FLEX_DIGIT Display

FLEX_DIGIT is a dual-digit, seven-segment display connected directly to the FLEX 10K device. Each LED segment on the display can be illuminated by driving the connected FLEX 10K device I/O pin with a logic 0. See Figure 4 on page 8 for the name of each segment. Table 7 lists the pin assignment for each segment.

Table 7. FLEX_DIGIT Segment I/O Connections

Display Segment	Pin for Digit 1	Pin for Digit 2
a	6	17
b	7	18
c	8	19
d	9	20
e	11	21
f	12	23
g	13	24
Decimal point	14	25

VGA Interface

The VGA interface allows the FLEX 10K device to control an external video monitor. This interface is composed of a simple diode-resistor network and a 15-pin D-sub connector (labeled VGA), where the monitor can plug into the boards. The diode-resistor network and D-sub connector are designed to generate voltages that conform to the VGA standard.

Information about the color, row, and column indexing of the screen is sent from the FLEX 10K device to the monitor via five signals. Three VGA signals are red, green, and blue, while the other two signals are horizontal and vertical synchronization. Manipulating these signals allows images to be written to the monitor's screen.

See "VGA Driver Operation" on page 25 for details on how the VGA interface operates.

Table 8 lists the D-sub connector and the FLEX 10K device connections.