

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.

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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	
Number of listeners: 4 JPEG Image Resolution: 1280x800 Data rate: 800Mbps AVBTP Packet buffers: 128	2

Table 2. Cycles Information

CONFIGURATION ID	PERFORMAN (PERCE	CE STATISTICS ENTAGE)
	TEST DESCRIPTION	AVERAGE
1	HWILLOad	3%
1	AVB Parser Task Lead	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
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	MEMORY STATISTICS 6				
CONFIGURATION ID	PROGRAM		DATA MEMORY		TOTAL
	MEMORY	INTERNAL	EXTERNAL	STACK	TOTAL
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

	DATA MEMORY - INTERNAL ⁷			
CONFIGURATION ID	SHARED		INSTANCE	
	CONSTANTS	SCRATCH	INSTANCE	
1 and 2	0	<< 9/>>	0	

⁷ All memory requirements are expressed in kilobytes.

Table 5. External Data Memory Split-up

	DAT	A MEMORY - EXTERNAL 8	
CONFIGURATION ID	\ \$HA	RED /	INCTANCE
	AVBTP PACKET MEM POOL	DATA	INSTANCE
1 and 2	195.5	6.5	0

⁹ All memory requirements are expressed in kilobytes.

Table 6. EDMA Channels Usage

	EDMA CHANNELS				
CONFIGURATION ID	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





2013-12-19

NA NA NA NA	NA	NA	NA	NA
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Table 9. TASKs & Priorities Usage

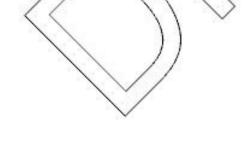
CONFIGURATION ID	TASKS			
CONFIGURATION ID	PROCESSOR	TASK NAME	TASK PRIORITY	TASK LOAD
1	Cortex M4	rxPacketTask	14	30%
2	Cortex M4	rxPacketTask	14	67%

Table 10. HWI/SWI & Priorities

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

Table 11. MMU or AMMU CONFIGURATION

	MMD-OR AMMU				
CONFIGURATION ID	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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