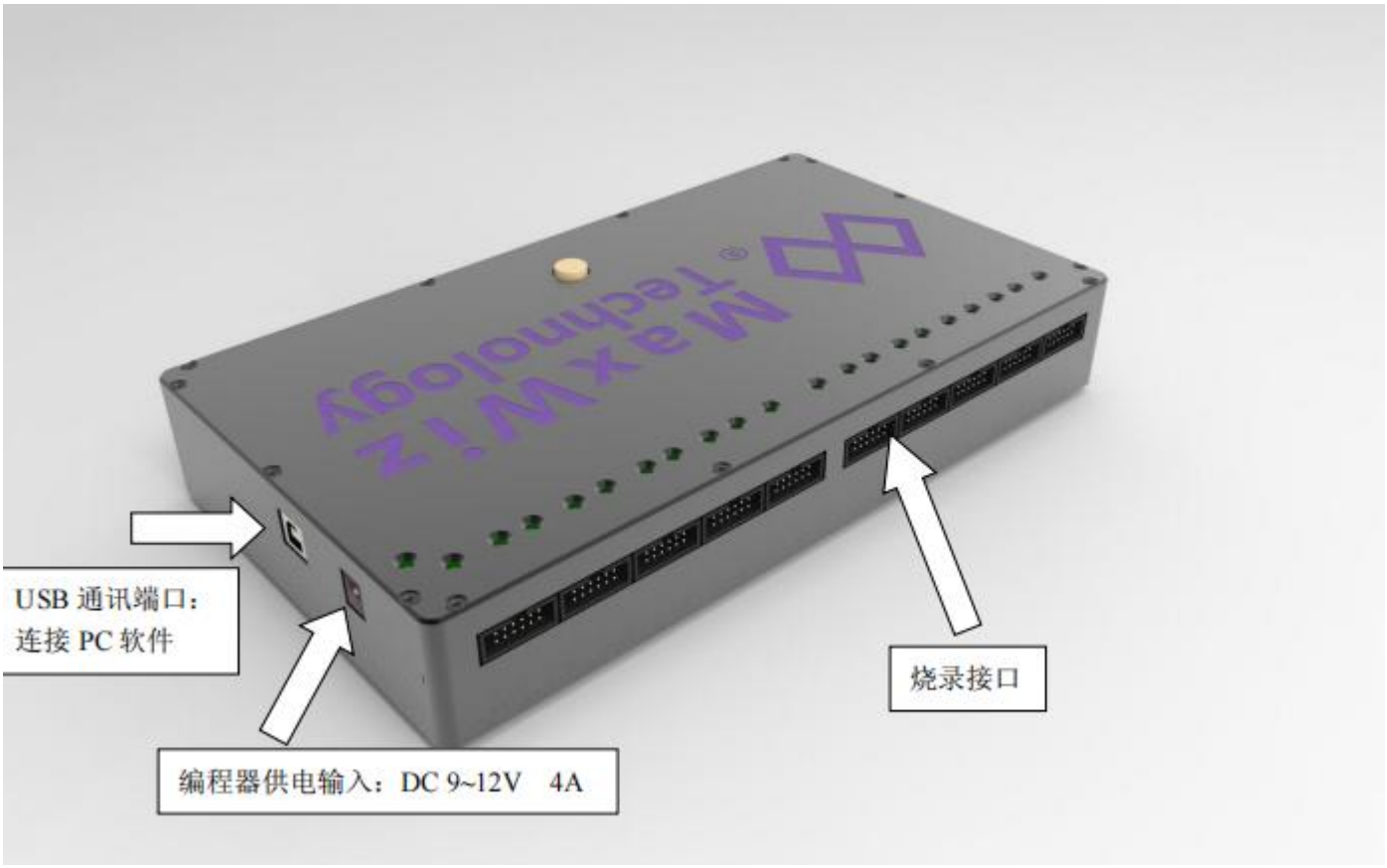
The address can be freely set by the user through a PC application, and the initial value and cumulative amount of the serial number can also be set by the user at will.

- WizPro200XX-X8 refers to the one to eight dedicated programmer of XX model ;
- **WizPro200RS-X8:** Renesas 32-bitSupperH series,32-bitRX series,H8Sxx series ;
- **MPlus300RX-X8:** Renesas RH850xx,RA series;
- **WizPro200ST8-X8:** ST STM8xx、STM32F0、STM32F1、STM32F2、STM32F3、STM32F4、STM32L0、STM32L1、STM32L4、STM32L4+、STM32G0、STM32G4、STM32L5、STM32W1、STM32C0 series ;
- **WizPro200SHWB-X8:** STM32H7、STM32WL、STM32WB、H5、U5 series ;
- **WizPro200CY-X8:** Cypress PSoC1,PSoC3,PSOC4,PSoC5,PSoC6,USBTypeC series,TrueTouch,Multi-Touch series ;
- **WizPro200PIC-X8:** Microchip PIC10xx,PIC12xx,PIC16xx,PIC18xx,PIC24xx,MCP19xx,dsPIC3xx series ;
- **WizPro200AT-X8:** Atmel ATTinyxx,ATMegaxx,AVR,XMEGA,SAM series ;
- **WizPro200EFM-X8:** SiliconLabs EFM8xx、EFM32xx、EFR32xx、EZR32xx、EFRModules series ;
- **WizPro200SLB-X8:** SiliconLabs C805xx、Si4010xx、Si10xx、CPTxx series ;
- **WizPro200EPS-X8:** Qorvo、Epson、Ambiq ,PAC5xx、S1C31xx、APOLL0xx、AMA3xx series;
- **WizPro200MSP-X8:** TI MSP430F1xx/2xx/4xx/5xxx series,DRV91670、DRV91680 ;
- **WizPro200NFP-X8:** NXP PCF79xx,KinetisKxx,LPC,S9KExx,MC9xx,FS32xx series ;
- **WizPro200WL-X8:** Nodic、Memsic、ITON、TI ,CC25xx,CC24xx,NRF518x2、NRF528x2、NRF24LExx、NRF24LU1xx、NRF31562、MXD2660,MXD27xx series ;
- **WizPro200NX-X8:** NEC All Flash series 8/16/32-bits MCU、R8Cxx and M16C series 、RL78 series,and Renesas other series MCU;
- **WizPro200LAP-X8：** LAPIS ML63Q466 ;
- **WizPro200INF-X8：** Infineon S6E1xx、S6E2xx、CY9xx series ;
- **WizPro200MLX-X8：** Melexis MLX81113KDC
- **WizPro200AUR-X8：** Aurasemi Au53xx、Au56xx
- **WizPro200BYD-X8:**BYD BF7xx,BS9000xx series ;
- **WizProXF-Plus-X8：** SPI Flash, MicroWave 93Cxx, SPI and I2C EEPROMs;

