

MN662710RA

Signal Processing LSI for CD Players

■ Overview

The MN662710RA is a CD signal processing LSI that, on a single chip, combines an optics servo for the CD player (focus, tracking, and traverse servos), digital signal processing (EFM demodulation and error correction), digital servo processing for the spindle motor, digital filter, and D/A converter, so thus covers all signal processing functions from the head's RF amplifier onward.

The MN662710RA is also usable as a CD signal processing LSI for double-speed CD-ROM playback. Do not, however, use the audio equipment D/A converter during double-speed playback.

■ Features

(Optics servo)

- Focus, tracking, and traverse servos
- Automatic adjustment functions for FO/TR gain, FO/TR offset, and FO/TR balance
- Built-in D/A converter for drive voltage output
- Built-in dropout countermeasures
- Anti-shock functions
- Built-in track cross counter
- Support for both linear motor and screw-based traverse mechanisms
- Support for 3- and 1-beam systems

(Digital signal processing)

- Playback switchable between double-speed and normal speed
- Built-in DSL and PLL
- Frame synchronization detection, holding, and insertion
- Subcode data processing
 - Q data CRC check
 - Built-in Q data register
- CIRC error detection and correction
 - C1 decoder: duplex error correction
 - C2 decoder: triplex error correction
 - Built-in 16-K bits of RAM for de-interleaving
- Audio data interpolation
 - Average, hold of previous values
 - Soft muting
 - Digital attenuation (256 levels)
- Software attenuation (256 levels)
- Audio data peak level detection function
- Auto cue detection function

- Digital audio interface (EIAJ format)
- Audio data serial interface

(Spindle motor servo)

- CLV digital servo

(Audio circuits)

- Operation guaranteed only for normal playback speed
- Digital filter using 8-fold oversampling
- Built-in D/A converter (1-bit D/A converter)
- Built-in differential operational amplifier (\pm PWM output)

(Other)

- Built-in playback pitch control function (normal speed only) (\pm 13%)
- Operating voltage 4.5 to 5.5V

■ Applications

- CD players

■ Block Diagram



