14-Bit, CCD Signal Processor with *Precision Timing*™ Core

AD9979

FEATURES

1.8 V analog and digital core supply voltage
Correlated double sampler (CDS) with –3 dB, 0 dB, +3 dB, and +6 dB gain
6 dB to 42 dB 10-bit variable gain amplifier (VGA)
14-bit 65 MHz analog-to-digital converter
Black-level clamp with variable level control
Complete on-chip timing generator
***Precision Timing* core with 240 ps resolution @ 65 MHz**
On-chip 3 V horizontal and RG drivers
General-purpose outputs (GPOs) for shutter and system support
7 mm × 7 mm, 48-lead LFCSP package
Internal LDO regulator circuitry

APPLICATIONS

Professional HDTV camcorders
Professional/high end digital cameras
Broadcast cameras
Industrial high speed cameras

GENERAL DESCRIPTION

The AD9979 is a highly integrated CCD signal processor for high speed digital video camera applications. Specified at pixel rates of up to 65 MHz, the AD9979 consists of a complete analog front end with analog-to-digital conversion, combined with a programmable timing driver. The *Precision Timing* core allows adjustment of high speed clocks with approximately 240 ps resolution at 65 MHz operation.

The analog front end includes black-level clamping, CDS, VGA, and a 65 MSPS, 14-bit analog-to-digital converter. The timing driver provides the high speed CCD clock drivers for RG, HL, and H1 to H4. Operation is programmed using a 3-wire serial interface.

Available in a space-saving, 7 mm × 7 mm, 48-lead LFCSP package, the AD9979 is specified over an operating temperature range of –25°C to +85°C.

FUNCTIONAL BLOCK DIAGRAM

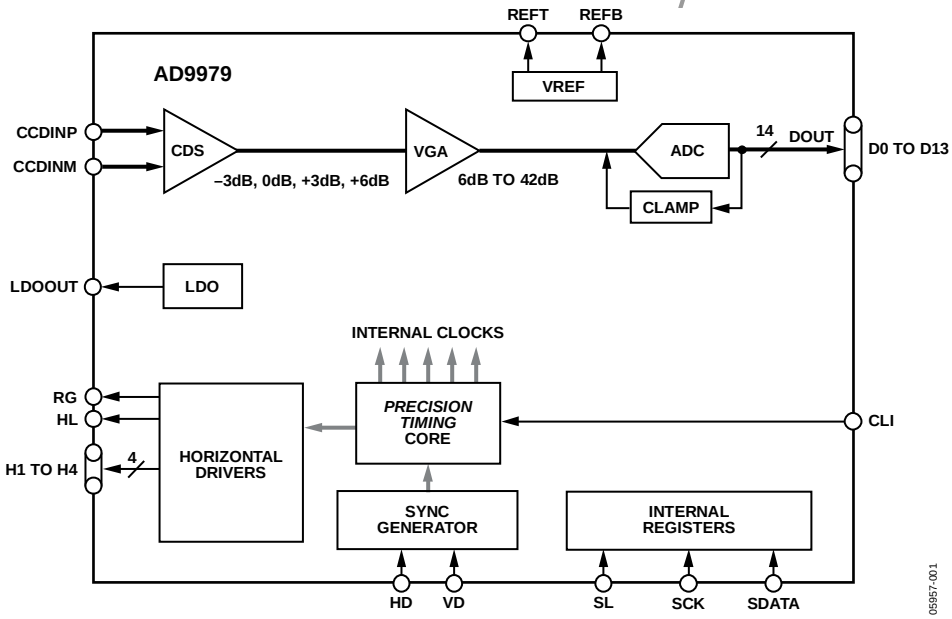

Figure 1.

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