2.Appearance dimensions and interface diagram:
(length, width, height: 275mm * 155mm * 49mm)







3. Indicator lights:

3.1. Power indicator light: After the programmer is powered on, the indicator light lights up, indicating that the power is normal;

3.2. Burning result status indicator lights (red and blue LED lights):

3.2.1 When the programmer downloads the program and connects it to the power supply:

●Red and blue indicator lights flashing alternately: indicates that the system is undergoing internal data verification;

●The internal data verification of the system has failed, and the red light remains on: it is necessary to connect to the computer and download the program again in order to burn and write normally;

●The internal data verification of the system is successful, and the blue light remains on for a long time; Can start burning chips;

3.2.2 When the programmer starts programming after completing the verification: (start button or provide trigger signal)

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

●After programming for a few seconds, the red light will light up: indicating that the programmer for the target chip has failed. Please perform the corresponding check;

●After programming for a few seconds, the blue light turns on: indicating successful programming of the target chip;

4. Key and interface instructions:

4.1. White button: Programmer button, press the button once to start programming all target chips (n channels);

4.2. Power interface: Connect a 9-12V DC adapter, 4A is sufficient, and it is equipped with a random DC power adapter;

4.3. USB interface: used for downloading programs or online programming, as well as updating and setting internal data of the programmer;

4.4. Programming Interface: Used for programming MCU. The end pointed by the arrow in the ribbon cable is the first pin. Pay attention to the insertion direction of the ribbon cable (with anti error design)

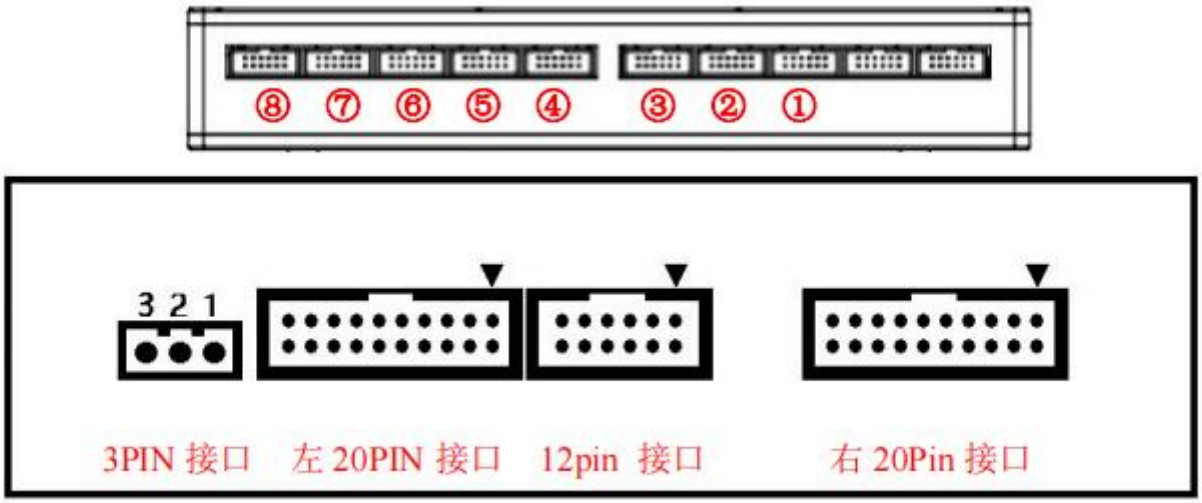
5.Expansion interface description:

5. Extension interface description:

5.1 Signal definition and description: Key input low level effective (>100ms), OK/NG: high level effective, burning write OK/NG

Output is low.

- NGx is the x-th NG state output (high level)
- OKx is the x-th OK state output (high level)
- BUZYx is the x-th BUSY signal
- KEYx is the x-th independent programming button input
- Programmer key input (pulse>100ms) low level effective)



5.1 Left 20PIN interface:

信号说明	KEY7	NG7	KEY8	NG8	GND	BUSY5	OK5	BUSY6	OK6	5V
引脚	1	3	5	7	9	11	13	15	17	19
引脚	2	4	6	8	10	12	14	16	18	20
信号说明	BUSY7	OK7	BUSY8	OK8	KEY5	NG5	KEY6	NG6	3V3	GND

5.2 Right 20PIN interface::

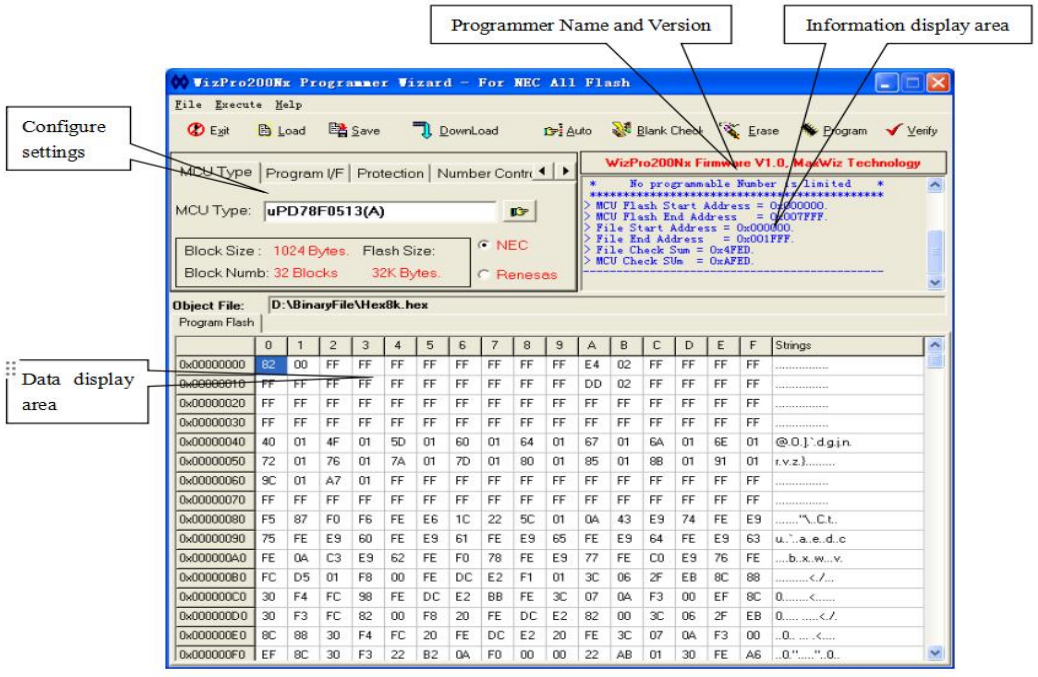
信号说明	KEY7	NG7	KEY8	NG8	GND	BUSY5	OK5	BUSY6	OK6	5V
引脚	1	3	5	7	9	11	13	15	17	19
引脚	2	4	6	8	10	12	14	16	18	20
信号说明	BUSY7	OK7	BUSY8	OK8	KEY5	NG5	KEY6	NG6	3V3	GND

6 All WizPro200XX-X8 series programmer has the similar PC interface, here use WizPro200Nx-X8 as the example for description.

