

DH9801 HD Video Modulation

Key Features

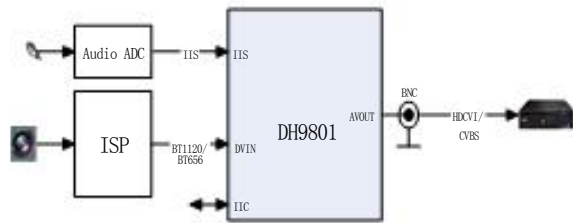
- Video Input
 - One-channel video input, programmable formats including BT.1120 and BT.656
 - 16-bit input, 74.25MHz sample clock
 - BT.1120 input format supports 720p@25Hz/30Hz/50Hz/60Hz, 1080p@25Hz/30Hz
 - Video Output
 - One-channel output, programmable modes for High Definition Composite Video Interface (HDCVI) and Composite Video Broadcast Signal (CVBS)
 - HDCVI supports 1280H@25Hz/30Hz/50Hz/60Hz, 1920H@25Hz/30Hz
 - CVBS supports D1 (PAL-B / NTSC-M)
 - Support one standard IIS Slave interface
 - 16-bit data input
 - Programmable audio sample rate that covers popular frequencies of 8KHz/16KHz/32KHz
 - Support one standard IIC Slave interface that can work at 100Kbit/s or 400Kbit/s
 - Programmable output signal gain control ●
- Analog signal performance characteristics
- 1.5Vpp signal amplitude, 150-ohm termination resistor
 - Longer than 500m transmission distance for 720p@25Hz/30Hz and 300m transmission distance for 720p@50Hz/60Hz, 1080p@25Hz/30Hz through SYV 75-3 Cable
 - Longer than 600m transmission distance for 720p@25Hz/30Hz and 400m transmission distance for 720p@50Hz/60Hz, 1080p@25Hz/30Hz through SYV 75-5 Cable
- Single 24MHz crystal input clock
 - Integrated clock PLL for accurate video clock and system clock
 - 1.2V digital core power supply, 1.2V and 3.3V analog power supplies, and 3.3V I/O power

supply

- Low power consumption (typically less than 1W)
- 68-pin MQFN package (8mm x 8mm)
- Temperature range -20°C to +125°C

Typical Applications

- 720p/1080p analog Camera



Description

The DH9801 is a HD video modulation for high-end analog camera application. It contains video decoder for BT.1120/BT.656 video data decoding, modulation unit for modulating video, audio and control data to a composite signal, and DAC for converting digital signal to analog signal. It also contains IIC module for communication with external CPU.

The DH9801 can receive BT.1120 format video input and decode it. It modulates received 720p/1080p HD video data, audio data from audio codec and forward control data from external CPU through IIC communication to generate one composite video as output. In particular, it can receive and decode backward control data (RS485) from cable transmission, and notices external CPU. The CPU reads these information through IIC and then does corresponding work.

The DH9801 also can receive BT.656 format video input and provide analog CVBS output.