

# COP8 ISP

## In System Programming for COP8 Devices



### Why ISP?

Why use ISP in your application? The device can be programmed after soldering which allows "one build, later customisation", separate test code vectors can be programmed first for function testing before programming with finished code, field upgrades are easy - it makes sense to use ISP.

### Why COP8?

Features of the COP8 include: 32kbytes Flash program memory with security feature, 1kbyte volatile RAM, virtual EEPROM, three timers, brownout reset, MICROWIRE/PLUS, 13 multi source vectored interrupts, watch dog, clock doubler, 8-bit stack pointer, 10 bit ADC and 2.7-5.5V Vcc (fully supported by COP8 ISP) and many many more.

### Kanda Multi-connector



Which PC connection to use? Always a tricky decision but the ISP solves the problem with our industry leading ISP system featuring a PC Printer Port &

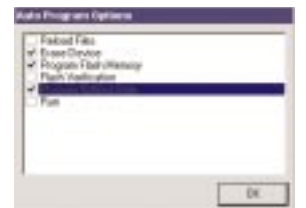


Serial Port multi-connector. It gives you the flexibility to choose any free port on your PC, making it ideal for development, field or production use.

### Compact Size



Your workbench and briefcase space is always at a premium, so this compact design will fit right in. You will be pleased to know that the Programmer powers itself from your target system so no additional power supply is



required. The ISP connector is the Kanda designed industry standard to reduce electrical noise problems and to fit with all existing designs

### Hardware Features

The ISP includes hardware to support features of the COP8 devices. This includes a 2 x Vcc generation on the Data (SI) line to enable re-programming of devices. Pullup resistors are also included reducing the components required on the user circuits.

◆ Compact:  
60×55×16mm

◆ Flexible:  
Parallel/Serial  
connection

◆ Fast:  
Complete  
erase, program,  
verify cycle for  
COP8CBR9 in  
less than 45  
seconds

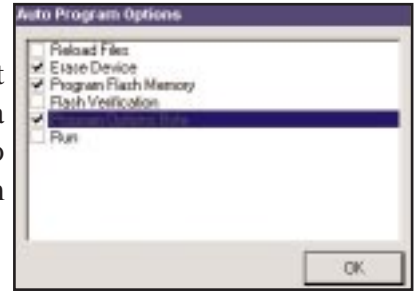
◆ Easy:  
Intuitive  
programming  
environment

Compatible with  
Windows  
95/98/2000/  
NT4/ME/XP

Supports:  
COP8CBR9  
COP8CCR9  
COP8CDR9  
COP8SBR9  
COP8SCR9  
COP8SDR9  
Future device  
support upgrades  
via net

## Auto-program

As well as being ideally suited for the development environment the ISP has some added extras for use on a production line. The Auto-program facility allows you to customise the program sequence and then perform complete program cycles with a single click.



## Option Bytes

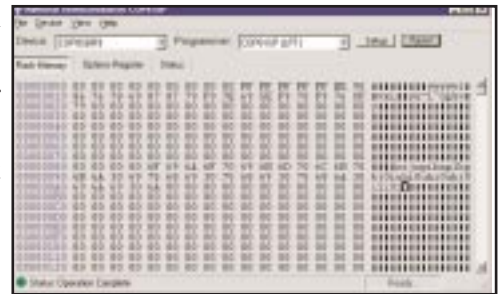


All the option bytes on the COP8 can be programmed with this programmer. These include security which allows you to set no further read or writes (keep your code safe), watchdog halt mode and flex bit. You can also set the write timings register, which is for setting the on board clock value, ranging from 25kHz to 10MHz.

## User Interface

The user interface has been carefully designed to provide "easy operation", coupled with advanced features for the power user. The COP8 ISP gives you save and load options for all your settings and files, making it simple to restart after a break. The standard erase, read, program and verify functions are available via single mouse click or keyboard short cut and Auto-program makes repetitive device programming really easy.

The programmer includes a hex file editor, which allows you to edit and view your file prior to programming the device. Verification after programming or verifying a device against a file is simplified by colour coding to give an instant visual check. And no more worries about your file type as the editor Auto-detects different file formats including Intel Hex, Motorola and Tektronix.

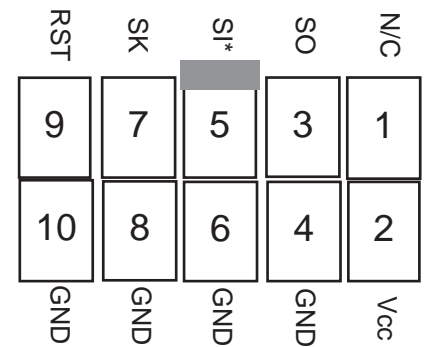


## Connector

The standard connector is a 10-way box header with interleaved ground lines to increase EMC noise immunity. This makes the programmer more reliable in electrically noisy environments. If a different type of connection is needed, e.g. 6 way single header, then the lead can be modified and some of the GND lines omitted.

The programmer includes a 2 x Vcc generator on the Data (SI) line. It is built into the ribbon cable.

The view shown in the diagram is the target board header



\*SI (Data) line has 2 xVcc generator

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