6.1 Starting “WizPro200Nx.exe” PC application:

A window as above is pop-up, select the correct COM port (Normal, when USB driver is installed, select the one with maximum digital’s COM port), and then click Yes to enter to Main form;

6.2 Main Form:



6.3 Button Description:

Basic button function:

- 

: Click this to exit WizPro200Nx application;
- 

: Click to load the object hexadecimal to application;
- 

: Click to convert save the loaded Hexadecimal to Binary file;
- 

: Click to download all settings and loaded hexadecimal data to programmer;

6.4 Online programming button:

a) 

: Click to do automatic execute programming functions, it will check thechip blank first, if its blank, do programming directly, otherwise, do erasing chip functions first and then do programming, after programming, verification will be executed and then write the security setting;

b) 

: Click to execute the chip erasing function;

c) 

: Click to do chip blank check;

d) 

: Click to programming the data to chip flash memory;

e) 

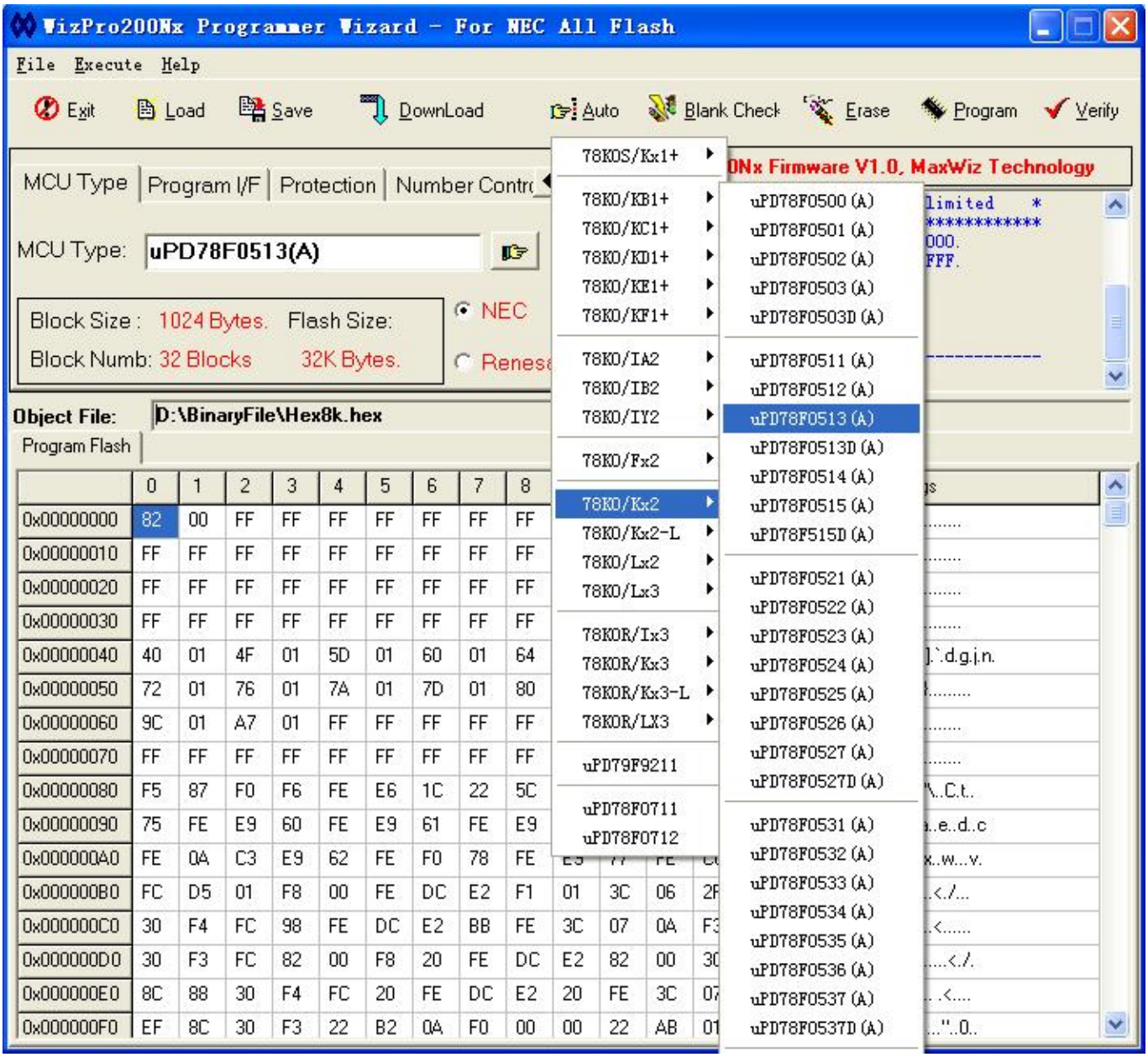
: Click to do the Checksum function and compare with current loaded data checksum, if it is same, then write the security setting to the chip, otherwise, report the error and then stop operation;

6.5 Function Description:

6.5.1 Select the MCU chip type:

- See below diagram, click the "MCU Type" page, and then click the "☞" button, a select menu will popup, click the items according to your chip, here, "uPD78F9234" under the "78K0S/Kx1+" series is selected;

- After select the chip, If hexadecimal file has loaded, the checksum will be re-calculated according to the selected chip's flash memory size.

