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## Features

### Hardware

- Supports Programming of all AT17LV, AT17N, and AT17F Series Devices
- Connection to Allow In-System Programming (ISP)
- Runs off Portable 9V DC Power Supply
- 5.0V and 3.3V Supply

### Software

- CPS – Configurator Programming System
- GUI-based Interface
- Supports Windows® 98/2000/XP and Windows NT®
- Online Help
- Supports Programming Reset Polarity
- Verification Routines to Validate Programming
- Accepts HEX, MCS, POF, RBF and BST File Formats

### System Contents

- ATDH2200 Programming Board
- ATDH2222 20-pin PLCC Adapter
- ATDH2200E Datasheet
- ATDH2200E Programming Kit User Guide
- 10-pin Ribbon Cable for ISP
- 9V DC, 500 mA, 2.1 mm Center Positive/Negative Power Supply (for US customers only)
- Sample AT17LV Devices

## Description

The ATDH2200E allows designers to quickly and economically program Atmel's family of AT17 series FPGA Configuration Memories. The system also provides support for new devices in the AT17 series Configurator prior to Third Party Programmer support being available. This is a truly portable solution that allows engineers to work from their lab bench or office.



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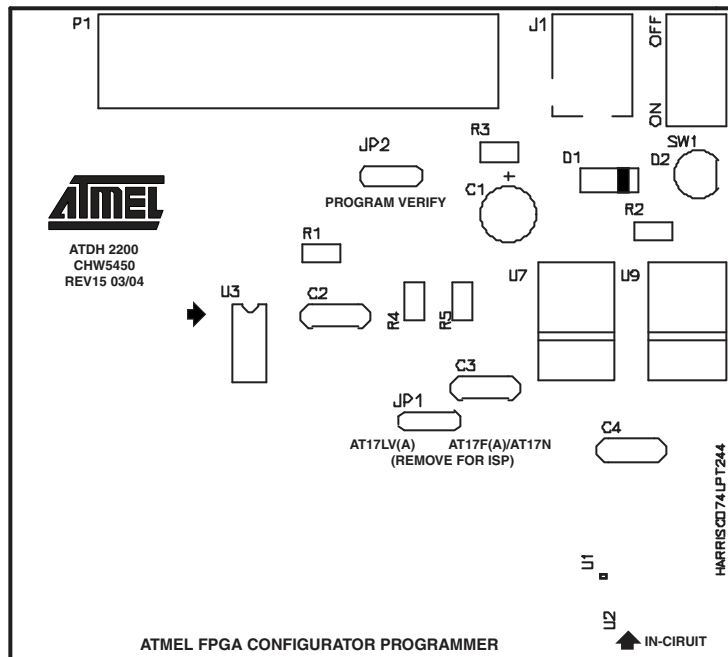
## FPGA Configurator Programming Kit (Enhanced)

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## ATDH2200E

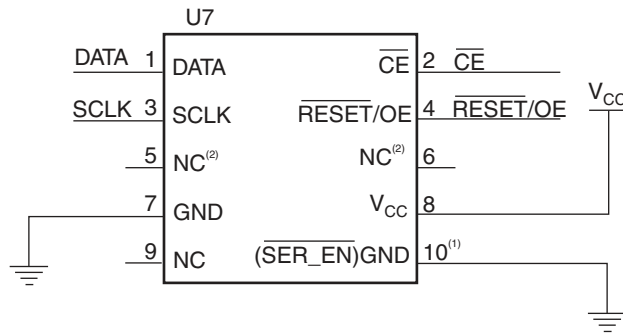


**Figure 1.** ATDH2200E Configurator Programming Board



## In-System Programming Connector

**Figure 2.** In-System Programming Header



- Notes: 1. Pin 10 activates  $\overline{\text{SER\_EN}}$  on target board.  
 2. NC stands for no connection.

The ATDH2200E programming board has a 10 pin header (0.1" spacing) to facilitate in-system programming (Figure 2) of the AT17 parts. The control signals generated by the software are fed to the header, as well as to socket U3 on the board. By placing a similar socket on the target system and connecting the programming board to that target system, the programming algorithms written by Atmel can be used to program an AT17 device in-system.

