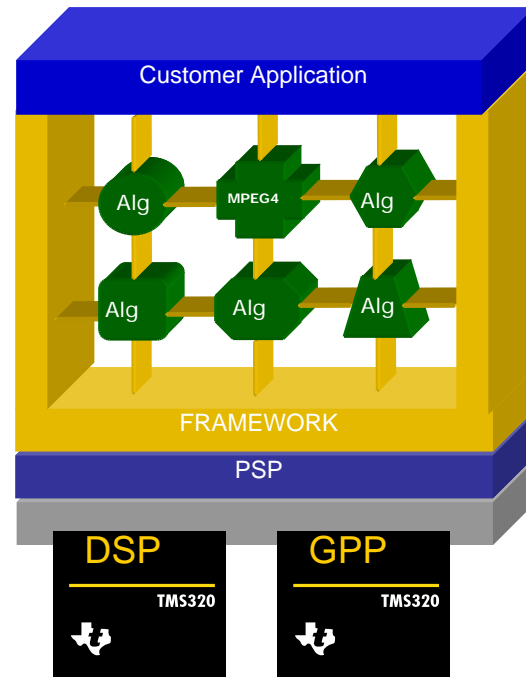




- eXpressDSP Algorithm Interface Standard (XDAIS) compliant
- Validated on TMS320C5505 EVM
- Supports both REV2 and REV3 core of c55x.
- MPEG4 AAC Low Complexity (LC) object type implementations supported
- MPEG2 AAC Low Complexity (LC) object type implementations supported
- Decoding LC contents of AAC HE and HEv2 streams supported
- Up to two channels supported
- Decoding of mono, dual mono, and stereo streams supported
- Mono and stereo output supported
- Audio Data Interchange Format (ADIF) and Audio Data Transport Stream (ADTS) input formats, encoded with ISO/IEC 13818-7 or 14496-3 compliant encoders supported
- RAW data input format supported
- Sampling frequency range of 8 kHz – 96 kHz as per ISO/IEC 14496-3 standard supported
- Supports bitrates ranging from 8kbps to 1152kbps.
- Maximum bit-rate based on the sampling frequency as per standard supported



description

Advance Audio Coding (AAC) is an audio data compression format. This coding technique uses a perceptual filter bank, a sophisticated masking model, noise-shaping techniques etc. It is validated on TMS320C5505 EVM with Code Composer Studio version 3.3 and Code Generation tools version 4.3.3.



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PRODUCT PREVIEW



summary of performance

Table 1. Configuration Table

CONFIGURATION	ID
MPEG4 AAC LC	MPEG4_AAC_001

Table 2. Cycles Information – Profiled on TMS320MAP2430 EVM with Code Generation Tools Version 4.3.3

CONFIGURATION ID	PERFORMANCE STATISTICS (IN MEGA CYCLES PER SEC) ¹		
	TEST DESCRIPTION	AVERAGE	PEAK
MPEG4_AAC_001	LC stereo - mj_48khz_128000.aac	14.01	15.31

¹ Measured with data memory, stack, and I/O buffers in DARAM and program section in SARAM.

Table 3. Memory Statistics - Generated with Code Generation Tools Version 4.3.3

CONFIGURATION	MEMORY STATISTICS ²				
	PROGRAM MEMORY	DATA MEMORY			TOTAL
		INTERNAL	EXTERNAL	STACK	
MPEG4_AAC_001	15	39.9	0	2.0	56.9

² All memory requirements are expressed in kilobytes (1K-bytes = 1024 bytes).

Table 4. Internal Data Memory Split-up

CONFIGURATION	DATA MEMORY – INTERNAL ³		
	SHARED		INSTANCE ⁴
	CONSTANTS	SCRATCH	
MPEG4_AAC_001	24.8	8.0	7.1

³ All memory requirements are expressed in kilobytes.

⁴ Does not include I/O buffers

**notes**

- I/O Buffers
 - Input Buffer Size = 4096 bytes
 - Output buffer size = 4096 bytes for 16-bit audio sample size, 2 channel output (stereo)
- Total data memory for N non pre-emptive instances =
Constants + Runtime Tables + Scratch + N*(Instance + I/O buffers + Stack)
- Total data memory for N pre-emptive instances =
Constants + Runtime Tables + N*(Instance + I/O buffers + Stack + Scratch)

references

- ISO/IEC 13818-7:2003 Information technology – Generic Coding of moving pictures and associated audio information -- Part 7: Advanced Audio Coding (MPEG2 AAC standards document)
- ISO/IEC 14496-3:1999(E) Information technology -- Coding of audio-visual objects -- Part 3: Audio (MPEG4 AAC standards document)
- *MPEG4AAC LC Decoder on c55x User's Guide*

glossary

Constants	Elements that go into .const memory section
Scratch	Memory space that can be reused across different instances of the algorithm
Shared	Sum of Constants and Scratch
Instance	Persistent-memory that contains persistent information - allocated for each instance of the algorithm

acronyms

AAC	Advanced Audio Coding
ADIF	Audio Data Interchange Format
ADTS	Audio Data Transport Stream
EVM	Evaluation Module
IEC	International Electro-technical Commission
ISO	International Organization for Standardization
MPEG4	Moving Pictures Experts Group-4
XDAIS	eXpressDSP Algorithm Interface Standard

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