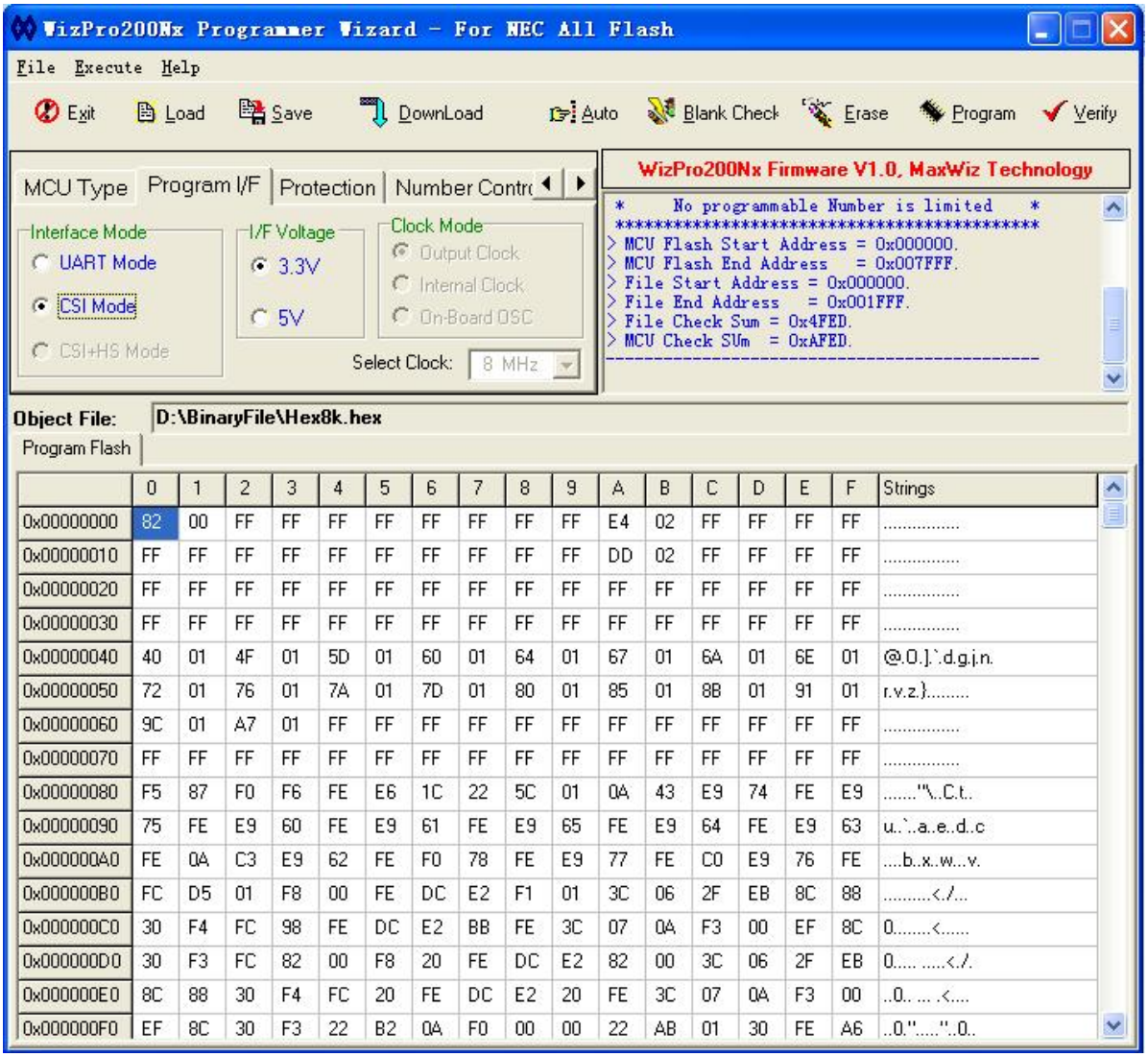


6.5.2 Select the Programming Interface:

- For different MCU series, they may have one , two or three programming interface, UART, CSI and CSI+HS, the system can filter the selection according to chip selection, such as, for uPD78F9234, only UART interface is available, so, it is not necessary to select the programming interface.

- For On-Board or in-circuit programming, according to the customer power system, it may use 3.0V or 5.0V to design the whole system, so in order to compatible the whole board system, 3.3V or 5.0V signal could be used; If use socket to program chip independently, both 3.3v and 5.0V are OK;

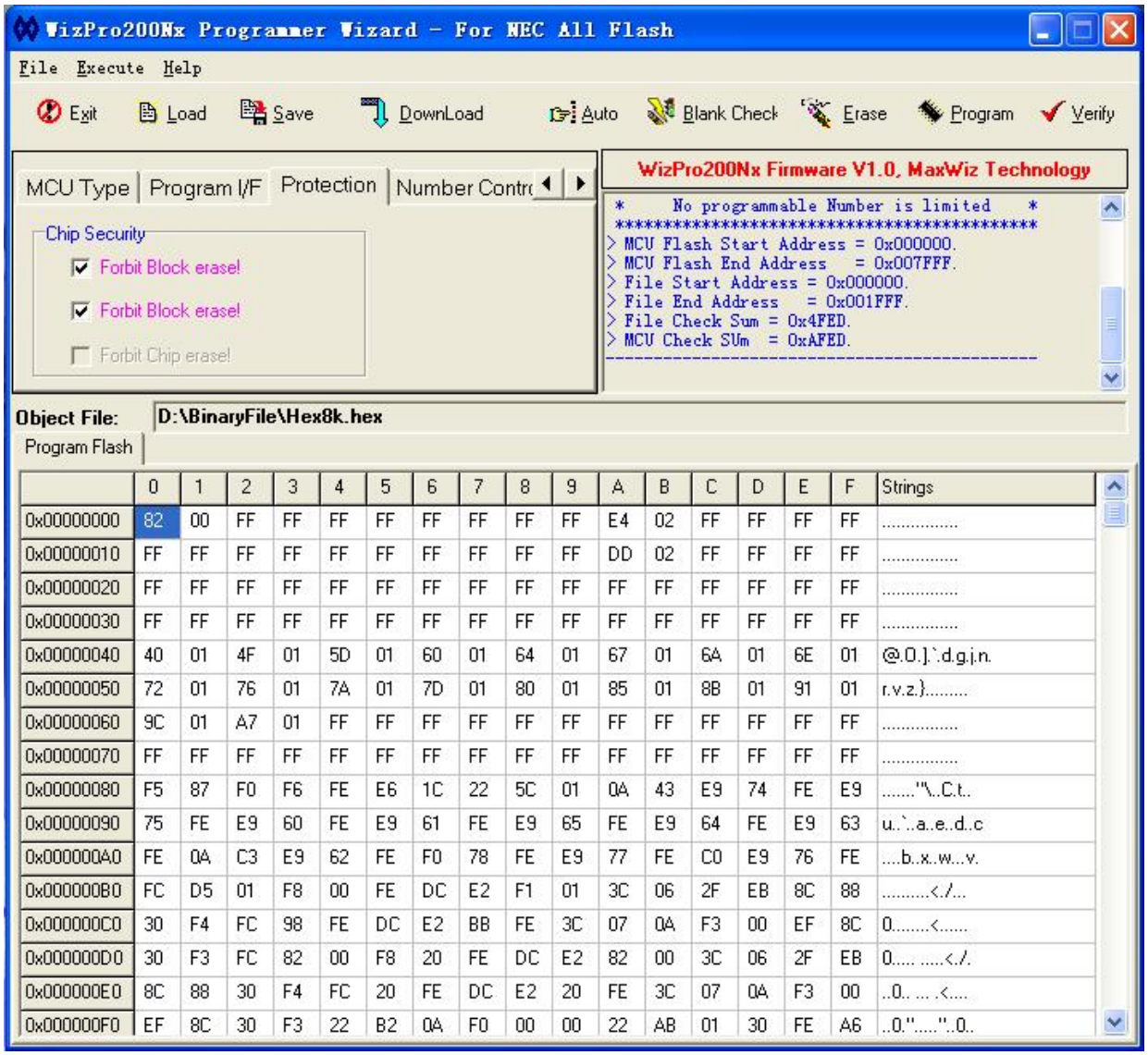
- Normally, we recommend to use Programmer to provide the oscillation clock for the chip, the programmer can optimize the clock frequency to fit the chip's requirement and to improve speed of programming, if On chip oscillator or on-board crystal is used as the chip's source clock, Unselect the "Use Ext. Clock(8/16Mhz)" option;



