Am8052/8152A/8153A

Alphanumeric CRT Controller Chip-Set

DISTINCTIVE CHARACTERISTICS

- 100MHz video dot rate supports high resolution CRT monitors with 132/60 or 96/66 screen formats
- Background or window soft-scroll capability without external MSI or software overhead
- User-friendly CPU interface. Compatible with 8086, Z8000 and 68000 CPUs.
- On-chip line buffers support flicker free soft-scrolling
- Supports proportional character widths
- Automatic concatenation of up to three trailing blank pixels supports text justification
- Flexible attribute handling
- Color and bit-mapped graphics extension

GENERAL DESCRIPTION

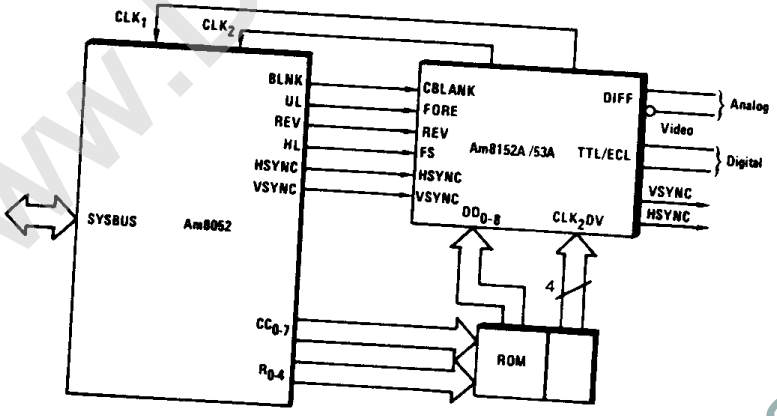
State-of-the-art CRT terminals incorporate advanced user programmable features, such as flexible attribute handling, proportional spacing of characters, split screens or multiple window display, soft-scrolling of windows, and variable character width and height in full page 132 x 60 screen formats. The video subsystem of a CRT terminal with these sophisticated video features can now be implemented with as few as three device packages with the Am8052/8152A chip-set, significantly reducing IC cost and board space without sacrificing performance. The Am8052/8152A chip-set consists of an NMOS LSI CRT Controller (CRTC), the Am8052, and the bipolar IMOX™ Video System Controller (VSC), the Am8152A.

The Am8052 has on-chip DMA which operates via linked list data structures to simplify text editing. In addition, it is the only known CRT controller with three line buffers on chip to support flicker free soft-scrolling of background or windows. The Am8052 has on-chip logic that can support a number of attributes, such as highlight, reverse video, underline, etc., which enhance display presentation (see Table 1 in the Am8052 CRTC datasheet). In addition, four user definable attributes are available providing user flexibility.

The Am8052 CRT controller performs all the data processing prior to video serialization. This latter task is performed by the Am8152A, for dot rates up to 60MHz, or by the Am8153A for dot rates up to 100MHz. Apart from the video output lines (TTL on the Am8152A and ECL on the Am8153A) these two devices are functionally identical. The high speed of the video controller, a result of AMD's patented IMOX™ technology, supports high resolution screens of 500-1000 scan lines per frame or rows with 100 or more characters. In addition, the Am8152A has on-chip logic that supports proportional spacing of characters and allows for text justification.

The CRT chip-set is designed for easy interface with all popular CPUs such as the 8086, 68000 and Z8000,* thus permitting design flexiblity with minimal logic.

TYPICAL APPLICATION WITH PROPORTIONAL SPACING



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Refer to page 7-1 for Essential Information on Military Devices