

Overview

NatureDSP G.728 – low-delay code excited linear prediction (LD-CELP) voice codec conforming complete ITU-T G.728 recommendation. It provides coding of speech signals at 16 kbit/s and at reduced rates 9.6 and 12.8 kbit/s. Integrated packet loss concealment synthesizes the speech during the periods when the bit stream is missed or errored making the signal erasures inaudible. Voice codec can be used in a wide range of applications such as multimedia devices, visual telephony, wireless telephony, and videoconferencing products. Best in class MIPS performance extends a number of voice channels processed by single DSP.

Features

- coding rates 16 kbps (G.728 main body), 9.6 kbps or 12.8 kbps (Annex H)
- Packet loss concealment (Annex I)
- Sampling rate 8 kHz
- 16-bit linear signal input
- C-callable program interface
- Multi-channel capable
- The encoder and decoder meet all ITU G.728 compliance and interoperability requirements.
- demo available for target and PC

Applications

- VoIP
- Telephony

Specifications

Algorithm	MIPS consumption		
	C64xx	ARM9e	ARM11
Encode, 16 kbit/sec	9,6	call	call
Decode, postfilter off, 16 kbit/sec	6,6		
Decode, postfilter on, 16 kbit/sec	8,6		
Encode+Decode, 16 kbit/sec	16,2		

Bit exactness proved by ITE

NatureDSP G.728 is delivered with fully automated IntegrIT Testing Environment (ITE) for target platform based on reference ITU-T vectors set along with extended IntegrIT proprietary vectors and methods.

Availability

This software package is available in binary/source code written on fully portable C-language for:

- Texas Instruments TMS320C64xx, DaVinci
- ARM9E, ARM11
- Marvell Sheeva/KirKwood/ARMADA
- Windows/Linux Object Library
- Porting on other platforms (Analog Devices, Freescale, etc.) is upon request.