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Strings
0x00000000	82	00	FF	FF	FF	FF	FF	FF	FF	FF	E4	02	FF	FF	FF	FF	.....
0x00000010	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	DD	02	FF	FF	FF	FF	.....
0x00000020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000040	40	01	4F	01	5D	01	60	01	64	01	67	01	6A	01	6E	01	@.O.].`.d.g.j.n.
0x00000050	72	01	76	01	7A	01	7D	01	80	01	85	01	88	01	91	01	r.v.z.}.....
0x00000060	9C	01	A7	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000080	F5	87	F0	F6	FE	E6	1C	22	5C	01	0A	43	E9	74	FE	E9	....."\..C.t..
0x00000090	75	FE	E9	60	FE	E9	61	FE	E9	65	FE	E9	64	FE	E9	63	u..`..a..e..d..c
0x000000A0	FE	0A	C3	E9	62	FE	F0	78	FE	E9	77	FE	C0	E9	76	FE	....b..x..w...v.
0x000000B0	FC	D5	01	F8	00	FE	DC	E2	F1	01	3C	06	2F	EB	8C	88	.....<./...
0x000000C0	30	F4	FC	98	FE	DC	E2	BB	FE	3C	07	0A	F3	00	EF	8C	0.....<.....
0x000000D0	30	F3	FC	82	00	F8	20	FE	DC	E2	82	00	3C	06	2F	EB	0..... ....<./.
0x000000E0	8C	88	30	F4	FC	20	FE	DC	E2	20	FE	3C	07	0A	F3	00	..0.. ... .<....
0x000000F0	EF	8C	30	F3	22	B2	0A	F0	00	00	22	AB	01	30	FE	A6	..0."....."..0..

6.5.3 Protection and security setting：

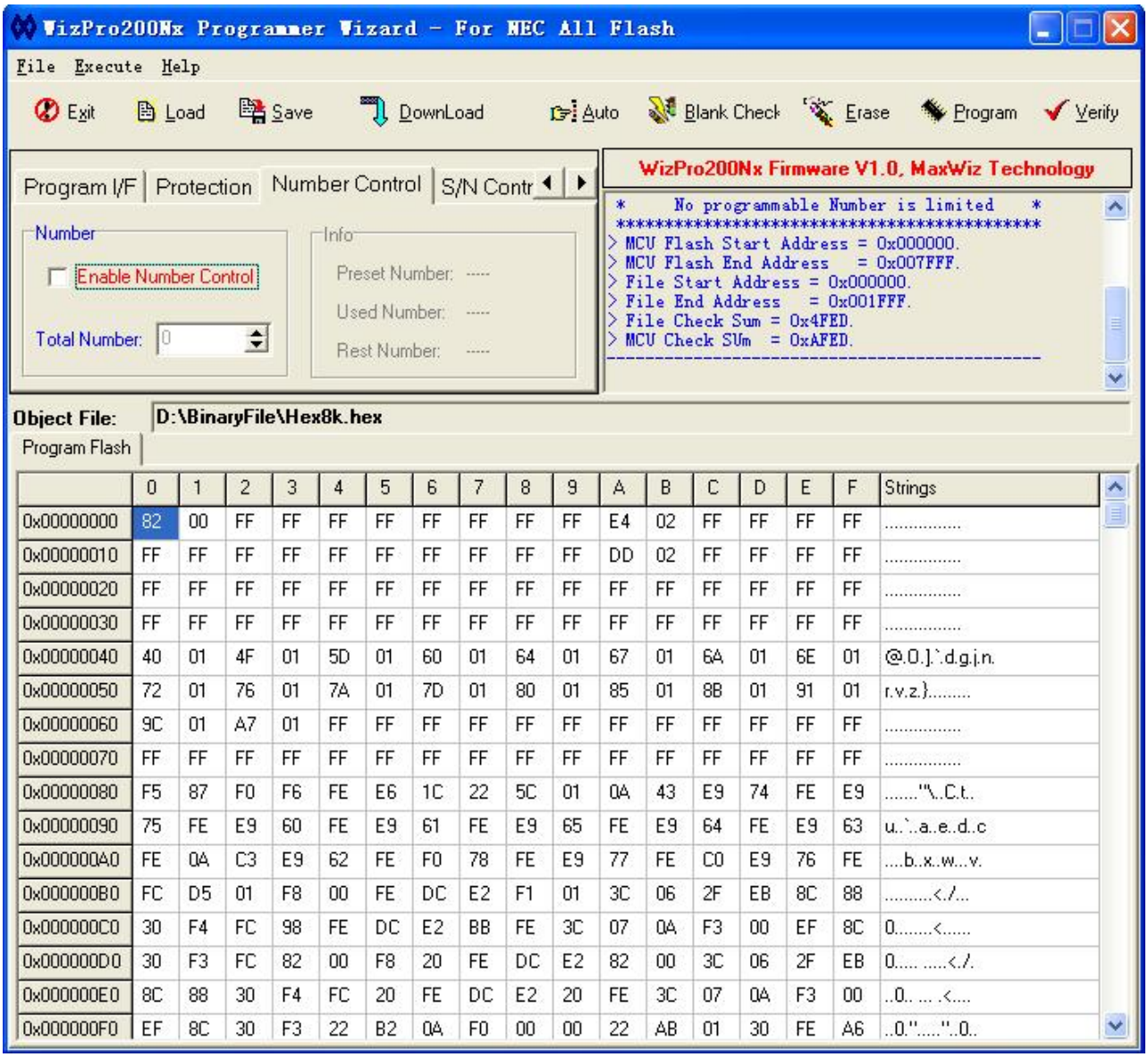
- Click “Protection” to enter this setup page;
- This option use to Chip’s security set.



