



LVDS Dithering

Description of Problem

Infrequently, some display artifacts might be seen on the LVDS panel from certain side angles of view. This seldom occurrence of display artifact is due to the dithering engine within the LVDS transmitters, in the particular case when the display data contains all equal value pixels, or identical consecutive lines.

Explanation of Problem

The LVDS dithering engine uses line buffers to manipulate the dithering and there are some limitations in the algorithm. If all pixels on the display have the same value, or all lines are identical on the display, then a pattern of dispersed quantization pixel errors will be introduced by the dither engine onto the display. This symptom is more readily observable to the human eye when a bright single color display is used.

In most cases, the dithering engine will produce a superior display quality on the LVDS panel. The symptom described above, which is a trade-off for dithering, will not be seen in usage of general applications. Apart from dithering, the visibility of display artifacts may vary from panel to panel. Furthermore, if viewing directly in front of the LVDS panel, the display artifact will not likely be detectable.

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