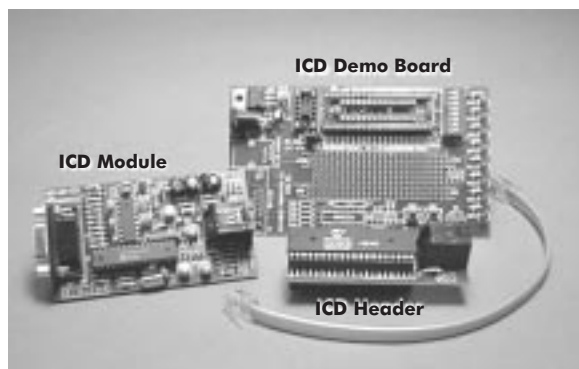


SICD-87X Serial In Circuit Debugger for PIC16F87x

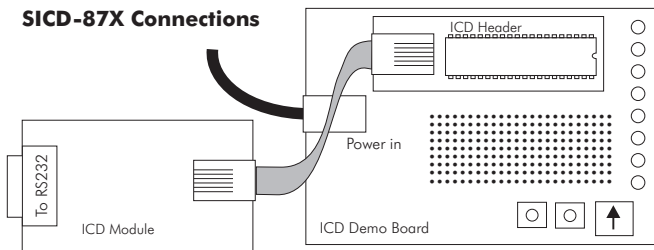


SICD-87X is a low-cost development system for Microchip's flash-based PIC16F87X microcontrollers. Utilizing the chips' In-Circuit Debugging (ICD) capability and Microchip's In-Circuit Programming (ICSP) protocol, the SICD-87X is an in-circuit debugger as well as a programmer. It runs under the MPLAB™ Integrated Development Environment which provides the front end for programming and emulation controls like running, stepping, setting breakpoint, etc.

Features

- Real-time code execution
- In-circuit debugging
- Built-in Programmer
- 3.0 to 5.5 volt operating range
- Operates off the voltage (VDD) supplied by the target application
- Operating frequencies from 32Khz to 20Mhz
- Source level and symbolic debugging
- Microsoft 3.1/95/98/NT compatible
- RS-232 interface

SICD-87X Connections



Due to the built-in ICD and ISP functions, the SICD-87X is intrusive and will use up the following on-chip resources: MCLR/Vpp shared for programming; RB3 reserved for low power programming; RB6 and RB7 reserved for programming and debugging; 6 general purpose registers (70h, 1EBh-1EFh) reserved for debug monitor; program memory (0x1F00-0x1FFF reserved for debug code; one stack level not available).

SICD-87X consists of

- ICD Module
- ICD Header
- ICD Demo Board
- 9" 6-wire modular cable

The ICD Module contains all debugging, programming and control logic. It is connected to the PC's serial port via a 9-pin serial cable and to the ICD Header or target using a 6-wire modular cable.

The ICD Header connects the ICD Module to the circuit under test. For in-circuit emulation, a PIC16F877 needs to be plugged into the header which then plugs into a 28-pin or 40-pin PIC16F87X DIP socket on an application. The Header is powered by the target application, from a 3.0 to 5.5 volt source. The modular cable can also be plugged into a modular connector on the application for in-system programming.

The ICD Demo Board is provided for demonstration and/or evaluation of the PIC16F87x in the absence of a customer's target application board. It is connected to the ICD Module via the ICD Header. The PIC16F877 can be unplugged from the Header and plugged directly into the demo board for stand-alone operation.

The demo board provides LEDs, DIP switch, push buttons, and a potentiometer for demonstrating the chip's features. A small prototyping area and RS232 circuitry is also available for experimentation.

The SICD-87X cannot replace a full-featured in-circuit emulator for debugging complicated program but it does provide an inexpensive solution to test and program the PIC16F87x.

ICD Control Dialog



Un-check the "Enable Debug Mode" option to program the chip for normal use