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Strings
0x00000000	82	00	FF	FF	FF	FF	FF	FF	FF	FF	E4	02	FF	FF	FF	FF	.....
0x00000010	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	DD	02	FF	FF	FF	FF	.....
0x00000020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000040	40	01	4F	01	5D	01	60	01	64	01	67	01	6A	01	6E	01	@.O.].`.d.g.j.n.
0x00000050	72	01	76	01	7A	01	7D	01	80	01	85	01	8B	01	91	01	r.v.z.}.....
0x00000060	9C	01	A7	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000080	F5	87	F0	F6	FE	E6	1C	22	5C	01	0A	43	E9	74	FE	E9	.....”\..C.t..
0x00000090	75	FE	E9	60	FE	E9	61	FE	E9	65	FE	E9	64	FE	E9	63	u..`..a..e..d..c
0x000000A0	FE	0A	C3	E9	62	FE	F0	78	FE	E9	77	FE	C0	E9	76	FE	....b..x..w...v.
0x000000B0	FC	D5	01	F8	00	FE	DC	E2	F1	01	3C	06	2F	EB	8C	88	.....<./...
0x000000C0	30	F4	FC	98	FE	DC	E2	BB	FE	3C	07	0A	F3	00	EF	8C	0.....<.....
0x000000D0	30	F3	FC	82	00	F8	20	FE	DC	E2	82	00	3C	06	2F	EB	0..... .....<./.
0x000000E0	8C	88	30	F4	FC	20	FE	DC	E2	20	FE	3C	07	0A	F3	00	..0.. ... .<....
0x000000F0	EF	8C	30	F3	22	B2	0A	F0	00	00	22	AB	01	30	FE	A6	..0.”.....”..0..

6.5.4 Programming Number control:

- Click “Number Control” to enter this setup page;
- If programmable number control is used for off-line programming, check the option of “Enable Number Control”, then the required number could be set by user;



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Strings
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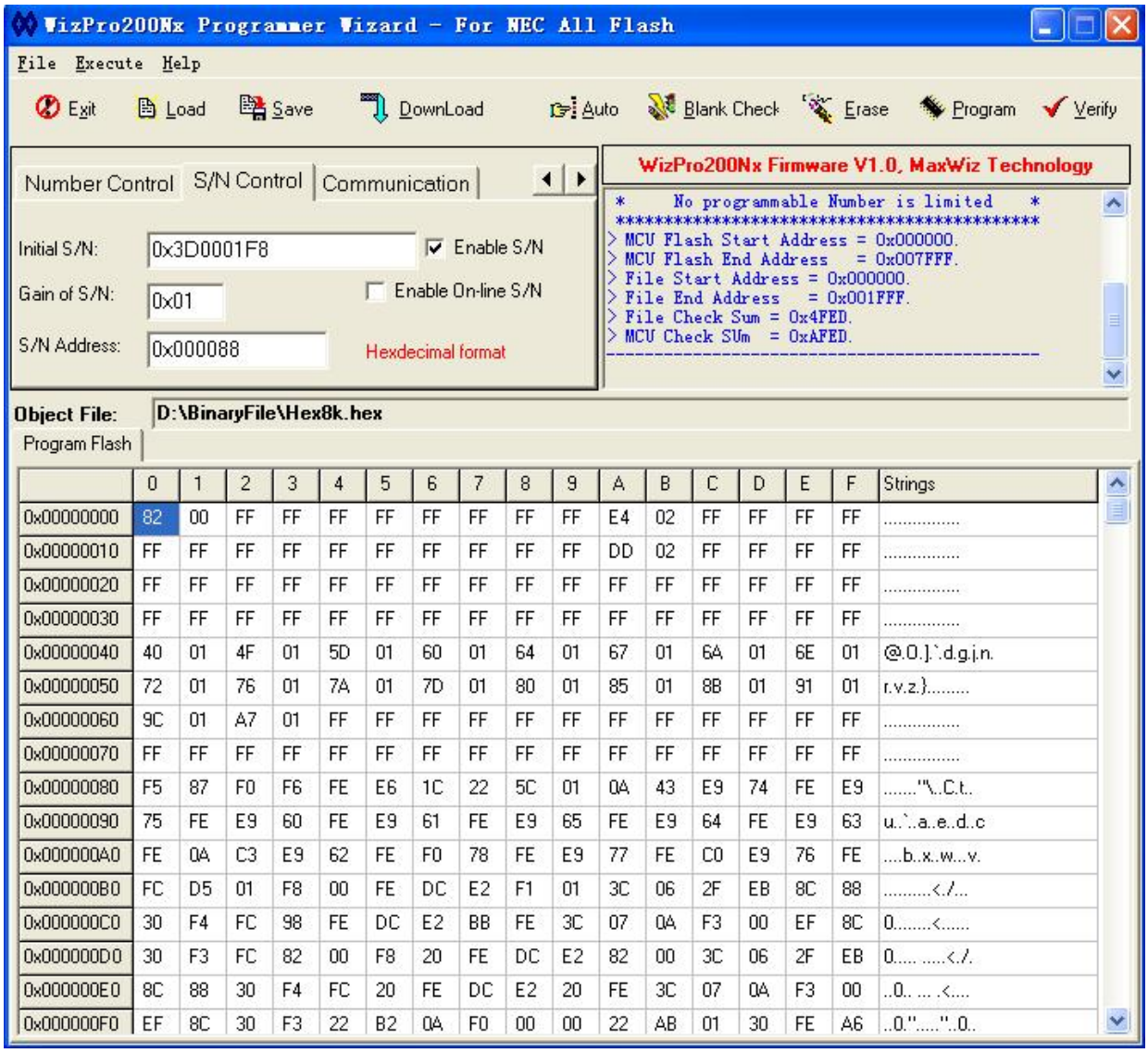
0x00000010	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	DD	02	FF	FF	FF	FF	.....
0x00000020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000040	40	01	4F	01	5D	01	60	01	64	01	67	01	6A	01	6E	01	@.O.].`.d.g.j.n.
0x00000050	72	01	76	01	7A	01	7D	01	80	01	85	01	8B	01	91	01	r.v.z.}.....
0x00000060	9C	01	A7	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000080	F5	87	F0	F6	FE	E6	1C	22	5C	01	0A	43	E9	74	FE	E9	.....”\..C.t..
0x00000090	75	FE	E9	60	FE	E9	61	FE	E9	65	FE	E9	64	FE	E9	63	u..`..a..e..d..c
0x000000A0	FE	0A	C3	E9	62	FE	F0	78	FE	E9	77	FE	C0	E9	76	FE	....b..x..w...v.
0x000000B0	FC	D5	01	F8	00	FE	DC	E2	F1	01	3C	06	2F	EB	8C	88	.....<./...
0x000000C0	30	F4	FC	98	FE	DC	E2	BB	FE	3C	07	0A	F3	00	EF	8C	0.....<.....
0x000000D0	30	F3	FC	82	00	F8	20	FE	DC	E2	82	00	3C	06	2F	EB	0..... .....<./.
0x000000E0	8C	88	30	F4	FC	20	FE	DC	E2	20	FE	3C	07	0A	F3	00	..0.. ... .<....
0x000000F0	EF	8C	30	F3	22	B2	0A	F0	00	00	22	AB	01	30	FE	A6	..0.”.....”..0..

