



# ZICSP000x00ZDx

## ZPRO Programming Modules

PUG000301-0900

Product User Guide

### Introduction

The ZiLOG ICSP system allows devices to be programmed in circuit, directly on the target board. The programming modules are used to program devices out of the circuit without using a target board. There are four separate module that are used to program different ICSP parts.

*The ZPRO programmer does not come with the programming module and ZPRO must be ordered separately (PN: ZLGICSP00100ZPR).*

### Supported ZiLOG Devices

ZPRO supports the Z86E136 and Z8PE013 family of processors.

Device	Package	Ordering Number
Z86E122,123, 124,125, 126	20SOIC	ZICSP000D00ZDS
Z86E122,123, 124,125,126	20PDIP	ZICSP000C00ZDP
Z86E132,133, 134,135 and 136	28 PDIP	ZICSP000100ZDP
Z86E132,133, 134,135 and 136	28SOIC	ZICSP000300ZDS
Z86E142,143, 144,145, and 146	40PDIP	ZICSP000400ZDP
Z86E143,143, 144,145, and 146	44QFP	ZICSP000600ZDF
Z8PE012, E015, E016	20PDIP	ZICSP000700ZDP
Z8PE013, E014, E017	28PDIP	ZICSP000900ZDP

### Hardware Specifications

#### Operating Conditions

Operating Humidity	10%-90% RH (Non condensing)
Operating Temperature	20°C ±10°C
Serial Baud Rate:	57,600 bps

#### Power Requirements

The module is powered by ZPRO.

#### Interface

The module communicates with ZPRO using a 10-pin female-to-female ribbon cable assembly.

#### GUI-Supported Compiler, Assembler Formats

The programmer supports files (binary or Intel hex) code files produced by ZiLOG Developer Studio (ZDS) and ZiLOG Macro Cross Assembler (ZMASM).

## Quick Start

Follow the below procedure to connect an OTP programming module.

1. Ensure that all the necessary hardware and software is installed.
2. Disconnect all power to **ZPRO**.
3. Plug the appropriate programming module's cable in to the ten-pin target connector located on the front of the **ZPRO** case.
4. Power **ZPRO**.
5. Open the module's ZIF socket located the end of the cable.
6. Place a new chip into the ZIF socket. Ensure that the chip's pin 1 matches pin 1 on the ZIF socket (pin one should be located in the corner closest to the locking lever).
7. Close the ZIF socket locking lever.
8. Open ZDS by selecting Start>Programs>Zilog Developer Studio> ZDS.
9. Choose New Project from the File menu. The New Project dialog box appears.
10. Select Family in the Selection by field.
11. Select Z8 from the Master pop-up list.
12. Select the microprocessor to program from the Project Target pop-up list.
13. Select ZLGICSP0100ZPR in the Emulator pop-up menu.
14. Select OTP only from the Project type window.
15. Click OK. A new edit window appears.
16. Select Emulator Configuration from the Project menu. The Emulator Configuration dialog box appears.
17. Ensure that Emulator is selected in the Module field.
18. Select the port the emulator is connected to from the Port pop-up list.
19. Select 57600 from the Baud Rate pop-up list.
20. Click OK to close and apply the Emulator Configuration options.
21. Select !Connect from the Build menu to connect to **ZPRO**.
22. Select Download Program Memory from the Tools>OTP menu. The Download File dialog box appears.
23. Select whether you wish to download the file as Hex (.hex) Binary (.obj) or COFF (.ld).
24. In the File Name field, enter the name and directory of the file to download to code memory, or click the browse button (...) to search for the file.
25. Click OK. The file is downloaded into code memory.
26. Select OTP from the Tools>OTP menu. The OTP configuration dialog box appears.
27. Click the Programming Options tab. The Programming options page appears.
28. Click Program to write contents of code memory to the OTP device.