

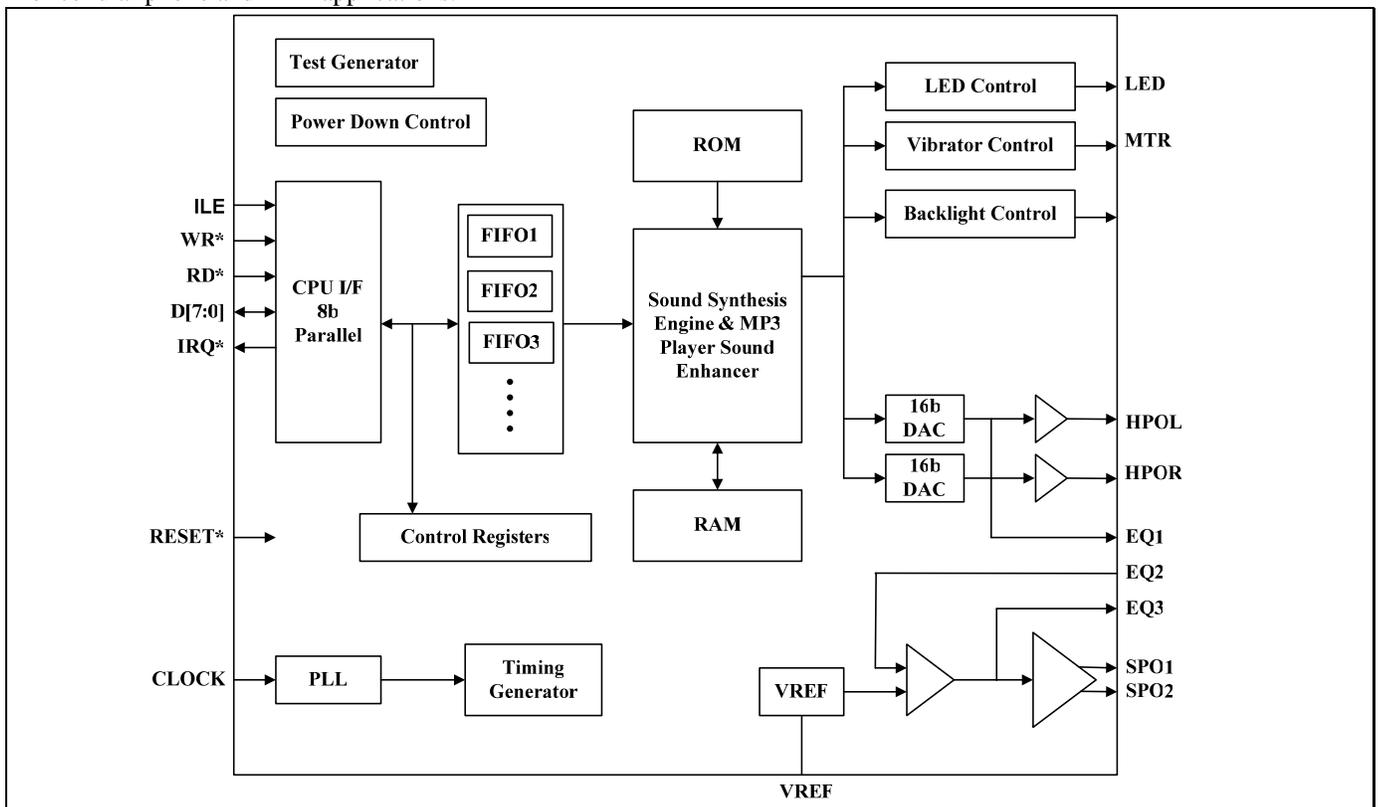
The ft1760N is a MP3 player and MIDI interface based high quality audio synthesis processor mixed signal VLSI, developed specifically for music ringers and game sounds. With a built in mixer, equalizer, speaker and headphone amplifiers, this VLSI is an ideal device for cellular phones, PDAs and other mobile devices.

The MP3 decoder requires no additional external program storage to play files at bit rates up to 320Kbps. MP3 digital music or ringtone files are loaded from storage attached to the host CPU.

With high quality on-chip wavetable, which is compatible with General MIDI sound set, ft1760N is capable of playing 16 timbres and 64 polyphonies simultaneously. This audio synthesis processor is able to present sounds by MIDI messages or arbitrary ADPCM/PCM voices. There are three on-chip FIFOs used to store musical score data, MIDI messages and ADPCM/PCM audio data. ft1760N has a built-in hardware sound synthesizer that is capable of complex sound replay with minimal loading of the host CPU. This VLSI also has a built-in LED controller and Vibrator controller and clock synthesizer with internal PLL loop filter.

ft1760N is designed to provide maximum performance with minimum power consumption. A fantastic music ringer subsystem can readily be built around this chip with minimum external components and cost.

The device is available in a thin plastic 32pin LPCC package with pinout is organized to provide optimal PCB layout suitable for cellular phone and PDA applications.

