

## ADI ADA4424-6 六路 SD-ED-HD 视频滤波方案

ADI 公司的 ADA4424-6 是六路带有电荷泵的 SD/ED/HD 视频滤波器,包括有用于标清(SD)的连个 5 阶 Butterworth 滤波器,用于高清(HD)的三个 5 阶滤波器.滤波器/缓冲器的工作电压 3.3V,完全支持(EIAJ RC-5237 D5 和 S1/S1 所提供的信令,而模拟部分工作电压 5V.本文介绍了 ADA4424-6 的主要特性,功能方框图以及自动失调消除模式的 ADA4424-6 应用框图.

### 6-Channel SD/ED/HD Video Filter with Charge Pump

The ADA4424-6 is a high performance video reconstruction filter specifically designed for consumer applications. It consists of a standard definition (SD) section with two fifth-order Butterworth filters, and a high definition (HD) section with three fifth-order filters. The SD section contains an internal Y/C summer for CVBS output, whereas the HD section provides selectable corner frequencies for either extended definition (ED) or high definition (HD) signals. The ADA4424-6 filter/buffer section operates from a single 3.3 V supply. Full support for D-terminal (EIAJ RC-5237 D5) and S1/S2 signaling is provided, along with a dedicated 5 V supply pin. Separate enable pins are provided for the SD and HD sections.

The luma channels (Y\_IN, HY\_IN) of the ADA4424-6 are capable of detecting and cancelling dc input offsets of up to 1.1 V. Four distinct modes of detection/cancellation are available. The output drivers on the ADA4424-6 feature rail-to-rail outputs with 6.2 dB gain. An on-board charge pump allows the outputs to swing up to 1.4 V below ground, eliminating the need for large coupling capacitors. Each output is capable of driving two 75  $\Omega$  doubly terminated cables.

The ADA4424-6 is available in a 38-lead TSSOP and operates in the extended industrial temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .

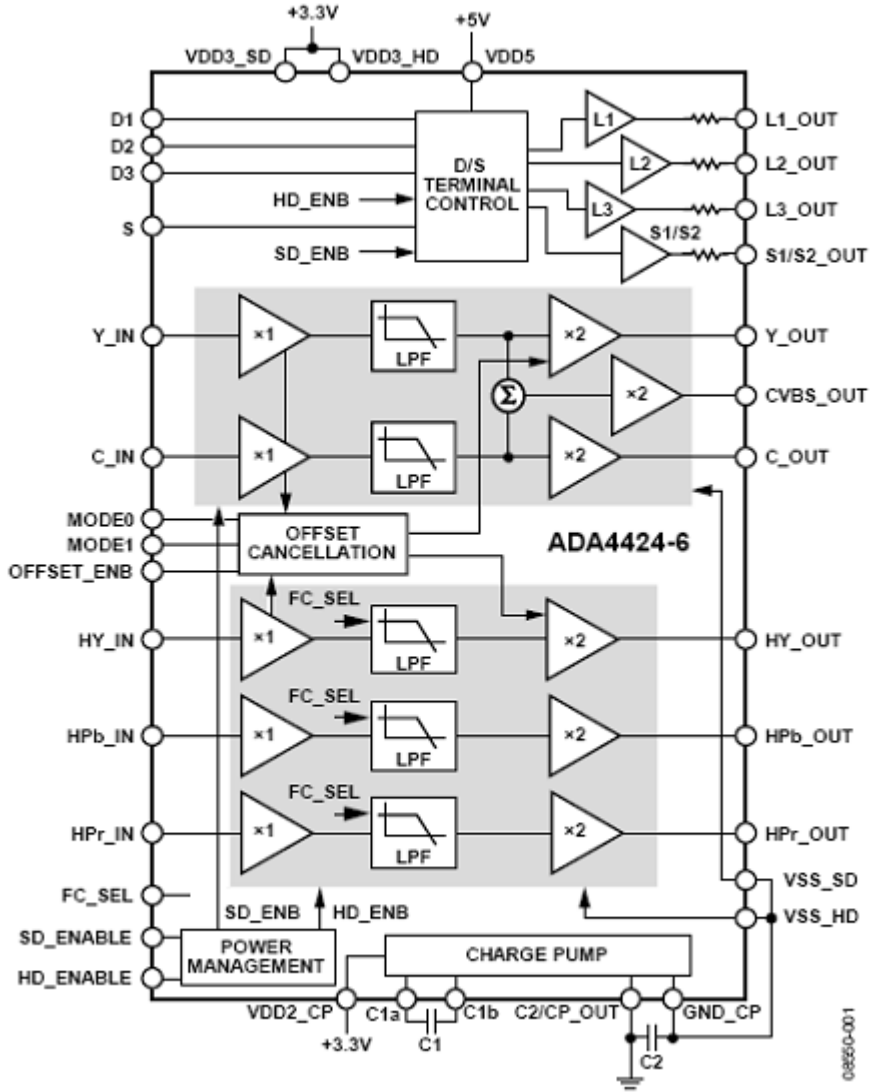


图 1.ADA4424-6 功能方框图

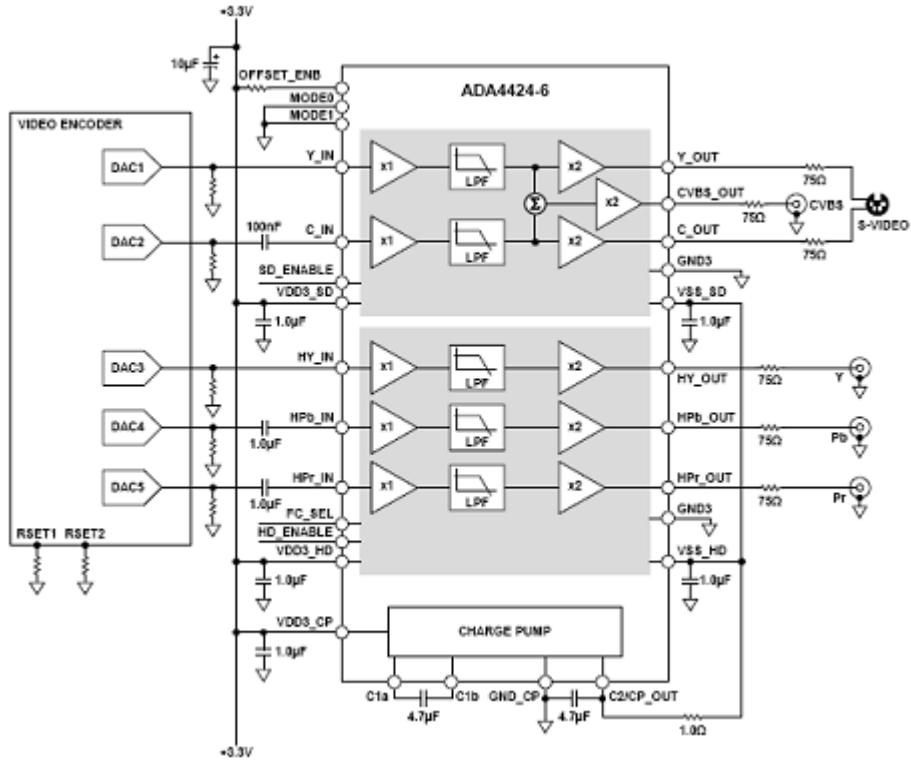


图 2.自动失调消除模式的 ADA4424-6 应用框图