14-Bit CCD Signal Processor with *Precision Timing*™ Generator

Data Sheet **AD9970**

FEATURES

1.8 V analog and digital core supply voltage
Serial data link with reduced range LVDS outputs
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 ADC
Black level clamp with variable level control
Complete on-chip timing generator
***Precision Timing* core with 240 ps resolution at 65 MHz**
On-chip, 3 V horizontal and RG drivers
5 mm × 5 mm, 32-lead LFCSP_VQ

APPLICATIONS

Professional HDTV camcorders
Professional/high end digital cameras
Broadcast cameras
Industrial high speed cameras
High speed data acquisition systems

GENERAL DESCRIPTION

The AD9970 is a highly integrated CCD signal processor for high speed digital video camera applications. Specified at pixel rates of up to 65 MHz, the AD9970 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 240 ps resolution at 65 MHz operation. The AD9970 also contains a reduced range LVDS interface for data outputs.

The analog front end includes black level clamping, CDS, VGA, and a 65 MSPS, 14-bit ADC. 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.

Packaged in a space-saving 5 mm × 5 mm, 32-lead LFCSP_VQ, the AD9970 is specified over an operating temperature range of −25°C to +85°C.

For more information about the AD9970, contact Analog Devices via email at afe.ccd@analog.com.

FUNCTIONAL BLOCK DIAGRAM

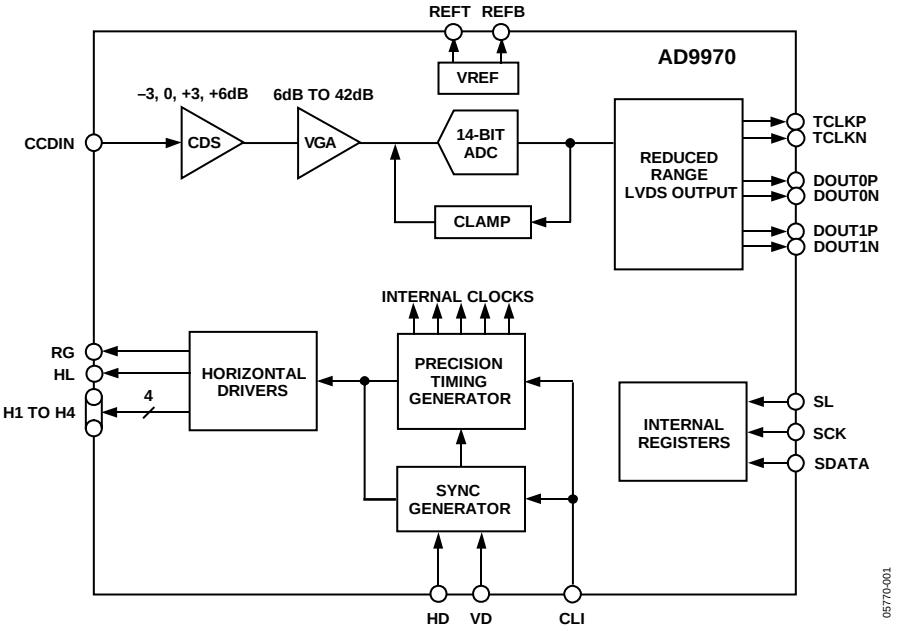

Figure 1.

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
Tel: 781.329.4700
Technical Support www.analog.com

NOTES

D05770F-0-7/14(SpD)