6.5.5 Serial No. function:

- Click the “S/N Control” to enter this setup page;
- If user want to use serial No. function, enable the “Enable S/N” option first, then user can set the starting serial No. value (4-Bytes), gain value of serial No. adjustment and the location in chip’s flash memory;
- This function is very useful for some product, such as remote controller product, normally, each remote controller has a unique ID address, use this function, software engineer can map this ID address to a fixed flash memory address, and during mass product, use this function to burn the ID address;

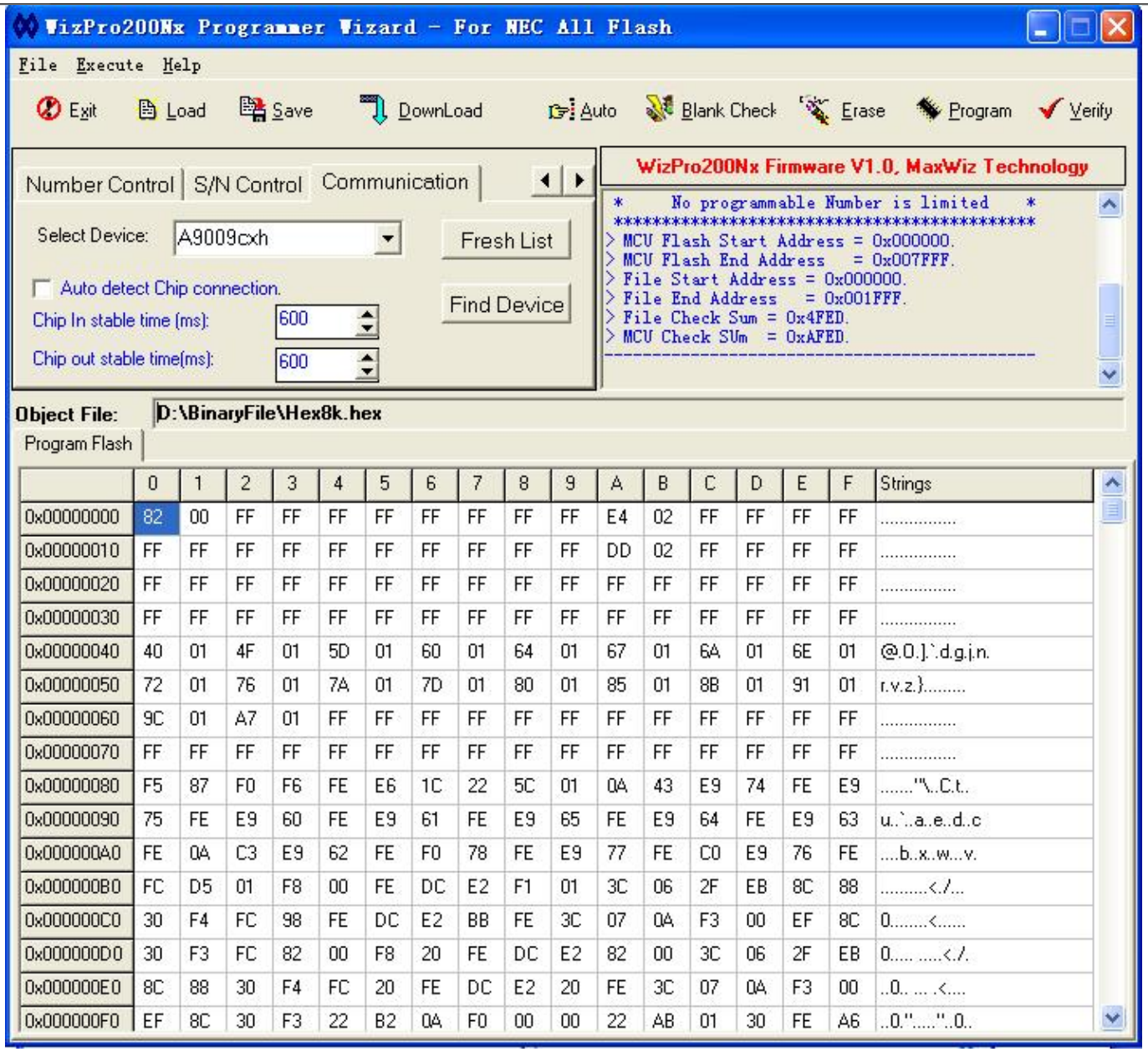
- This option just affect the off-line programming unless “Enable On-Line S/N” is selected;



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	Strings
0x00000000	82	00	FF	FF	FF	FF	FF	FF	FF	FF	E4	02	FF	FF	FF	FF	.....
0x00000010	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	DD	02	FF	FF	FF	FF	.....
0x00000020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000040	40	01	4F	01	5D	01	60	01	64	01	67	01	6A	01	6E	01	@.O.].`.d.g.j.n.
0x00000050	72	01	76	01	7A	01	7D	01	80	01	85	01	8B	01	91	01	r.v.z.}.....
0x00000060	9C	01	A7	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
0x00000080	F5	87	F0	F6	FE	E6	1C	22	5C	01	0A	43	E9	74	FE	E9	.....”\..C.t..
0x00000090	75	FE	E9	60	FE	E9	61	FE	E9	65	FE	E9	64	FE	E9	63	u..`..a..e..d..c
0x000000A0	FE	0A	C3	E9	62	FE	F0	78	FE	E9	77	FE	C0	E9	76	FE	....b..x..w...v.
0x000000B0	FC	D5	01	F8	00	FE	DC	E2	F1	01	3C	06	2F	EB	8C	88	.....<./...
0x000000C0	30	F4	FC	98	FE	DC	E2	BB	FE	3C	07	0A	F3	00	EF	8C	0.....<.....
0x000000D0	30	F3	FC	82	00	F8	20	FE	DC	E2	82	00	3C	06	2F	EB	0..... .....<./.
0x000000E0	8C	88	30	F4	FC	20	FE	DC	E2	20	FE	3C	07	0A	F3	00	..0.. ... .<....
0x000000F0	EF	8C	30	F3	22	B2	0A	F0	00	00	22	AB	01	30	FE	A6	..0.”.....”..0..

