CYIENT

AVIONICS BASEBAND VOICE COMMUNICATION MODULE

Key Features

- TI's Dual Core SoC
- Non-volatile FPGA
- Audio interfaces such as mic, speaker, Headphone
- Modulation and demodulation
- Power convertor

Overview

Cyient's baseband voice communication module is based on TI Dual core SoC with 375-MHz ARM926EJ-S™ RISC MPU and 375-MHz C674x Fixed/Floating-Point VLIW DSP and enables voice communication processing card with Microsemi Polar Fire FPGA for control. It has all the communication interfaces, multipurpose IO interface and capable of hosting high end application software. A power convertor from 14 to 28V for delivering 5.5A load.

Technical Specifications

Memory

- NOR Flash 1 Gb, 16 bit data, asynchronous memory with parallel interface
- DDR2 SDRAM: Total 1Gbit, 64MB x 16, 400 MHz data rate
- 512KB Core net platform cache
- 16KB data cache and 16KB instruction cache for ARM
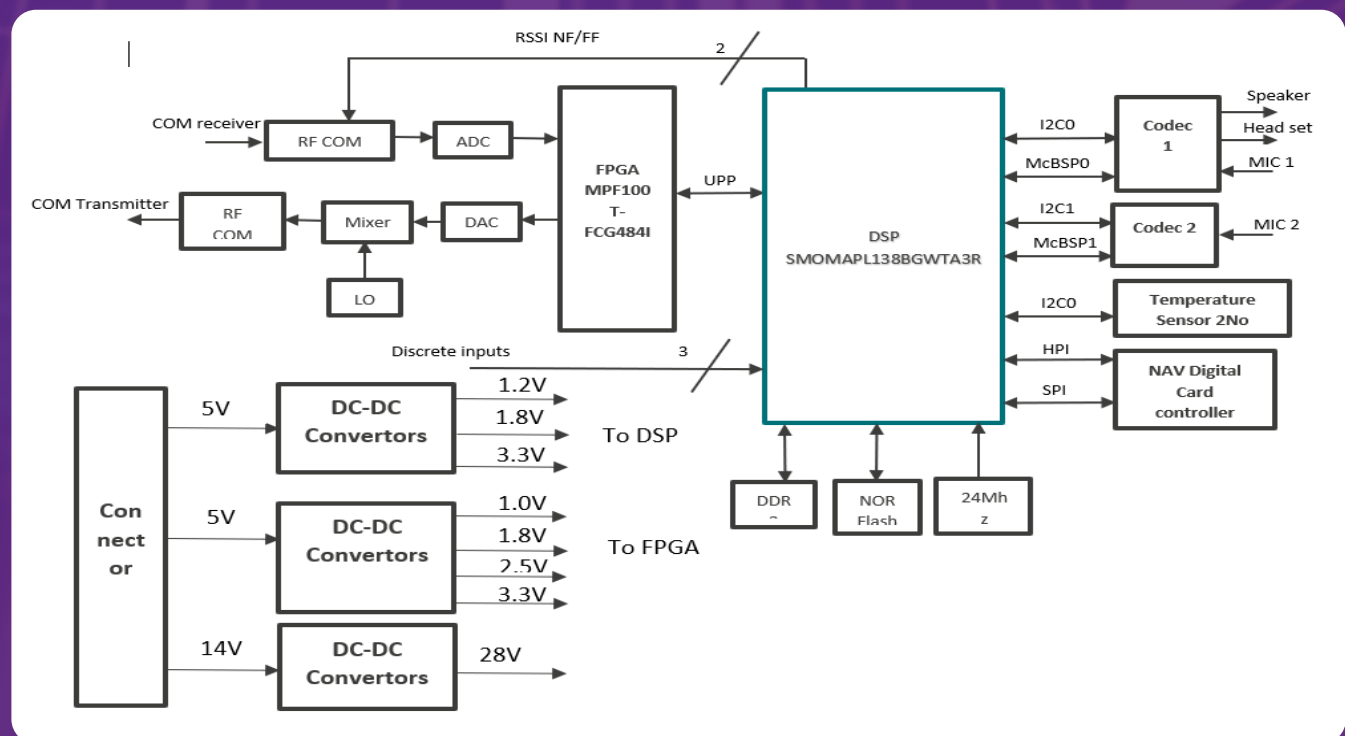- 32KB data cache and 32KB instruction cache for DSP

Interfaces

- I2C interface thermal monitor,
- McBSP interface with codec for Audio in/out
- JTAG interface
- SPI Interface
- UART Interface
- ADC and DAC

Size

- (LXHXW): 235.14 mm X 133.59 mm X 2 mm

Block Diagram

Benefits

Overall "Low cost of ownership" to the customer due to

- ARM and DSP in a single SoC
- Both signal modulation and demodulation using floating point DSP
- A FPGA for interface with high sampling rate ADC and DAC
- Communication interface such dual mic input, speaker and headphone outputs

Our USP

- Processor used in the module is a dual core which has ARM processor and floating-point DSP in a single chip
- 375-MHz ARM926EJ-S™ RISC MPU
- 375-MHz C674x Fixed/Floating-Point VLIW DSP
- Module can deliver power 28V, 5.5A load