

CP1306

1 Channel PCM / ADPCM Codec

OVERVIEW

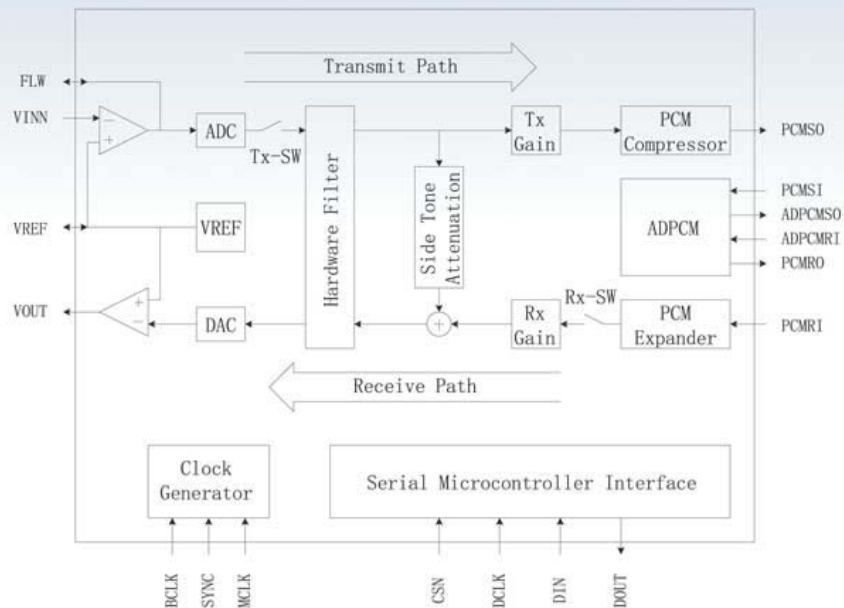
The CP1306 is a single channel PCM / ADPCM codec fabricated in advanced low-power mixed-mode CMOS process. The CP1306 encodes the analog voice band signal to 64 Kbps PCM (G.711) or 32 Kbps ADPCM (G.721) serial data, and decodes 64 Kbps PCM (G.711) or 32 Kbps ADPCM (G.721) serial data to analog voice band signal. Its transmit/receive data mute, gain, side-tone attenuation, 12 dB loss PAD at receive side and power down mode are programmable through a serial microcontroller interface.



SSOP30
-40°C ~ 85°C

FEATURES

- 1 channel PCM / ADPCM codec with Digital Signal Processing(DSP) technique
- Voice companding algorithm:
 - ITU-T G.711 PCM (μ -law) @ 64 Kbps
 - ITU-T G.721 ADPCM @ 32 Kbps
- Transmit/Receive synchronous mode only
- Sampling frequency: $f_{\text{SYNC}} = 8 \text{ KHz}$





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PRODUCT BRIEF

CP1306

1 Channel PCM / ADPCM Codec

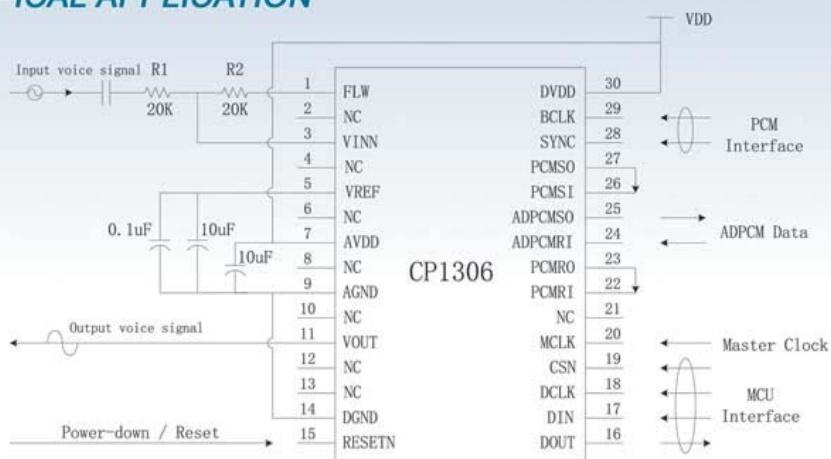
- Master clock frequency: $f_{MCLK} = f_{SYNC} \times 1296$
- Serial PCM/ADPCM transmission data rate from 64 Kbps to 2048 Kbps
- Programmable digital filters to adapt transmission behaviors:
 - Transmit/Receive mute
 - Transmit/Receive gain
 - Side tone path attenuation
 - 12dB loss PAD at receive side
 - Power-down mode

- On-chip precision reference voltage ($V_{ref} = 1.4V \pm 50mV$)
- Single 3V power supply (Min=2.7V, Max=3.6V)
- Low power dissipation:
 - In working mode: $I_{dd} = 8mA$ (typ)
 - In power down mode: $I_{dd} = 0.01mA$ (typ)
- Serial microcontroller interface
- Operating industrial temperature range: -40°C ~ 85°C
- SSOP30 package

APPLICATIONS

- Central office switch and PBXs
- Voice over IP (VoIP)
- Digital cordless telephony systems

TYPICAL APPLICATION



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