## Related Documents

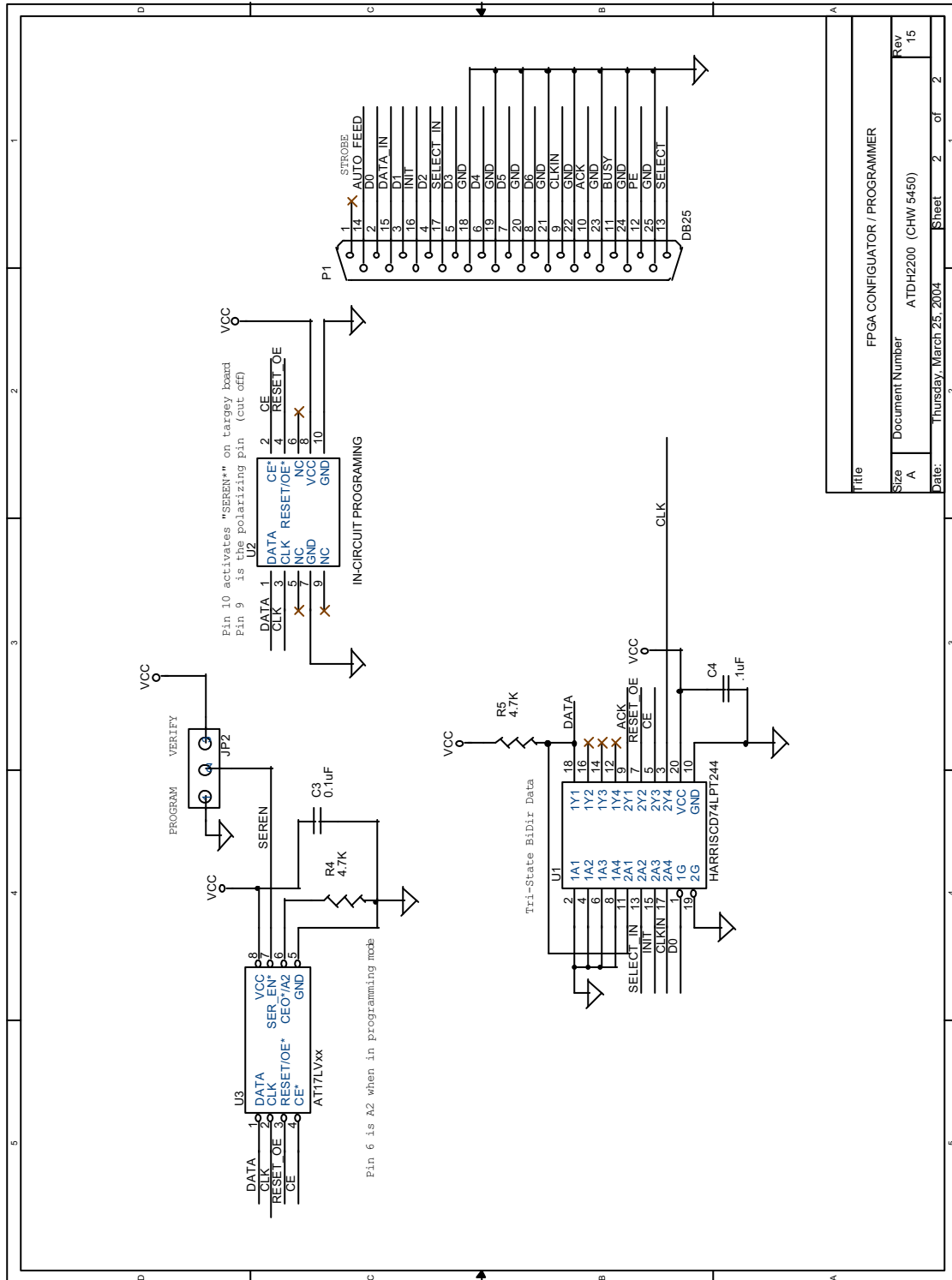
- ATDH2200E Programming Kit User Guide
- AT17 Series datasheet
- Programming Specification for Atmel's FPGA Configuration memories
- In-System Programming Cascaded Configurators
- AT17A Series datasheet

## Adapters Available for the ATDH2200E

- ATDH2222 – 20-lead PLCC adapter (supplied with kit)
- ATDH2221 – 20-lead SOIC adapter
- ATDH2223 – 8-lead SOIC adapter
- ATDH2224 – 44-lead TQFP
- ATDH2226 – 32-lead TQFP
- ATDH2227 – 44-lead PLCC (non-A parts only)
- ATDH2227A – 44-lead PLCC (A parts only)
- ATDH2228 – 8-lead LAP

