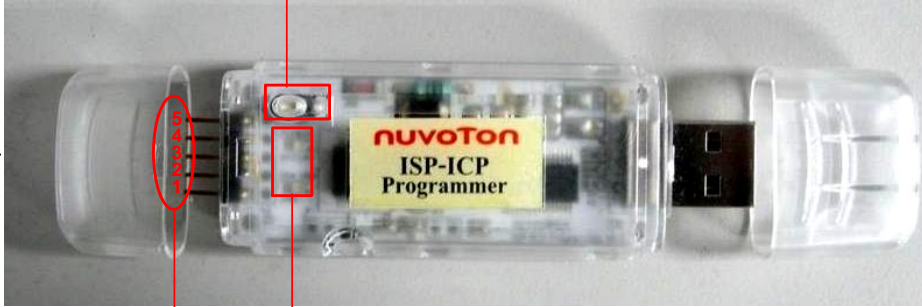


## Brief Introduction

The “ISP/ICP 2-in-1 Programmer”, as shown in the following picture, can function as an *ISP Programmer* or an *ICP Programmer*. For detailed information of the ISP Programmer and the ICP Programmer, please refer to their respective user manuals.




**Auto Key**  
(For off-line operation, press to do 'Update Chip')

**Green/Red LEDs**  
(To show programming result)

**ISP/ICP Interface**

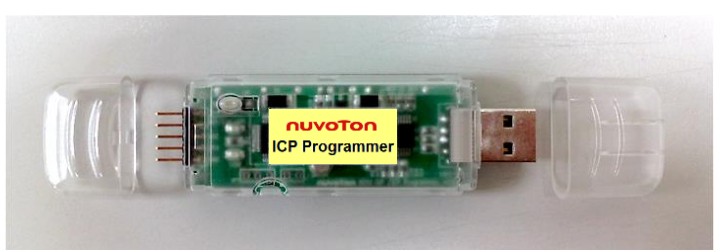
**As an ISP Programmer** →



**ISP Interface:**

- Pin-5:** (PL) (Pull-low control)
- Pin-4:** RST (Reset control to 8051 MCU)
- Pin-3:** VCC (Power supply from target system)
- Pin-2:** DTA (Serial data to/from 8051 MCU)
- Pin-1:** GND (Ground)

**As an ICP Programmer** →



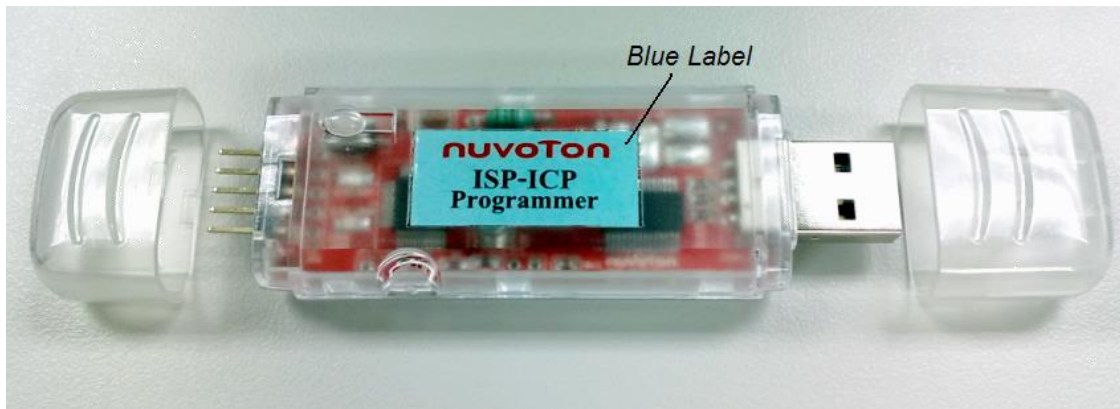
**ICP Interface:**

- Pin-5:** VPP (Programming voltage to 8051 MCU)
- Pin-4:** CLK (Serial clock to 8051 MCU)
- Pin-3:** VCC (Power supply from target system)
- Pin-2:** DTA (Serial data to/from 8051 MCU)
- Pin-1:** GND (Ground)

## V2.2 of “ISP/ICP 2-in-1 Programmer”

V2.2 of the “ISP/ICP 2-in-1 Programmer”, as shown in the following picture, has the following differences compared with the first version:

V2.2 has the VCC pin, The 3<sup>rd</sup> pin of the ISP/ICP interface, designed as *bi-directional* power input and output. When the programmer is connected to PC (for on-line operation), the VCC pin can output power to the target chip for ISP/ICP programming. In off-line operation, the VCC pin should be powered from the target system for the programmer to operate.



## V2.3 of “ISP/ICP 2-in-1 Programmer”

V2.3 of the “ISP/ICP 2-in-1 Programmer”, as shown in the following picture, has better noise immunity compared with the V2.2.



**V2.4 of "ISP/ICP 2-in-1 Programmer"**

V2.4 of the "ISP/ICP 2-in-1 Programmer", as shown in the following picture, Replaced 10 k $\Omega$  with 2 k $\Omega$  on R13/R14 and modified reset circuit with FP6810-44.

