The AVBTP library supports the following

- **AVB TP packet parsing (stream data only)**
- **Extraction of JPEG frames encapsulated in AVBTP packets**
- **Configurable number of simultaneous AVBTP listeners**

Description

The AVBTP library provides support to extract JPEG data from streaming Ethernet packets using the Audio/Video Bridge Transport Protocol defined by the IEEE 1722 standard.

PRODUCT PREVIEW

Summary of performance

Target Platform Name: TDA2xx
CPU Cores: IPU1 (Cortex M4)
Frequency: 212 MHz

Table 1. Configuration Table

COMPONENT CONFIGURATION DESCRIPTION	ID
Number of listeners: 4 JPEG Image Resolution: 1280x800 Data rate: 280Mbps AVBTP Packet buffers: 128	1
Number of listeners: 4 JPEG Image Resolution: 1280x800 Data rate: 800Mbps AVBTP Packet buffers: 128	2

Table 2. Cycles Information

CONFIGURATION ID	PERFORMANCE STATISTICS (PERCENTAGE)	
	TEST DESCRIPTION	AVERAGE
1	HWI Load	3%
1	AVB Parser Task Load	30%
1	Overall CPU load	38%
2	HWI Load	7%
2	AVB Parser Task Load	67%
2	Overall CPU load	77%

Table 3. Memory Statistics

CONFIGURATION ID	MEMORY STATISTICS [6]				
	PROGRAM MEMORY	DATA MEMORY			TOTAL
		INTERNAL	EXTERNAL	STACK	
1	4.4K	0	202	4	210.4
2	4.4K	0	202	4	210.4

[6] All memory requirements are expressed in kilobytes (1K-byte = 1024 bytes).

Table 4. Internal Data Memory Split-up

CONFIGURATION ID	DATA MEMORY – INTERNAL[7]		
	SHARED		INSTANCE
	CONSTANTS	SCRATCH	
1 and 2	0	0	0

[7] All memory requirements are expressed in kilobytes.

Table 5. External Data Memory Split-up

CONFIGURATION ID	DATA MEMORY – EXTERNAL [8]		
	SHARED		INSTANCE
	AVBTP PACKET MEM POOL	DATA	
1 and 2	195.5	6.5	0

[9] All memory requirements are expressed in kilobytes.

Table 6. EDMA Channels Usage

CONFIGURATION ID	EDMA CHANNELS		
	CHANNEL NUMBER	INTERRUPT ENABLED	AVG. REQUEST (MBYTES/SEC)
1 and 2	1 QDMA (Any)	NO	NA

Table 7. EDMA Additional PaRAM sets

CONFIGURATION ID	NUMBER OF PARAM SETS
1 and 2	128 (depends on number of AVBTP Packets)

Table 8. Peripheral Usages

CONFIGURATION ID	PERFORMANCE STATISTICS (NANO SECONDS / MICRO SECONDS)		
	TEST DESCRIPTION	LATENCY	THROUGH-PUT

NA	NA	NA	NA

Table 9. TASKs & Priorities Usage

CONFIGURATION ID	TASKS			
	PROCESSOR	TASK NAME	TASK PRIORITY	TASK LOAD
1	Cortex M4	rxPacketTask	14	30%
2	Cortex M4	rxPacketTask	14	67%

Table 10. HWI/SWI & Priorities

CONFIGURATION ID	HWI/SWI			
	PROCESSOR	HWI/SWI HANDLER	INTERRUPT VECTOR	XBAR SOURCE (IF ANY)
NA	NA	NA	NA	NA

Table 11. MMU or AMMU CONFIGURATION

CONFIGURATION ID	MMU OR AMMU				
	PROCESSOR	SECTION TYPE	START ADDRESS	SIZE	POLICY (IF ANY)
NA	NA	NA	NA	NA	NA

Glossary

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

Acronyms

AVBTP	Audio/Video Bridging Transport Protocol

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