

Overview

IntegrIT GSM AMR-NB – is a standard ACELP vocoder adapted by the 3rd Generation Partnership Project (3GPP). It is an Adaptive Multi Rate-Narrow Band (AMR-NB) speech codec. This vocoder is used mainly in 3rd generation mobile telephony devices to compress toll-quality speech at 8000 samples/second. GSM-AMR codec has eight basic bit rates, 12.2, 10.2, 7.95, 7.40, 6.70, 5.90, 5.15 and 4.75 Kbit/s.noise.

Features

- eight coding rates in range of 4.75 to 12.2 kbps
- sampling rate 8 kHz
- 16-bit linear signal input
- full 3GPP TS 26.073 compliance
- demo available for target and PC

Applications

- VoIP
- Telephony
- Mobile Communication

Specifications

PLATFORM	MIPS consumption	Program Memory	Constants	Data Memory
Texas Instruments C64xx, DSP/BIOS				
Encoder	call			
Decoder	call			
ARM9E, GCC, Linux				
Encoder+Decoder, 4.75, no VAD	44 ¹			
Encoder+Decoder, 12.2, no VAD	51			

Bit exactness proved by ITE

GSM AMR-NB 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
- Marvell Sheeva/KirKwood
- ARM9E
- Windows/Linux Object Library
- Porting on other platforms (Analog Devices, Freescale, etc.) is upon request.

¹ Measured using reference testing vectors on a real hardware.