



MU9C4910, 4910V

24-BIT DIRECT COLOR GRAPHICS PALETTES

PRODUCT INFORMATION

DISTINCTIVE CHARACTERISTICS

- Combination Look-up table and triple eight-bit Video DAC
- Pseudo-color displays of 256 colors from a 256K color palette
- Adds 15-, 16-, and 24-bit (Blue-byte first) Direct Color capability to standard VGA controllers
- Direct Color modes display 32K, 64K, or 16M colors
- Directly drives double-terminated 75-ohm transmission line
- Compatible with VGA, Super-VGA, VESA, TIGA™ and 8514/A with enhanced features
- Internal/external voltage reference (MU9C4910V) or external current reference (MU9C4910)
- Two power-down modes for extended battery life
- Monitor Sense comparators detect monitor connections
- Setup and programmable Sync for video monitor compatibility
- Asynchronous Microprocessor interface
- Pixel Replicate™ suppresses display noise when Look-up table or Mask register accessed during active display time
- Industry-standard 44-pin PLDCC and 28-pin PDIP packages
- 90-, 110-, and 125-MHz pixel rates
- High-performance, TTL-compatible CMOS for low power

GENERAL DESCRIPTION

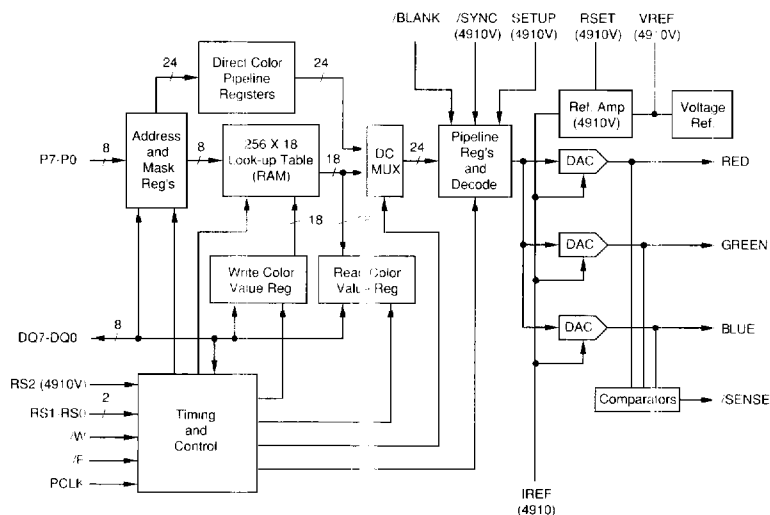
The MU9C4910 and MU9C4910V monolithic 24-bit Direct Color Graphics Color Palettes include a 256-word by 18-bit Look-up table, 24-bit Direct Color bypass, three eight-bit Video DACs, Monitor Sense comparators, and two Sleep modes. The VGA-compatible Look-up table accepts up to eight bits per pixel from a frame buffer and performs a translation into three six-bit values for conversion into Red, Green, and Blue analog signals. Each of the Video DACs can directly drive a double-terminated 75-ohm transmission line. The MU9C4910V includes an internal voltage reference, and may also be used with an external voltage reference. The MU9C4910 requires an external current reference.

The MU9C4910 and MU9C4910V are fully compatible with VGA, Super-VGA, VESA, TIGA and 8514/A industry standards while providing many enhanced features. Direct Color operation bypasses the Look-up table to provide 16M (24-bit Blue-byte first format) 64K (16-bit XGA™), or 32K (15-bit TARGA™) displayable colors. Direct

Color data is clocked on two or three consecutive rising edges of the pixel clock, making these devices compatible with any VGA controller. Programmable Sync pulses and a Set-up pedestal are available on all three outputs (MU9C4910V only). Monitor Sense comparators (44-pin PLDCC only) permit the detection of color, monochrome, or no monitor connection. Two Sleep modes reduce power consumption in battery-powered applications. These devices also incorporate a proprietary Pixel Replicate feature that allows Look-up table read and write operations to occur during the active portion of the display.

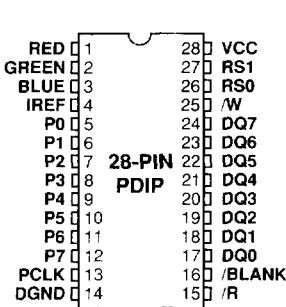
The enhanced Direct Color features may be accessed through an industry-standard key sequence, allowing this device to directly upgrade standard VGA system designs. Available in 28-pin PDIP (MU9C4910 only) and 44-pin PLDCC packages, this device supports the screen resolution, color capability, and power requirements necessary for high-performance Desktop and Notebook Personal computers and Desktop Publishing systems.

BLOCK DIAGRAM

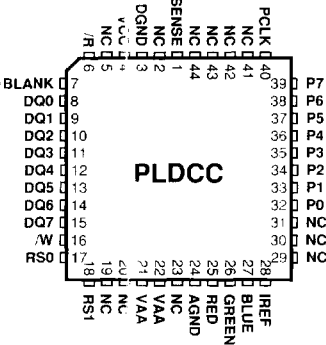


MU9C4910/V

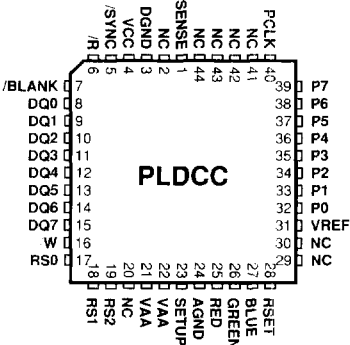
PINOUT DIAGRAMS



MU9C4910



MU9C4910



MU9C4910V

ORDERING INFORMATION

PART NUMBER	SPEED	REFERENCE	PACKAGE	TEMPERATURE RANGE
MU9C4910-YYPC		CURRENT	28-PIN PDIP	0-70°C
MU9C4910-YYDC		CURRENT	44-PIN PLDCC	0-70°C
MU9C4910V-YYDC		VOLTAGE	44-PIN PLDCC	0-70°C
YY=90	90 MHz			
YY=11	110 MHz			
YY=12	125 MHz			

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