

# ABRIDGED VERSION



# SSI 32R1570R +5, -5V, 12 Channel MR Head Read/Write Device

## Target Specification

February 1996

### DESCRIPTION

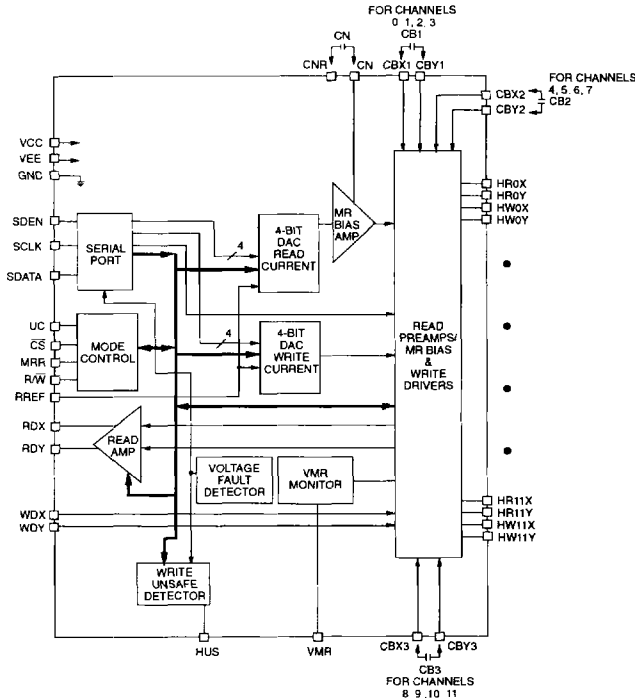
The SSI 32R1570R is a BiCMOS monolithic integrated circuit designed for use with four-terminal Magneto-Resistive recording heads. The reader architecture is MR current bias/voltage sense. A write-only back capability serial port is provided to enable the implementation of on-chip MR bias and write current DACs. It provides a write driver, low noise read amplifier, serial port controlled head selection, servo bank write, write current MR read bias current and fault detection circuitry for up to twelve channels. In servo write mode, 3 channels can be separately selected. The device requires +5V and -5V and comes in an 80-lead TQFP package.

### FEATURES

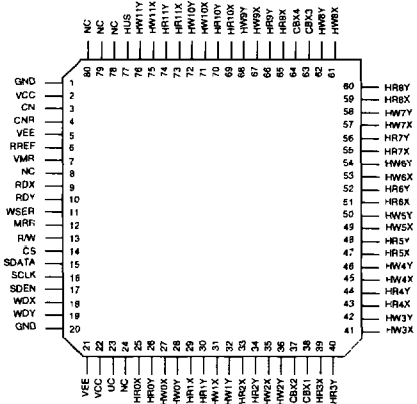
- +5V, -5V  $\pm 10\%$  supply
- Designed for four-terminal MR heads with minimum external components
- Truly differential current bias/voltage sense MR read Amp
- MR head bias current range = 5-16 mA
- MR read gain = 220 V/V (nom)

3

### BLOCK DIAGRAM



### PIN DESCRIPTION



**32R1570R-12 CGT**  
**12 Channel**  
**80-Lead TQFP**

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

The target specification is intended as an initial disclosure of specification goals for the product. The specifications are based on design goals, subject to change and are not guaranteed. Silicon Systems assumes no obligation regarding future manufacture unless agreed to in writing.

# SSI 32R1570R

## +5, -5V, 12 Channel

### MR Head Read/Write Device

---

#### FEATURES (continued)

- MR read input noise = 0.75 nV/√Hz (nom)
- Differential PECL write data inputs
- Head voltage swing = 12 Vp-p (Typ)
- Write current range = 10 - 40 mA
- Read and write fault detection
- Power supply fault protection
- Enhanced system write to read recovery time
- Head select, write current magnitude and MR bias current are controlled by serial interface

---

**Target Specification:** The target specification is intended as an initial disclosure of specification goals for the product. The specifications are based on design goals, subject to change and are not guaranteed. Silicon Systems assumes no obligation regarding future manufacture unless agreed to in writing.

No responsibility is assumed by Silicon Systems for use of this product nor for any infringements of patents and trademarks or other rights of third parties resulting from its use. No license is granted under any patents, patent rights or trademarks of Silicon Systems. 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 92680-7022 (714) 573-6000, FAX (714) 573-6914

---