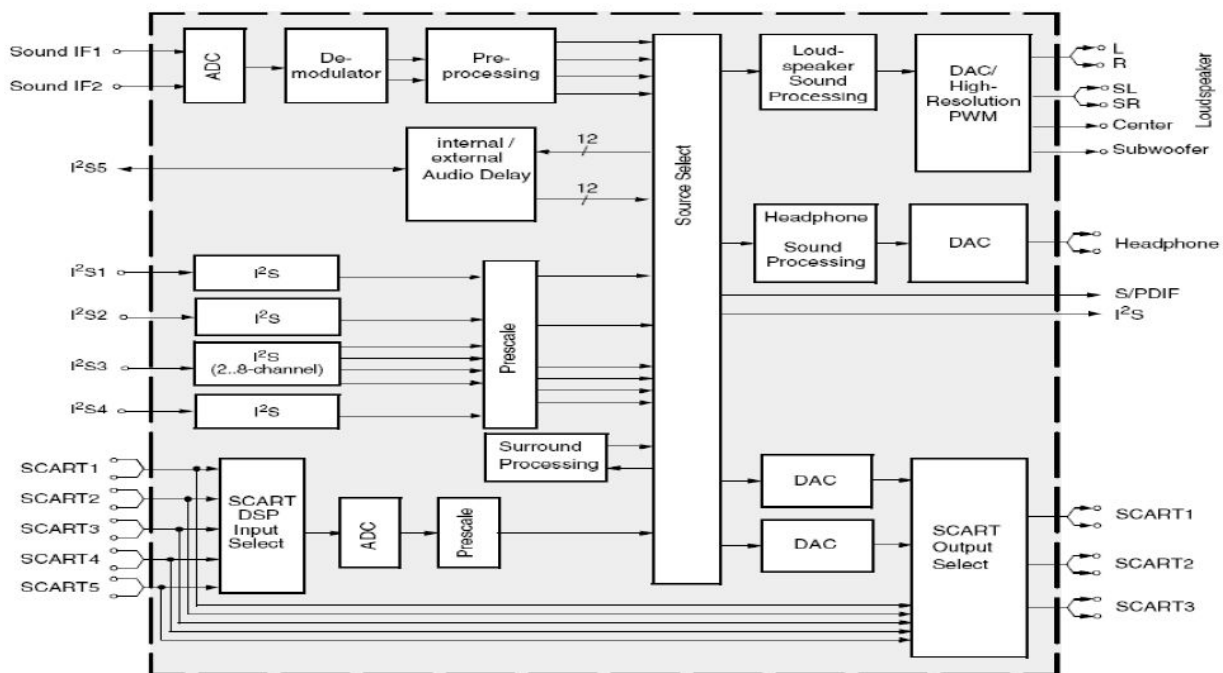


AUDIO: MSP4440K



AUDIO: MSP4440K

The MSP4440K family of single-chip Multistandard Sound Processors covers the sound processing of all analog TV-Standards worldwide, as well as the NICAM digital sound standards and FM stereo radio. The full TV sound processing, starting with analog sound IF signal-in, down to processed analog AF-out (baseband audio), is performed on a single chip.

With its extended number of inputs and outputs, the MSP4440K can handle all audio signals in modern LCD, PDP, or CRT TVs. Even additional signals from Digital TV decoders are included in the MSP4440K's single chip TV Audio concept.

The MSP4440K has an internal 40ms (stereo) audio delay line. Complex video processing delays the picture by several video frames. To avoid mismatch between sound and a speaker's lip movement, the audio has to be delayed accordingly (lip sync).

The MSP4440K built-in stereo A/D converters offer a S/N ratio of 95dBA typ. The multiple D/A converters with analog volume and 0.125dB steps make use of the Micronas unique multibit Delta-Sigma technology, offering a dynamic range of 95 dBA typically. The DSP processing is performed at 48kHz sample rate, maintaining the full audio bandwidth of 20kHz.

AUDIO: MSP4440K

These TV sound processing ICS include versions for processing the multichannel television sound (MTS) signal conforming to the U.S. standard recommended by the Broadcast Television Systems Committee (BTSC). The DBX noise reduction, or alternatively, Micronas Noise Reduction (MNR) is performed alignment free.

The MSP4440K offers the following automatic functions:

- ASD (Automatic Standard Detection) detects the actual broadcasted TV standard automatically.
- ASS (Automatic Sound Select) switches automatically (without any I²C action) between mono/stereo/bilingual when the broadcast mode changes.
- The MSP4440K can handle very high FM deviations.