



G.726 Licensed Media-Processing Technology

ITU G.726 is the most used speech-compression algorithm in telecommunications due to its high perceived speech quality and low resource requirements. It compresses 64-K speech to 40-K, 32-K, 24-K, or 16-K BPS using adaptive differential pulse-code modulation (ADPCM). Mean Opinion Scores (MOS) for G.726 at the 32K rate are considered to be toll quality; the 24K rate is near toll quality. G.726 is used in applications where high-quality, low DSP MIPS, and low algorithmic delay are desired. Since G.726 is a waveform coder, rather than a speech coder, it is more suitable in coding non-speech signals, such as DTMF, than some speech-specific coders.

Commetrex offers G.726 in a C-coded reference design, as well as versions optimized for the Texas Instruments TMS320C6000 and TMS320C5400. Commetrex' implementations are extremely resource-frugal. The 'C6000 version requires only 1.55 mega-cycles per second in the dual-channel version where two samples are processed simultaneously. On the 200-MHz TI 'C6201, this yields 120 channels per DSP. When the execution is optimized for single-channel operation the 'C6000 version requires 2.77-MCPS, or over 60 channels per DSP.

G.726 is eXpress DSP Compliant (http://dspvillage.ti.com/docs/express_dsp/expressdsphome.jhtml). The TMS320DSP Algorithm Standard is directly supported by the MSP Consortium M.100 specification (<http://www.msp.org>) so it is compatible with any MSP-conforming media-processing system.

Features

- Ultra-low resource utilization
- C-callable interface
- Does not disable interrupts
- TMS320DSP Algorithm Standard compliant
- MSP Consortium M.100 compatible
- Industry's lowest MIPS utilization

Benefits

- High densities
- Low power
- Low implementation cost

'C6000 Resource Utilization

MCPS dual-sample encode: 1.54
 MCPS dual-sample decode: 1.64 (32-K rate)
 Program Memory (full duplex): 9-K bytes
 Per-Instance Memory: 54 bytes

'C5400 Resource Utilization

μ -law encode 32-K rate: 8.76 MCPS
 μ -law decode 32-K rate: 9.91 MCPS

License Options

Limited-Use Paid-Up Source Code
 Royalty with Reduced Up-Front
 Object Code with Runtime Licenses

Ordering Information

G.726 on 'C5400 – PN 60092-1
 G.726 on 'C6000 – PN 60092-2

Commetrex, Open Telecommunications Framework, PowerFax, PowerRelay, OpenMedia, Media Stream Gateway, OTF Kernel, MSP-320, MSP-160, MSP-H8, PortableT38, TerminatingT38 and MSP/CX are trademarks of Commetrex. All other trademarks are the property of their respective holders. Specifications subject to change without notice. Copyright © 2001.

Commetrex Corporation

1225 Northmeadow Parkway, Suite 120
 Roswell, GA 30076
 (770) 449-7775, Fax: (770) 242-7353

www.commetrex.com τ sales@commetrex.com

