

August 1996

## DESCRIPTION

The SSI 36C3951 Flash Drive Controller is a CMOS monolithic integrated circuit housed in a 144-lead TQFP package. The device integrates the major portions of the hardware required to implement a PCMCIA-ATA compatible flash drive based on Intel NOR type flash memory devices. Functionality includes PCMCIA-ATA and standard ATA/IDE interfaces, sector buffer controller and on-chip buffer memory, microprocessor interface, flash memory controller, power management, error detection and correction logic.

A high capacity, high performance solid state flash memory card emulating an ATA/IDE disk drive is implemented with the 36C3951, a microprocessor, program memory, data memory, and the flash memory array. A reference design example based on the 36C3951 is available and described in detail in the data sheet titled 36C3951 Reference Design.

(continued)

## FEATURES

### HOST INTERFACE

- **PCMCIA-ATA mode**
- **Standard ATA/IDE mode**
- **Bootable in ATA/IDE mode**
- **ATA/IDE dual drive support**
- **256 bytes of PCMCIA attribute memory**
- **8 Mbyte/s burst, PIO Mode 2**

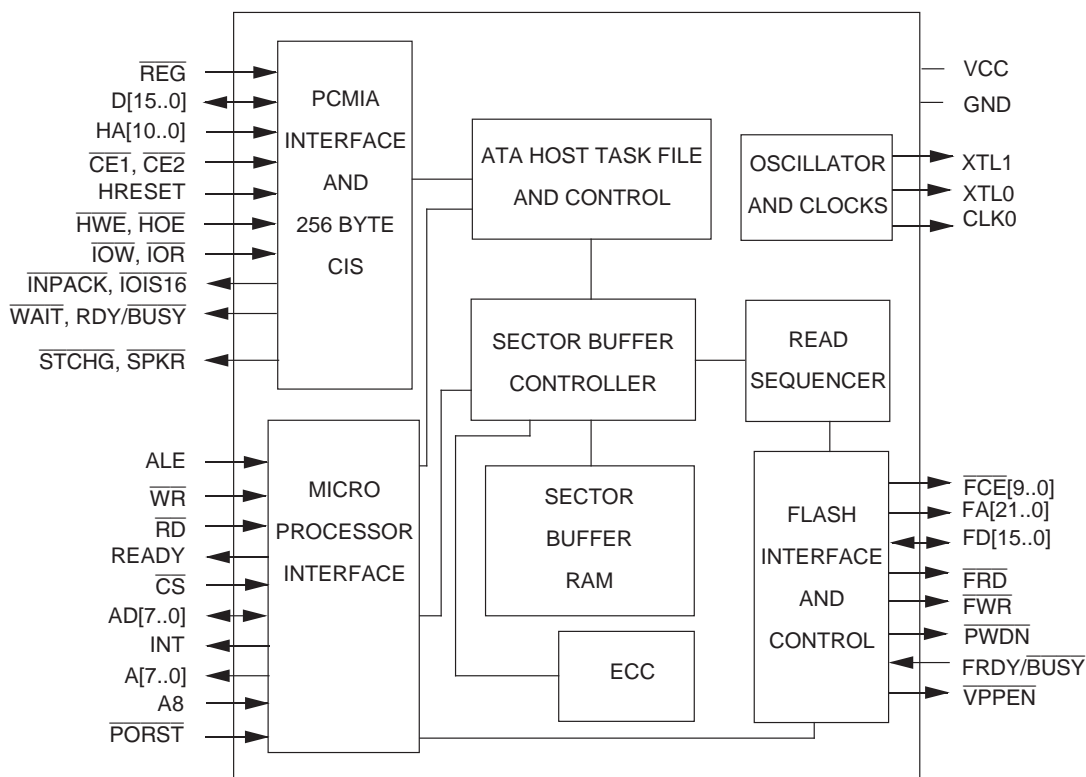
### BUFFER CONTROLLER

- **1568 byte sector buffer**
- **Three separate channels for host, microprocessor, and read sequencer**

### FLASH MEMORY CONTROLLER

- **Intel FlashFile™ compatible interface**
- **High speed read sequencer automates transfers from flash to sector buffer**

