Register Changes:

The register number is multiplied by 2 to account for 64-bit access instead of 32-bit access.

CTRL register is the only register with changes to bit meanings.

CTRL – Reg 00

Bits moved and added for color depth.

|  |  |  |
| --- | --- | --- |
| Bit # | Access | Description |
| [31:24] | ~ | Reserved |
| [20] | W | Char write |
| [19] | W | Transform point |
| [18] | W | Forward point |
| [17:16] | RW | Active point |
| [15:14] | ~ | Reserved |
| [13] | W | Bézier inside shape |
| [12] | W | Interpolation |
| [11] | W | Curve write |
| [10] | W | Triangle write |
| [9] | W | Line write |
| [8] | W | Rect write |
| [7] | W | Point write |
| [6] | RW | Z-buffer enable |
| [5] | RW | Clipping enable |
| [4] | RW | Color-key enable |
| [3] | RW | Blending enable |
| [2] | RW | Texture0 enable |
| [1:0] | RW | Color Depth |

Color depth is no longer used. See the color component register.

|  |  |  |
| --- | --- | --- |
| Mode | Color Depth |  |
| 00 | 8 bit |  |
| 01 | 12 bit |  |
| 01 | 16 bit |  |
| 10 | 24 bit |  |
| 11 | 30 bit |  |

Several new register have been added to define the target area, font table, font in use (font ID)

|  |  |  |
| --- | --- | --- |
| Reg # | Access | Description |
| xB0 | RW | Target X0 |
| xB4 | RW | Target Y0 |
| xB8 | RW | Target X1 |
| xBC | RW | Target Y1 |
| xC0 | RW | Font Table Base Address |
| xC8 | RW | Font ID |
| xCC | RW | Char Code |
| xD0 | RW | Color Component |

Using the text blitter:

Setup the font table containing the bitmap font information.

Set the position of the character using the dest\_x0, dest\_y0 registers.

Set the character code to display in the Char code register.

Select the font to use in the font id register.

Set the char write bit in the control register. It will automatically reset.

## Color Component Register

This register contains a description of the bits making up the pixel color. Valid values for each component range from 0 to 10. The total number of bits must be less than 33. Pixels that are not a multiple of eight bits in size require read-modify-write cycles and are hence processed more slowly.

|  |  |
| --- | --- |
| Bits |  |
| 0 to 3 | Number of blue bits |
| 4 to 7 | Number of green bits |
| 8 to 11 | Number of red bits |
| 12 to 15 | Number of padding bits |