

# ICP2-COMBO(G3)

## Production Quality In-Circuit 12-Channel Programmer



Softlog  
Systems

ICP2-COMBO(G3) is the top high-volume model in our line of high-speed, production-grade in-circuit programmers for Microchip microcontrollers. Incorporating twelve independent channels and expandable to up to 60 channels in a daisy chain configuration, ICP2-COMBO(G3) is ideal for non-stop, mass production operations. Using our breakthrough Secure Programming technology, ICP2-COMBO(G3) ensures the highest level of protection for your intellectual property during the manufacturing process.



- Up to 60 true parallel channels
- Fast high-volume programming
- Easy ATE integration
- Built-in opto-relay barrier for target lines
- Galvanic isolation of control lines
- Innovative, multi-layer IP protection (optional)

### Secure Programming

Secure programming optional software feature provides several layers of protection that dramatically reduce the risk of unauthorized reconstruction of hex files. These include strong hex file encryption, a counter that ensures the number of programmed devices does not exceed a pre-defined value, and a secure buffer of "invisible" hex data stored in ICP2-COMBO(G3) protected memory.

### Microchip-Oriented

Reflecting our focus and expertise in working with Microchip, ICP2-COMBO(G3) is specifically designed for full compatibility with all Microchip microcontrollers and peripheral components. ICP2-COMBO(G3) hardware virtually supports popular programming interfaces (ICSP™, JTAG, SWD, UPDI, SPI, QSPI, etc.) used by Atmel, SST and others.

### ATE Compatible

Final test machine (FTM) functions in DLL allow the ICP2 family software to easily integrate with test equipment, working in either standalone mode or driven by a host system. Adaptable to bed-of-nails and other types of ATEs, ICP2-COMBO(G3) helps you preserve your investment in test equipment.

### 24x7 Support

We understand the importance of zero downtime on your assembly line. Softlog's technical support engineers are available round-the-clock to provide you with immediate solutions to operational and maintenance issues which may arise.

[www.softlog.com](http://www.softlog.com)

# ICP2-COMBO(G3)

## Production Quality In-Circuit 12-Channel Programmer

### High-Speed, Scalable Programming Device

- Designed for ICSP™, JTAG, SWD, UPDI, SPI, QSPI, etc. used by Microchip, Atmel, SST and others.
- Ultra fast programming of up to 60 channels simultaneously
- **Built-in opto-relay barrier** for target lines
- **Galvanic isolation** of control and communication lines
- **LAN**, USB and RS-232 interface
- On-board 32MByte flash memory per channel for non-volatile storage of HEX, configuration and serialization files (**6 environments**)
- Multiple serialization schemes:
  - Sequential, random, pseudo-random and user file
  - 1 to 8 bytes, automatic "retlw" or "raw data"
- Tests Vdd and Vpp for overload with indication by software
- Dimensions: 215x118x90mm

### Programmable Hardware

- Wired remote programming and environment switch: Go/Pass/Fail/Env
- Programmable Vdd (1.8 to 5.5V) and Vpp (1.8 to 13.5V)
- Programmable delay between Vdd and Vpp (0.1 to 250ms)
- Programmable clock/data speed (500KHz to 10MHz)
- Programmable Vdd source: ICP2-COMBO(G3) or target
- Vdd current limit: 250mA per channel
- Prevents damage to connected microcontroller in case of power ON and power OFF

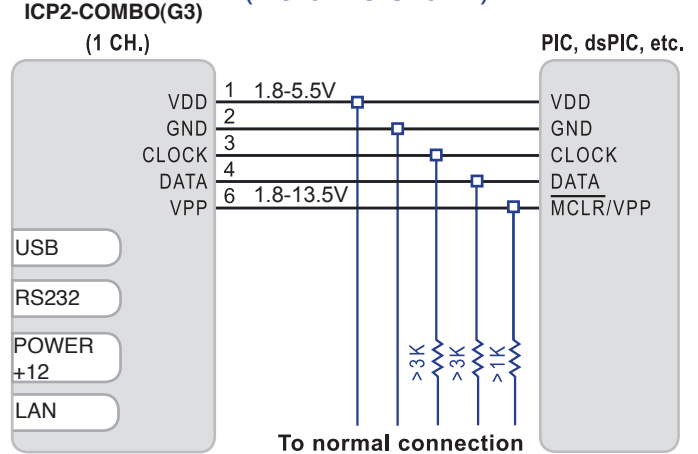
### Easy-to-Use Software

- Windows® DLL/Command line functions for automatic programming (optional)
- Secure programming feature including hex file encryption, counter and secure buffer (optional)

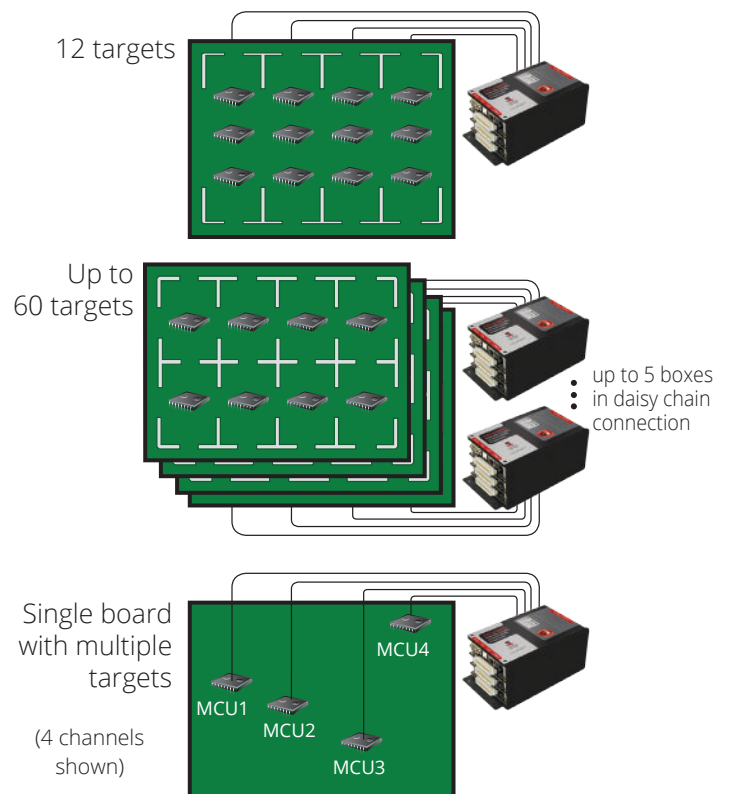
### Host System Requirements

- Windows®-XP/7/8/10
- USB, RS-232 port or **LAN**

### Typical in-circuit programming connection (1 channel shown)



### Typical Application



### About Softlog Systems

Softlog Systems specializes in In-Circuit Serial Programming (ICSP™) for Microchip microcontrollers. Since 1998, our high-performance, cost-effective ICSP™ solutions have been used to manufacture millions of products worldwide. Leveraging our technical know-how and extensive field experience, Softlog Systems' ICP family of production-grade programmers reduce manufacturing costs and accelerate time-to-market.



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