AX2030 – 8-bit CMOS Microcontroller

AX2030 is a high performance and cost competitive MP3 decoder SoC designed for applications such as MP3 music boombox, MP3 radio and audio products. It equips with MP3 decoder engine to decode MPEG-1, MPEG-2, MPEG-2.5 audio files. It can access the MP3 files from two SD cards or USB flash drive with the SD card controller and full speed USB2.0 controller respectively. The vivid analog audio is outputted from the 16-bit stereo high SNR DAC. The IC provides key voice feature to enhance the control interface to be more user friendly.
The highly integrated IC design makes AX2030 competitive. It embeds IRTCC (independent power real time clock counter) with internal memory to store operating parameters and saves an external EEPROM. AX2030 only needs single 32kHz crystal to operate and enable to provide clock signal to external FM receiver IC. Thus the total system cost is decreased and the application design can be minimized.
The application development of AX2030 is eased by its ISD online emulation by UART. The power consumption in idle mode is further reduced to increase the operation time of battery powered applications.

Specification
Architecture: 8051
Max Speed (MIPS): 48
Program ROM (Byte): 16K OTP
RAM (Byte): 8K
GPIO: 32
ADC: 8-ch 10-bit
DAC: 16-bit Stereo
USB: 2.0 Dev/Host (4 EP) USB Audio
Timer: 2 x 8-bit 2 x 16-bit
UART: 1
SPI: 2
I2S: N
PWM: Y
DSP Engine: MP3 Decode
SD/MMC Interface: SDHC 2.0 X 2 slots
Special Feature: Direct drive 7-segment LCD, Class A/B Headphone, IRTCC, Key voice
Package: LQFP48
Tools: EVK