

SPIRIT G.728 Codec

SPIRIT G.728 conforms to ITU-T G.728, G.728 Annex G, G.728 Annex I recommendations that specifies speech compression and decompression at rate of 16 Kbps, based on Low Delay Code Excited Linear Prediction (LDCELP). It can be effectively used for audio and speech compression in such applications as speech storage and voice communications.

Features

- Fully bit exact with ITU-T G.728, G.728 Annex G
- Sample-by-sample or block based analog input
- 16 Kbps bit stream rate
- 0.625 ms frame size
- 0.625 ms algorithmic delay
- Input/output samples format: Linear PCM, 8 kHz, 16 bits. Both sample-by-sample and block based processing supported
- Simple and flexible application interface
- eXpressDSP compliant. Code is reentrant, supports multithreading and dynamic memory allocation

Resource Requirements

SPIRIT provides porting services to multiple DSP (Motorola, Analog Devices, etc), RISC and general-purpose processors.

PLATFORM	TI C64xx		
	Encoder	Decoder	Encoder+Decoder
Peak MIPS	11.0	7.2	18.2
Program Memory, KB	-	-	40.6
Const Memory, KB	-	-	2.7
Dynamic Memory, KB	-	-	5.3

Benefits

- High speech quality
- Low MIPS requirements
- Easy integration

Key Features

- Full eXpressDSP compliance
- Simple API
- Fully bit exact with ITU-T G.728, G.728 Annex G

Applications

- Speech storage
- Voice over IP communications

Availability

- TI OMAP3
- TI C64xx
- MS Windows (DLL library)
- Fully functional evaluation object code

The product is supplied with test environment and integration example code.

PLATFORM	ARM9		
	Encoder	Decoder	Encoder + Decoder
Peak MIPS, MHz (frame 2.5 ms)	60	37	97
Peak MIPS, MHz (frame 0.6 ms)	43	64	107
Const Memory, KB	-	-	2.7
Program Memory, KB	-	-	26
Dynamic Memory, KB	-	-	7.5
Scratch, KB	-	-	1.5
Stack, KB	-	-	0.5

PLATFORM	ARM9E		
	Encoder	Decoder	Encoder + Decoder
Peak MIPS: Frame 2.5 ms	40	25	65
Peak MIPS: Frame 0.6 ms	43	29	72
Const Memory, KB	-	-	2.7
Program Memory, KB	-	-	25
Dynamic Memory, KB	-	-	7.5
Scratch, KB	-	-	1.5
Stack, KB	-	-	0.5

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