

# CAT9883C

150/170MSPS Triple 8-bit Video Analog-to-Digital Data Converter

CHIP ADVANCED TECHNOLOGY

[www.chipadvanced.com](http://www.chipadvanced.com)



## FEATURES

- ◆ 0.5 V to 1.0 V Analog Input Range
- ◆ Ultra Wide Range Conversion Rate (480i~1080P)
- ◆ Adjustable Analog Input Bandwidth
- ◆ 4:2:2 Output Format Mode
- ◆ Digital Output Tri-State
- ◆ 3.3 V Power Supply
- ◆ Full Sync Processing
- ◆ Midscale Clamping
- ◆ Power-Down Mode
- ◆ Max. Power Dissipation under 800mW @ SXGA (1280x1024x75Hz)
- ◆ Automatic Offset Calibration
- ◆ Automatic Gain Balance
- ◆ Built-In smart de-macrovision
- ◆ Green Package (Optional)

## Applications

- ◆ RGB/YUV Signal Conversion Processing
- ◆ LCD Monitors and TV
- ◆ Projectors
- ◆ Rear Projection TV
- ◆ Plasma Display Panels
- ◆ Digital TV
- ◆ Set-Top Box

## GENERAL DESCRIPTION

A top-notch video analog front-end, the CAT9883C converts RGB or YUV triple analog video inputs into 8-bit digital outputs. Specifically, it works to convert analog inputs to digital outputs at

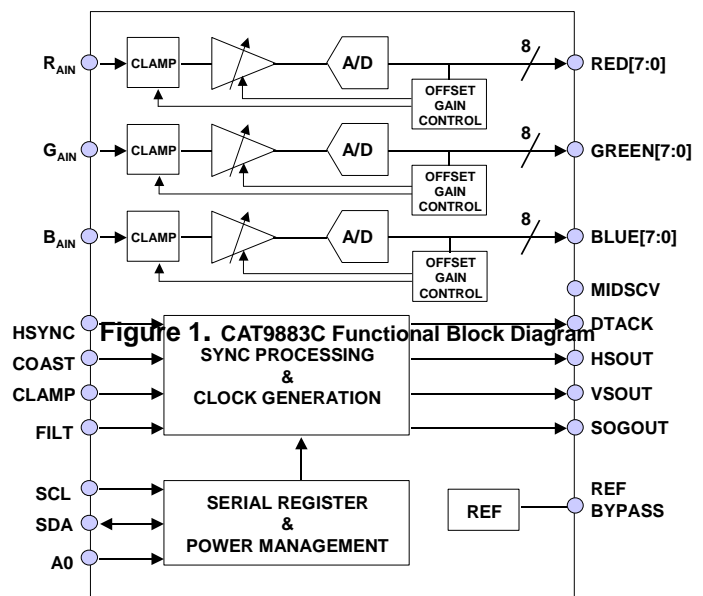
up to 8 bits/170MSPS, which means it supports 1080P video format out of the box.

The CAT9883C integrates three ADCs with programmable gain control, PLL, clamp control and offset cancellation. The robust PLL design, which delivers high precision and low jitter, generates pixel clocks from 12MHz to 170MHz. It also supports full sync processing for composite sync and sync-on-green graphic applications.

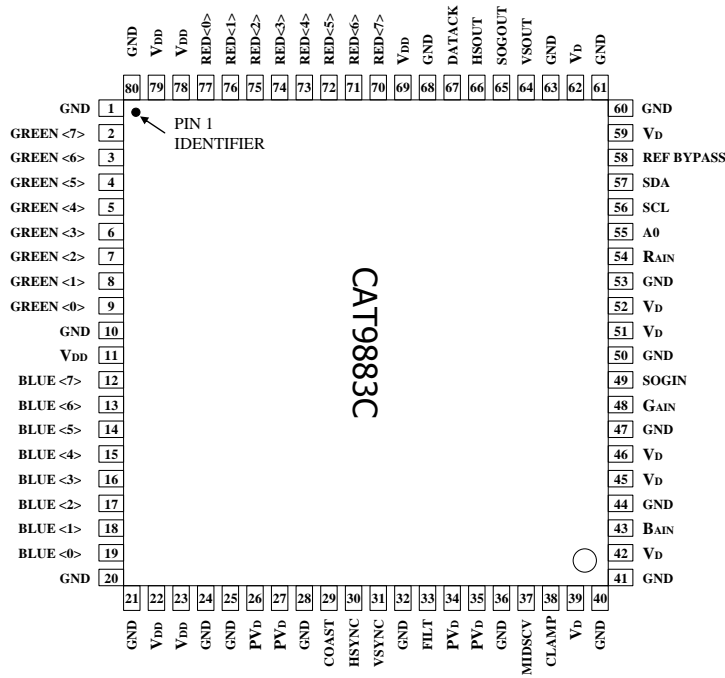
Equipped with auto-calibration function for ADC inter-channel offset and gain mismatch, the CAT9883C is free of any external adjustment for the sake of color balancing.

The CAT9883C also offers full sync processing for composite sync and sync-on-green applications. Clamp and COAST signals are generated internally or may be provided by the user through Clamp and COAST pin.

The CAT9883C is fabricated in 0.35um mixed-mode CMOS process and available in 80-lead LQFP package.



## Pin Configuration



**Figure 2. CAT9883C LQFP80 Pin Configuration**