Encore's G.711

Processor

TMS320C64xx Series.

Technology

ITU-T G.711 is a standard to represent 8 bit compressed pulse code modulation (PCM) samples for signals of voice frequencies, sampled at the rate of 8000 samples/second. G.711 encoder will create a 64 Kbps bitstream. This standard has two forms, viz., A-Law and μ-Law. A-Law G.711 PCM encoder converts 13 bit linear PCM samples into 8 bit compressed PCM (logarithmic form) samples, and the decoder does the conversion vice versa. μ-Law G.711 PCM encoder converts 14 bit linear PCM samples into 8 bit compressed PCM samples.

Features

- Fully compatible/bit-exact with the ITU-T G.711 standard.
- Texas Instruments eXpressDSP™ compatible software architecture.
- Frame based design. Frame is designed as 10 msec (80 samples).
- Law is selectable on the fly – once every frame (10 msec, 80 samples).
- Full duplex multi-channel capability.
- Flexible interface with 'C' callability, with a single archive file for all functions.
- Relocatable program space.
- The code is interruptible and full re-entrant. It can be used in systems with multi threaded software architecture. Maximum interrupt latency is 490 cycles (2.45 μs for 200 MHz processor).

Performance

Resource Requirements

(Internal Code Version 1.0)

Memory (KBytes)

Program Memory	Data Memory		
	Tables	Static/Channel	Scratch
1.936	Nil	Nil	Nil

Note: Processing is done on the input/output buffers. No extra data memory is required. The worst case stack memory usage is 64 Bytes.

MCPS

MCPS measurements on **TMS320C64xx TEB** target platform, with all program and stack in **L2 memory**.

	Maximum
A-Law	
Encoder	0.09
Decoder	0.09
Full Duplex	**0.18**
µ-Law	
Encoder	0.09
Decoder	0.09
Full Duplex	**0.18**

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