



product features

- ATAPI (SFF-8020) and ATA/ATAPI-4 standard support
- Supports CD-ROM disk speeds at over 40X
- Real time Q+P ECC and EDC correction at over 40X
- Unlimited host transfers at greater than 40X
- Ultra DMA Mode 2 support (no pausing required)
- DMA Mode 2 support (no DMAREQ de-assertions required)
- PIO Native Mode 4 support (no IORDY required)
- Improved DRAM timing for faster clock speeds
- nX-to-1X audio playback with EBU (IEC-958) digital audio
- CD-DA synchronized buffering
- Pin-compatible upgrade from OTI-912
- 100-pin PQFP Package

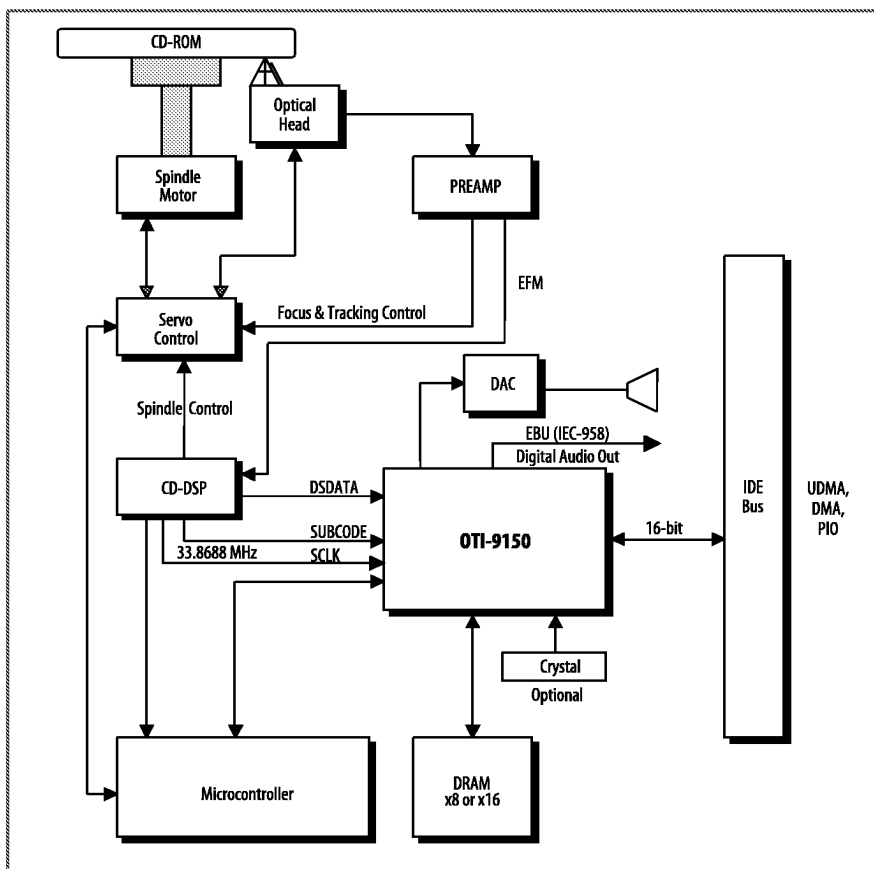
OTI-9150

IDE CD-ROM Controller

Oak Technology's OTI-9150 CD-ROM controller contains new features and enhancements that will be required by tomorrow's ATAPI CD-ROM drives.

Peak data rates required by the drive interface controller have increased dramatically due to the shift towards constant angular velocity (CAV) drives. The flexible architecture and features of the OTI-9150 allow it to be used at data rates above 40X. Many competing solutions have to reduce or delay the error correction process in order to achieve both high disk speeds and host interface throughput, however the OTI-9150 achieves both while still performing real-time Q+P ECC and EDC. The OTI-9150 can also sustain Ultra DMA data rates of over 33MB/s for an entire transfer of 31 blocks without pausing or terminating the burst.

The OTI-9150 can be used in existing OTI-912 designs without a PCB change. In most cases UDMA support is possible by updating existing OTI-912 firmware for use with the OTI-9150 thereby providing a fast design cycle. A new memory timing feature which can improve timing margins for high speed DRAM and allow operation of the OTI-9150 at higher clock rates has been added. Improvements to the nX-to-1X audio playback feature and the addition of EBU (IEC-958) digital audio support provide additional enhancements over the OTI-912.



Block Diagram of CD-ROM Drive Electronics