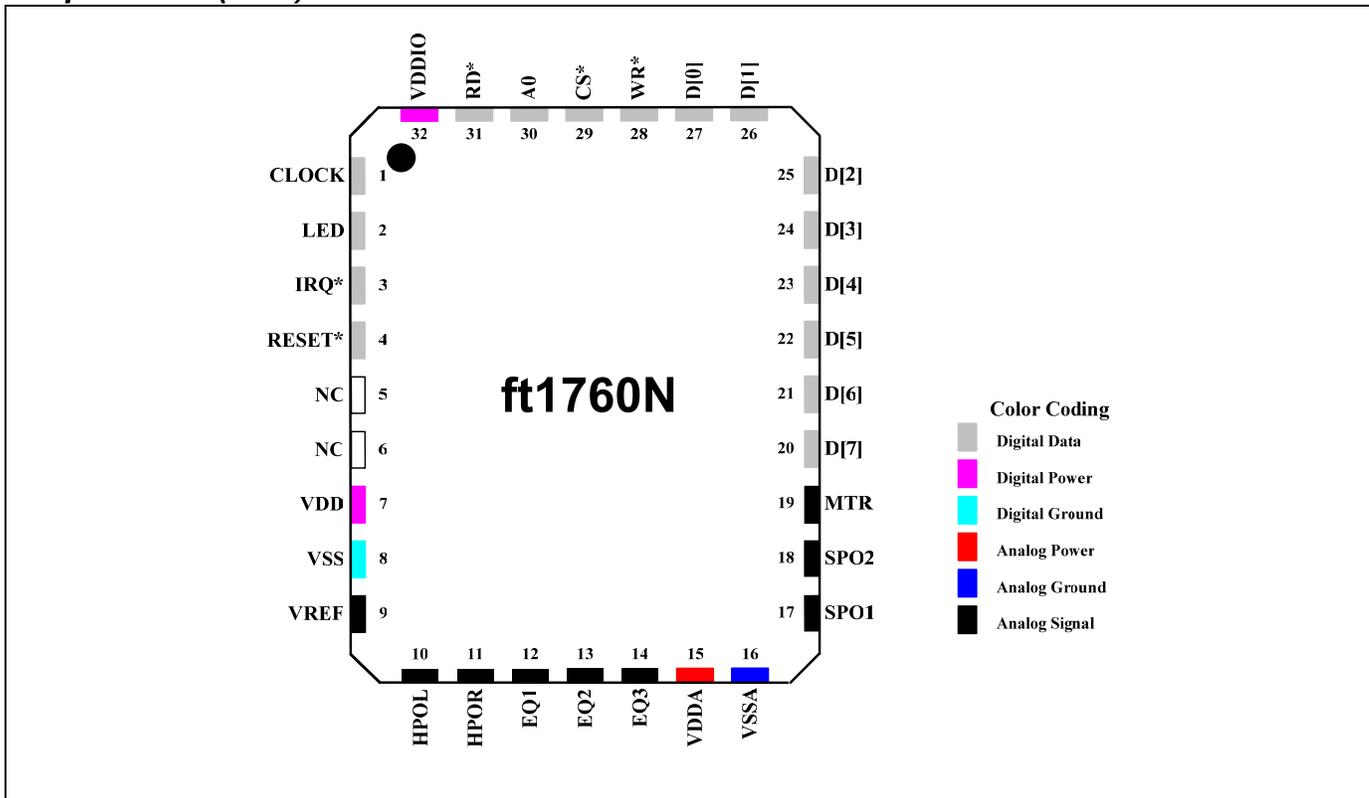


Features

- MP3 Digital Music Player
- MP3 Ring Tone Replay
- Simultaneous generation of 16 timbres, 64 polyphonies
- Supports 4 MIDI channels
- On-chip high-quality wavetable sound set, compatible with General MIDI (GM) system level 1 with 128 timbres + 47 percussions embedded
- ADPCM/PCM Stream Replay
- Contains 16-bit stereo D/A converter
- Internal 20mW stereo headphone amplifier
- Internal 550mW mono speaker amplifier
- 8 bit parallel CPU Interface with 4KB embedded FIFOs to reduce host CPU loading
- Complies with the low voltage CPU interface (1.8V typical)
- Built-in PLL with internal loop filter, and inputting of master clock up to 34MHz
- Vibrator motor and LED control
- Power down mode with power down current less than 1 μ A (typ.)
- Operating current: 30mA (max.)
- Digital power supply – 2.65V~ 3.3V
- Digital I/O power supply – 1.65 ~VDD
- Analog power supply – 2.65~ 4.5V
- 32pin LPCC (QFN) plastic package

Pin Diagram

32 pin LPCC (QFN)



Software Support

Support software for standard MIDI0, MIDI1 and ADPCM/PCM playback is available (subject to anon-disclosure agreement).

Applications

- Cellular phones
- PHS phones
- PDAs

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