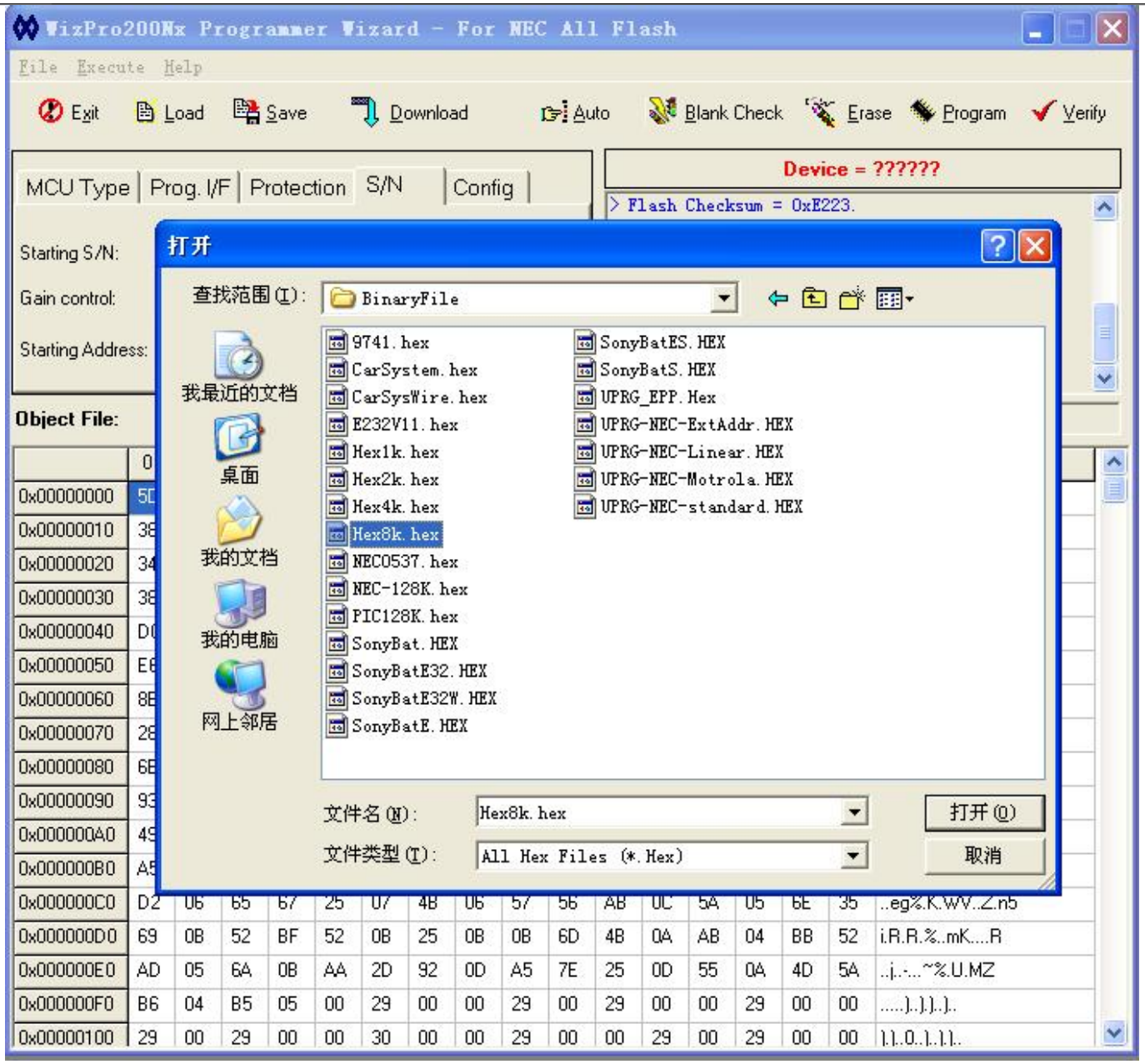
6.5.6 Communication configuration:

- Click the “Communication” to enter this setup page;
- If this application start-up before connect the device, user must to enter this page first;
- Click “Fresh List” button to update the COM port list; then select the correct the COM port according to the Programmer;
- Click “Find Device” to establish the connection between application and Programmer;
- “Auto detect Chip connection” use to turn on the Auto-detection function to check if the chip is connected, the time setting is use to set the stable time of Chip in or chip out.



6.5.7 Load Hexadecimal File:

- After select the Chip, click “ Load ” button to load the object binary file to application;
- Hexadecimal format and binary format are supported;



6.5.8 Save button : click this button will convert the loaded data to binary file format for other purpose;

6.5.9 Download Function :

- Click this button to download all configuration data and object file to programmer for off-line programming, before click this button, chip type must be selected and hexadecimal file must be loaded; otherwise, error message will pop-up to remind user;
- All setting and data will be stored permanently, unless new data will be downloaded;
- If Serial number function is used, download command will reset serial No. counter and set with new serial No. setting (disable or new serial No.);
- If Programmable number control function is enabled, download command will clear all programming counter and set with new setting (new Number or disable it);

7 Programming:

Off-Line Programming:

7.1 First, connect programmer to PC with USB cable, select the chip and load your object Hex file and download to the programmer. Then disconnect the USB cable and re-power on the programmer ;

7.2 Connect the cable to your target chip by socket or target board;

7.3 After the above steps, press the programming key to start the programming. If programming successful, one beep will be heard and blue LED will turn on, otherwise, red led will turn on. If programming failure, please check the connection and try again;

7.4 Replace another chip and do 7.3 step again;

7.5 If Programming quantities function is enabled, The programmer will not response to the key press when the preset quantity is arrived and the blue LED and red LED will blink alternatively .

7.6 If serial No. function is enabled, the programmer will write the serial No. data to the specified chip memory address, and after programming one chip successfully, the serial No. will automatically increase (set by PC).

On-Line Programming with PC:

8.1 Connect the Programmer in USB to PC.

8.2 Start the PC Application, then select the chip name, upload the object binary file (default is Hex format).

8.3 Setup the option Byte according to your design.

8.4 Click on-line button

8 Package List:

8.1 WizPro200XX-X8 Programmer: 1Set.

8.2 12V AC-DC adapter: 1 PCS.

8.3 USB cable: 1 PCS.

8.4 12-Pin Programming Cable: 8 PCS.

9 Characteristic;

9.1 Input Voltage: DC 9～12V.atleast 1A

9.2 USB1.2or above.

9.3 Output voltage: 3.3V or 5.0V±0.3V.

9.4 Max output Current: 300mA.

9.5 Working Temperature: -20C ~ 70C.

9.6 Internal Flash Erase : Endurance 100,000 Cycles;

11.7 Internal Flash Data Retention: More than 10years