

Achieving a Common Chassis Worldwide
Y, C, and Synchronizing Signal Processing ICs

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CXA2060AS

CXA2061S

Sony provides an extensive lineup of Y, C, and synchronizing signal processing ICs (YCD).

These ICs take advantage of earlier TV ICs and in addition adopt new technologies to incorporate even more peripheral components and functionality in the same chip.

The CXA2060AS supports NTSC, PAL (including PAL-M and PAL-N), and SECAM, whereas the CXA2061S is a special-purpose NTSC YCD chip.

Thus the pin compatible CXA2060AS and CXA2061S support all TV broadcast regions and can achieve a common chassis worldwide.

- Reduced peripheral components count
- On-chip 1H delay line
- On-chip SECAM decoder
- On-chip video switch
- Three crystal oscillator pin sets for PAL-M and PAL-N support
- The CXA2060AS and CXA2061S are pin compatible.

Worldwide Horizontal Deployment

The CXA2060AS is a single-chip Y,C, and synchronizing signal processing IC (YCD) that includes both a 1H delay line and a SECAM decoder on chip, and the CXA2061S is a special-purpose NTSC YCD. While it goes without saying that these chips are pin compatible, their I²C control registers are also identical, making them software compatible as well. These two products were designed to allow a common chassis to be used in all TV broadcast regions. Figure 1 shows the block diagram of the CXA2060AS.

Built-in 1H Delay Line and SECAM Decoder

The CXA2060AS includes an on-chip 1H delay line and an on-chip SECAM decoder. While earlier products such as the CXA2000Q required an external 1H delay line for PAL and an external SECAM decoder for SECAM, by including these circuits on chip, the CXA2060AS allows the same circuit to provide the different types of signal processing required by NTSC, PAL, and SECAM. This allows the same chassis to be used for all reception areas, including NTSC-only areas, PAL/SECAM areas, and NTSC/PAL-M/PAL-N areas.

Reduced Peripheral Components Count

Figure 2 presents a sample application circuit. In addition to the components used in this system, a video switch, a 1H delay line, and a SECAM decoder would be required to construct the same system using earlier products. The CXA2060AS includes these devices on chip. (The CXA2061S only includes the video switch on chip.) Since a high-performance sync separator system for the input signal is fully included on chip, no separate sync separator circuit input signal is required. Additionally, the sample-and-hold capacitor for the auto-cutoff circuit (AKB) is built in, and capacitors and an oscillator element are not required for the H/V oscillator. Thus

this single chip can completely support all aspects of a color system.

Vertical Deployment from the Low End to the High End

Since these chips also provide Y and color difference signal input/output, a feature block can be added. Since an fsc output is provided, a digital comb filter can be used. Thus these chips support flexible deployment in higher grade television systems. The CXA2060AS and the CXA2061S not only aim for extensive and complete television functionality, but also promise the achievement of a common chassis worldwide.

V O I C E

We are finally seeing the debut of single-chip support for multi-format systems! We performed extensive field testing in developing this IC, looking for signals that are difficult to receive in all corners of the world. As a result, this IC achieves the best SECAM discrimination performance of the century! Sony's engineers strongly recommend that you try this IC.