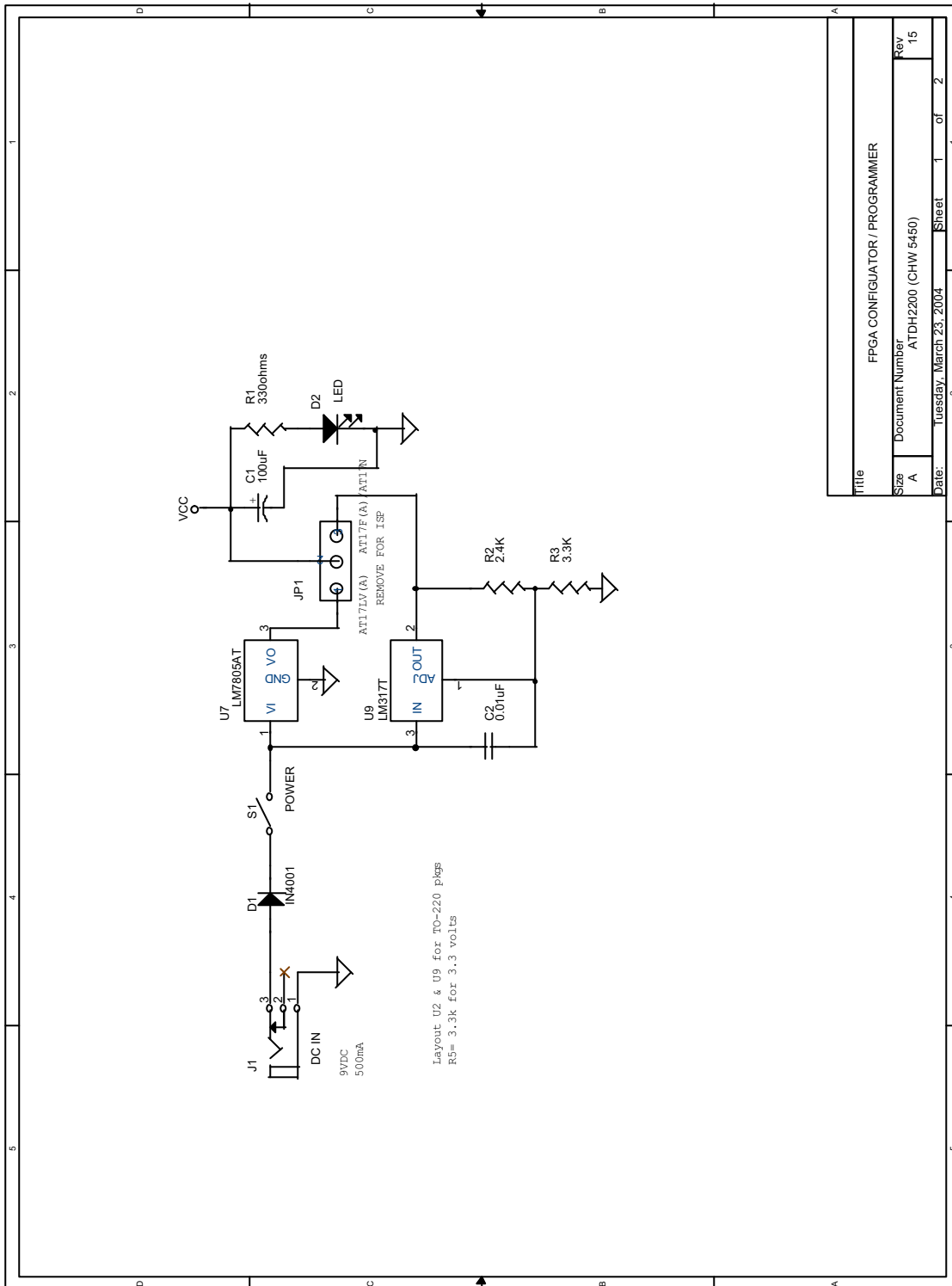
# Schematics

## Programming Connections



Title	
FPGA CONFIGURATOR / PROGRAMMER	
Size	Document Number
A	ATDH2200 (CHW 5450)
Rev	15
Date:	Thursday, March 25, 2004
Sheet	2 of 2

## Power Supply Generation





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