

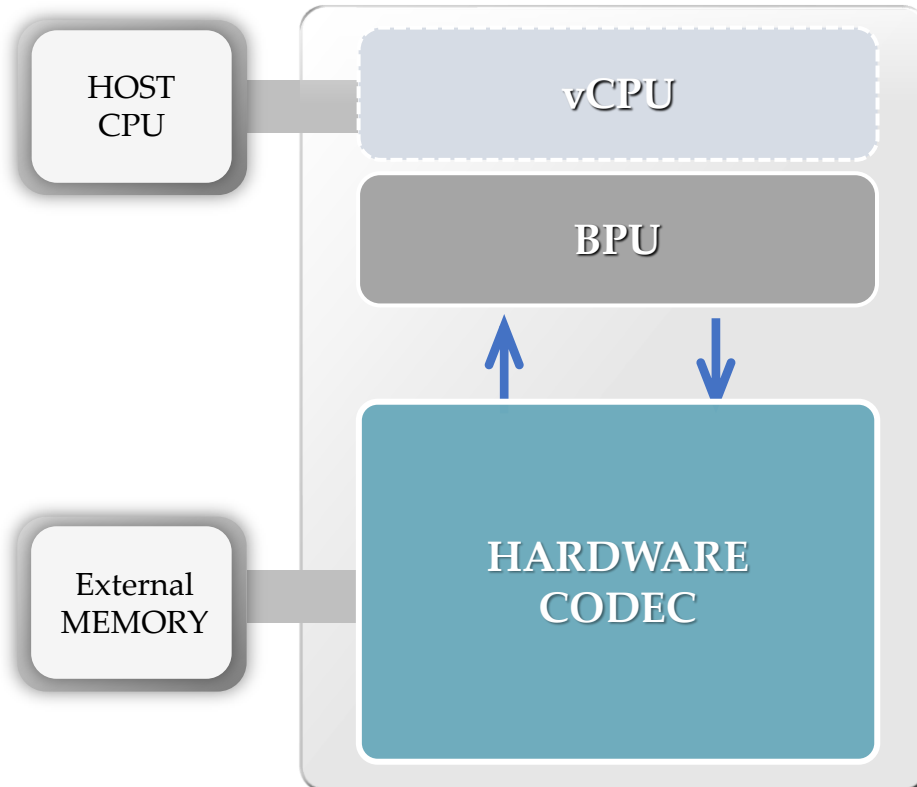


Video Codec Encoder Decoder



Architecture: Video Codec

Hardware Acceleration and Software Programmability Coexist



Gives Decent Flexibility

- Error handling
- Field-patchable
- Supports multi-core (v-core)

Promises High Performance

- Small silicon area
- Low power consumption
- Guaranteed performance
- Low memory bandwidth requirement

Take Advantages of High Performance and Decent Flexibility

IP LINE-UP: Video Codec

Extensive catalog of a vast range of video codec cores with high performance and acceleration while offering exceptional low external memory bandwidth and less power consumption.

IP Name	Codec Type	No. of Cores		Type		Video Standards					Bit Depth		Pic Type		Feature	Resolution/Frame Rate (28nm@500MHz, otherwise noted)
		Single	Dual	Encode	Decode	HEVC	H.264	VP9	AV1	AVS2	8-bit	8-/10-bit	I/P	I/P/B		
WAVE541C	Codec		☐	•		•	•					•		•	•	4Kp 120, 8Kp30 8Kp60 (12nm or higher)
WAVE541	Encoder		☐	•	•	•	•					•		•	•	
WAVE537	Decoder		☐		•	•	•	•	•	•		•		•	•	
WAVE520C	Codec	☐		•		•						•		•	•	4Kp60
WAVE521C	Codec	☐		•	•	•	•					•		•	•	4Kp60
WAVE521CL	Codec	☐		•		•	•				•		•	•	•	
WAVE521	Encoder	☐		•		•	•					•		•	•	
WAVE521L	Encoder	☐		•		•	•				•		•	•	•	
WAVE520	Encoder	☐		•		•						•		•	•	
WAVE517	Decoder	☐			•	•	•	•	•	•		•		•	•	
WAVE515	Decoder	☐			•	•		•	•	•		•		•	•	4Kp60
WAVE512	Decoder	☐			•	•		•				•		•	•	
WAVE511	Decoder	☐			•	•	•					•		•	•	
WAVE510	Decoder	☐			•	•						•		•	•	
WAVE510A	Decoder	☐			•				•			•		•	•	

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IP Name	Codec Type	Type		Video Standards										Bit Depth	Pic Type		Feature	Resolution/ Frame Rate
		Encoder	Decoder	H.264	MPEG-4	H.263	MPEG-2	VC-1	RV	VP8	AVS	AVS+	JPEG	8-bit	I/P	I/P/B	3DNR	
CODA988	Codec	•		•	•	•								•	•			2K 60fps @ 266MHz
			•	•	•	•	•	•	•	•	•	•		•		•		
CODA966	Codec	•		•	•	•								•	•			2K 30fps @ 185MHz
			•	•	•	•	•	•	•	•	•	•		•		•		2K 60fps @ 266MHz
CODA7L	Codec	•		•	•	•								•	•			1K 30fps @ 185MHz
			•	•	•	•	•	•	•	•	•			•		•		2K 30fps @ 166MHz
CODAJ12	Codec	•	•										•					4:2:2 210M pixel/sec
BODA955	Decode		•	•	•	•	•	•	•	•	•	•		•		•		2K 60fps @ 266MHz
BODA7L	Decode		•	•	•	•	•	•	•	•	•			•		•		2K 30fps @ 166MHz

* Possible to decode DivX, Xvid, Sorenson and Theora

IP LINE-UP: Video Codec

A glimpse of the various video codec

IP Name	Codec Type	No. of Cores		Type		Video Standards					Bit Depth		Pic Type		Feature	Resolution/Frame Rate (28nm@500MHz, otherwise noted)	
		Single	Dual	Encode	Decode	HEVC	H.264	VP9	AV1	AVS2	8-bit	8-/10-bit	I/P	I/P/B	3DNR		
WAVE533	Decode		☐		•	•			•			•		•			8K60p@900MHz
WAVE521-E1	Encode	☐		•		•	•					•		•	•		4K60p@450MHz 4Kp120@900MHz
WAVE524	Encode	☐		•		•	•		•			•		•	•		4K60p@450MHz 4Kp120@900MHz



Thank You

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