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Low Resolution Support of AD9985A

The AD9985A is Analog Device's (ADI) latest analog interface offered for video applications requiring extended temperature range of operation. It's guaranteed to operate within its data sheet specification over the entire -40° to 85° temperature range. In addition, through comprehensive testing it has been confirmed that the AD9985A will maintain robust operation down to 6MHz when using the recommended settings provided by ADI.

The AD9985A employs the "low gear enable" bit (R0x16[7]) that adds an additional divide-by-2 into the PLL divide ratio when the VCO Range (R0x03[7:6]) is set to '0'. Enabling this function at Pixel frequencies below 20MHz will result in improved PLL jitter performance as it allows the VCO to run at a higher frequency with lower jitter. This ensures that the PLL will operate in the WQVGA timing format.

It's specified in AD9985A datasheet that the operating temperature of AD9985A is -40° to +85° . The testing conducted on the AD9985A included running at +90° and at -45° for 15 minutes each with no loss of image, data or timing signals at 6.38MHz pixel clock.

The AD9985A can drive some special panels as long as the capacitive loading does not exceed the limitation of AD9985A and if the input resolution matches the resolution of the display. For this instance as very low frequency, the capacitive load can be 20pF or even more. However note that AD9985A can't realize scaling function since it's not designed for that.

Brett Li

Applications Engineer – Display Electronics

Analog Devices