



## DESCRIPTION

The PT8501 is a complete low-cost decoder for use in the decompression of higher-performance multi-channel digital audio, such as Dolby Digital (also called AC3). The PT8501 provides a complete and flexible solution for multi-channel audio decoding in laser-disc players, DVD movie players, stereo receivers, out-board decoders, HDTV sets, head-end decoders, set-top boxes, and similar products. PT8501 contains on-chip firmware for decoding and processing DOLBY DIGITAL (AC-3), linear PCM data. It also includes a Dolby Pro Logic decoder for decoding matrix surround encoded PCM data or 2-ch Dolby digital data. With a built-in S/PDIF receiver, no external S/PDIF receiver is necessary in order to receive digital bitstreams.

The decoder is controlled via an I<sup>2</sup>C serial host interface. Standard digital audio data formats are supported, including I<sup>2</sup>S, MSB-first right-justified, and MSB-first left-justified.

## FEATURES

- Dolby<sup>®</sup> Digital (5.1-channel) decoder up to 448Kbps.
- Dolby<sup>®</sup> Surround Pro Logic decoder
- Built-in S/PDIF receiver and automatic bitstream detection
- Built-in large output buffers for both surround and center channels delay
- Pink Noise Generator built-in for easy set up of surround system
- I<sup>2</sup>C control interface
- 1 set of digital audio input port can be programmed to fit different format
- 3 sets of digital audio output port, can decode up to 6 channels
- Low operating voltage, 2.5V, with 3.3V IO tolerance
- Available in 100 pins, QFP and 80 pins LQFP

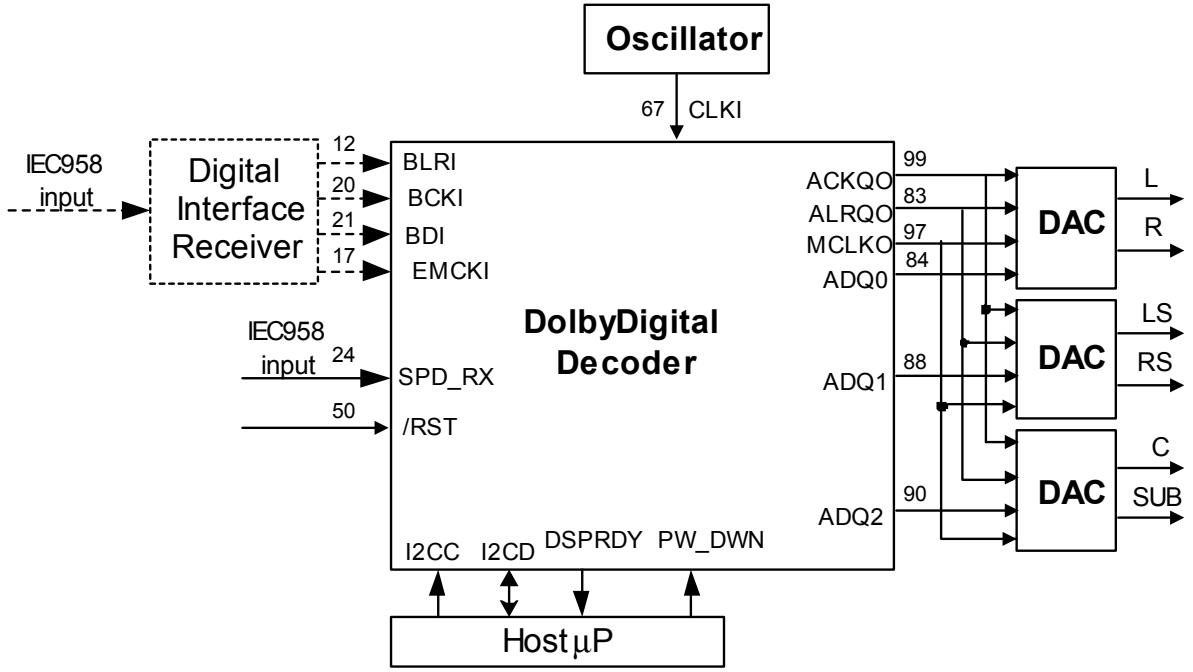
## APPLICATIONS

- Multimedia Speakers
- DVD Player
- AV Amplifier
- Set Top Box





## APPLICATION CIRCUIT





## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT8501	100 pins, QFP	PT8501
PT8501-80LQ	80 pins, LQFP	PT8501-80LQ