

TCD3070 SINGLE CHIP AUDIO RECORDING / NETWORKING SOLUTION

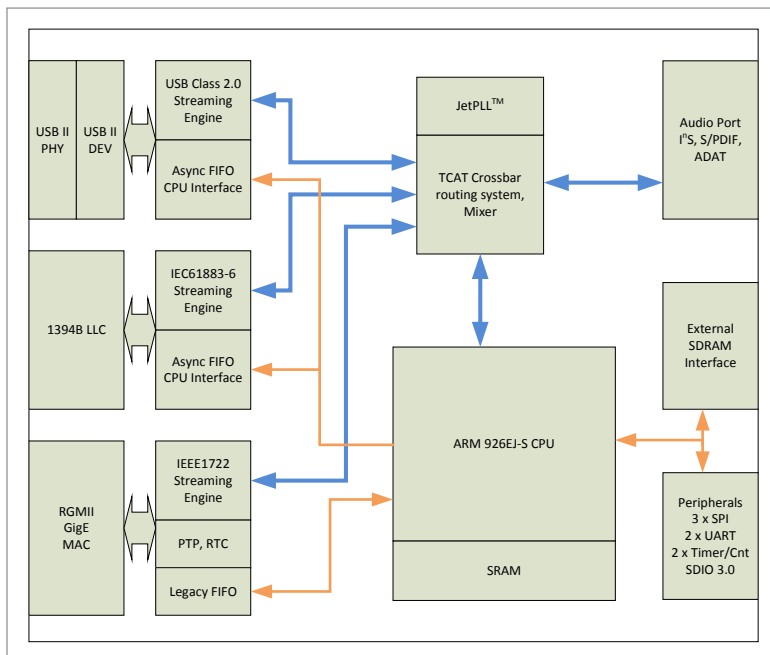
TCD3070 is a powerful CMOS based Audio Controller with an on-board **ARM™** processor. It is the flagship in TC Applied Technologies' **DICE III™** series of integrated circuits, supporting all current and emerging interfaces for audio networking and computer recording including **USB**, **Firewire** and **Ethernet AVB**. **TCD3070** is designed for everything from simple AVB endpoints to complex recording interfaces and digital mixing consoles.

Ethernet AVB, FireWire and USB audio channels can be routed to and from industry standard digital audio formats using **TCD3070's** on-board ADAT and AES/SPDIF transceivers, and to and from various DACs, ADCs and DSPs using its fully configurable **I²S/TDM** interface.

With its high level of integration, patented **JetPLL™** technology, and support of USB, Firewire and Ethernet, **TCD3070** provides the versatility necessary for the professional and Music Industry (MI) audio markets.

The **DICE™** Broadband Streaming Engine handles all aspects of moving data in hardware, resulting in zero realtime load on the host processor.

A complete **SDK** supports Hardware Abstraction Layer (**HAL**) libraries and protocol stacks for USB, Firewire and Ethernet (TCP/IP and AVB protocol suite). We provide **vendor specific Firewire and USB drivers at no additional cost (no USB drivers required for OS X)**.



Target Applications:

- Computer Recording
- Networked Mixer, Matrix etc.
- Networked Amplifiers, Speakers

- ▶ **I²S/TDM** Audio Interface - 128x128 Channels
 - 3 clock ports, configurable to all common modes.
- ▶ Dual **ADAT** Transceivers - 16x16 Channels
- ▶ **AES/SPDIF** Transceiver - 2 Channels
- ▶ **AVB** System - 128x128 Channels
 - PTP, RTC hardware
 - GigE MAC (RGMII)
 - 1722 16 stream listener (max. 128 Channels)
 - 1722 16 stream talker (max. 128 Channels)
- ▶ **Firewire S800** Audio Streaming
 - 126x126 Channels
 - Dual stream 63 Channel receiver (IRX)
 - Dual stream 63 Channel transmitter (ITX)
- ▶ **USB 2.0 Audio Streaming** - 48x48 Channels
 - Class 2.0 compliant
 - Asynchronous and synchronous modes
- ▶ **Onboard Mixer**
 - In hardware - zero processor overhead
 - Up to 32x32 Channels
- ▶ **JetPLL™ Clock Technology**
 - Virtually removes incoming jitter
 - Achieves dual-VCXO performance without external components
 - Integrated clock extraction/synchronization
- ▶ **ARM926™ 32-bit RISC processor with cache**
 - Up to 200MHz clock speed
 - 3 x SPI interface (2 Master, 1 Slave)
 - 2 x UART interface
 - 4 x timer/counter
 - Up to 19 GPIOs
 - SDIO 3.0
 - 320kB internal SRAM
 - External SDRAM interface
 - Simple boot from SPI flash
- ▶ **Other Features**
 - Integrated 10-bit ADC for easy reading of pots, etc.
- ▶ **Package Type:**
 - TCD3070-CH: 225-Pin TFBGA