

GSM Full Rate Vocoder

Adaptive Digital Technologies, Inc.

PRODUCT DESCRIPTION

The Adaptive Digital Technologies GSM FR vocoder is a real-time implementation of GSM 06.10 RPELTP (Regular Pulse Excitation-Long Term-Prediction-Linear Predictive Coder) vocoder. GSM FR was the first digital standard used in digital mobile phone system.

FEATURES

- Functions are C-callable.
- Multi -Channel Implementation.
- Completely re-entrant (Channel can interrupt any Channel, any time)
- Can be integrated with echo cancellers, VOX and tone detection/regeneration.

AVAILABILITY

ADT GSM FR is available on the TMS320C64X™ DSP Family C64x™DSP, & C64x+™DSP Generations - 'C55x and 'C54x are preliminary

SPECIFICATIONS

Coding Rate: 13.2 kbps

Sampling Rate: 8 kHz

C64x/C64+

All Memory usage is given in units of byte.

Function	C64x Library MIPs	C64+ Library MIPs	C64x Library Program Memory	C64+ Library Program Memory	Data Memory	Scratch Memory	Per Channel Data Memory
Encode	2.1	1.9	35152	26096	408	688	740
Decode	3.1	3.1				560	640
Encode/Decode	5.2	5.0	-		-	-	-

Last update: 01/06/2008

C55x - *preliminary*

All Memory usage is given in units of byte.

Function	MIPs	Program Memory	Data Memory	Scratch	Per Channel Data Memory
Encode	8.7	10293	408	688	740
Decode	8.7			560	640
Encode/Decode	17.4	-	-	-	-

C54x - preliminary

All Memory usage is given in units of 16 bit word

Function	MIPs	Program Memory	Data Memory	Scratch	Per Channel Data Memory
Encode	17.4	5147	204	344	370
Decode	17.4			280	320
Encode/Decode	35	-	-	-	-

Last update: 11/14/2006

FUNCTION

FR_ADT_encInit (...) Initializes the GSM FR Encode Channel Structure
FR_ADT_decInit (...) Initializes the GSM FR Decode Channel Structure
FR_ADT_encode (...) Executes the GSM FR encoder
FR_ADT_decode (...) Executes the GSM FR decoder

Adaptive Digital is a strategic member of the Texas Instruments Developer Network.

CONTACT INFORMATION

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