## BLOCK DIAGRAM



# SSI 36C3951

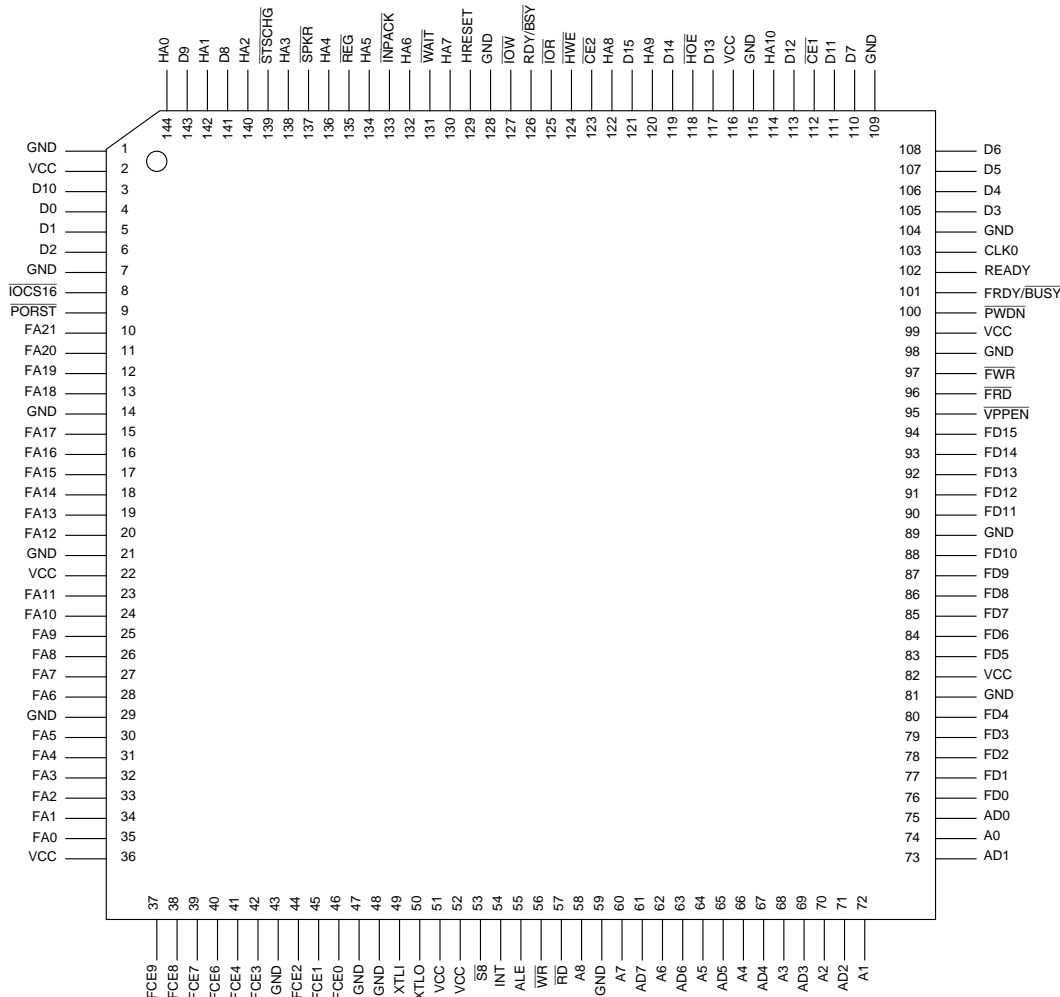
## PCMCIA-ATA/IDE

### Flash Drive Controller

#### PACKAGE PIN DESIGNATIONS

(Top View)

CAUTION: Use handling procedures necessary for a static sensitive component.



144-Lead TQFP

#### ORDERING INFORMATION

PART DESCRIPTION	ORDER NUMBER	PACKAGE MARK
SSI 36C3951 144-Lead TQFP	36C3951-CGT	36C3951-CGT

Silicon Systems reserves the right to make changes in specifications at any time without notice. Accordingly, the reader is cautioned to verify that the data sheet is current before placing orders.

Silicon Systems, Inc., 14351 Myford Road, Tustin, CA 92780-7068 (714) 573-6000, FAX (714) 573-6914