

5V R/W Preamplifier for 3 Terminal Recording Heads, 2 or 4 Channels

GENERAL DESCRIPTION

The XR-507 is a monolithic disk drive integrated circuit providing read mode preamplification, write current control, and head selection. It requires a single +5V power supply and consumes far less power than similar devices.

Up to four read/write heads can be switched with one device; multiple devices are cascadable. A low noise read signal preamplifier provides two user selectable gain levels.

All digital controls are TTL compatible. The XR-507 is available in 16, 20 and 24 pin SO packages. A 24 Pin DIP version is available for evaluation.

FEATURES

- Complete Head Interface Functions, Read and Write
- Low Power, Single +5V Operation
- High Bandwidth and Dynamic Range
- Low Noise Preamplifier
- Error Preventing Power Monitor
- Pinout Designed for Layout Ease
- Digitally Selectable Preamplifier Gain
- Digitally Selectable Write Current

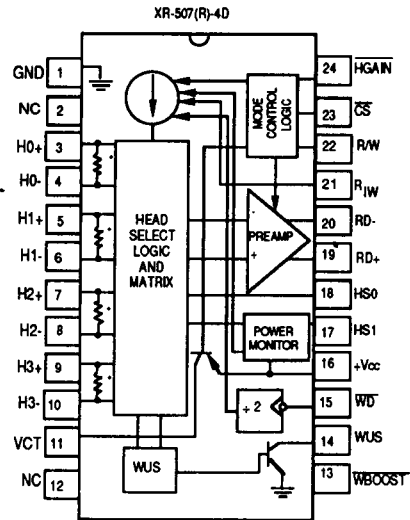
APPLICATIONS

- Battery operated Winchester disk drives
- Low power disk drives
- High density floppy disk drives
- Digital tape drives
- Dedicated servo read/write

ABSOLUTE MAXIMUM RATINGS

VCC	8 Volts
Digital Inputs	-0.3V to VCC +0.3V
Write Current	70mA
Junction Temperature	150° C
Storage Temperature	-65° C to +150° C

PIN ASSIGNMENT



ORDERING INFORMATION

Part Number	Package	Operating Temperature
XR-507R-4CK	24 SOP	0°C TO 70°C

SYSTEM DESCRIPTION

The XR-507 is a low power four channel Winchester Disk Drive Read/Write Preamplifier ideally suited for laptop computer system drives and other applications where power consumption is important. Similar in function to other Exar Read/Write amplifiers, the XR-507 provides equivalent or superior performance at one-fourth the power consumption and requires only a single +5V power supply.

The read preamplifier section consists of a 60MHz bandwidth $1.0\text{nv}/\sqrt{\text{Hz}}$ noise level differential amplifier. Preamplifier gain of either 100 V/V or 200 V/V is digitally selectable. The write driver controls up to 50mA of write current. A full featured power monitor circuit positively disables write mode operation during low voltage fault conditions to preserve data integrity.