

Overview

DSP Group®'s DBMD4 (Part Number D4A1A) is an innovative audio/voice processor for smartphones, wearable and IoT devices. DBMD4 (Part Number D4A1A) enables device activation and operation via voice commands while maintaining extremely low power consumption and high performance using pre-process algorithms such as noise reduction, beam-forming and Acoustic Echo Cancelling (AEC).

Features

DSP Voice Processing

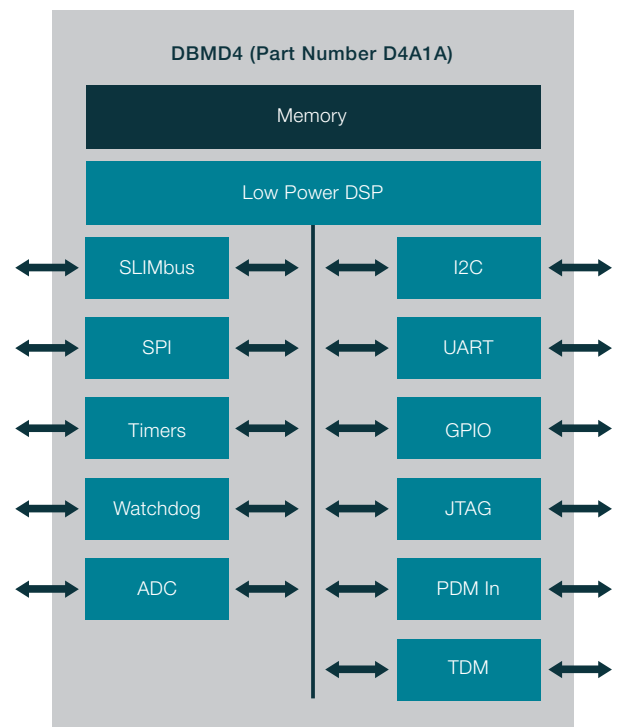
- DSP Core
- Power management mechanism
- Ultra low power for always-on functions

Package

- BGA 1.8 mm x 2.1 mm

Interfaces and Connectivity Modes

- High speed I2C ports
- UART ports
- TDM interfaces
- SLIMbus interface
- SPI interface
- Up to 20 GPIOs
- 32-bit timers/watchdog
- Interfaces for digital microphone inputs
- Low power ADC for analog microphone
- JTAG-based debug port



Benefits

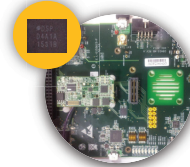
- High-performance, ultra-low power audio/voice DSP platform
- Programmable DSP Core
 - Autonomous operation while Application Processor is either in sleep mode or performing other tasks
- Rich set of interfaces
- Small footprint
- Comprehensive software framework for fast time-to-market



DBMD4 (Part Number D4A1A) Open Audio/ Voice DSP Platform



Software
Development Tools



Hardware
Development Tools

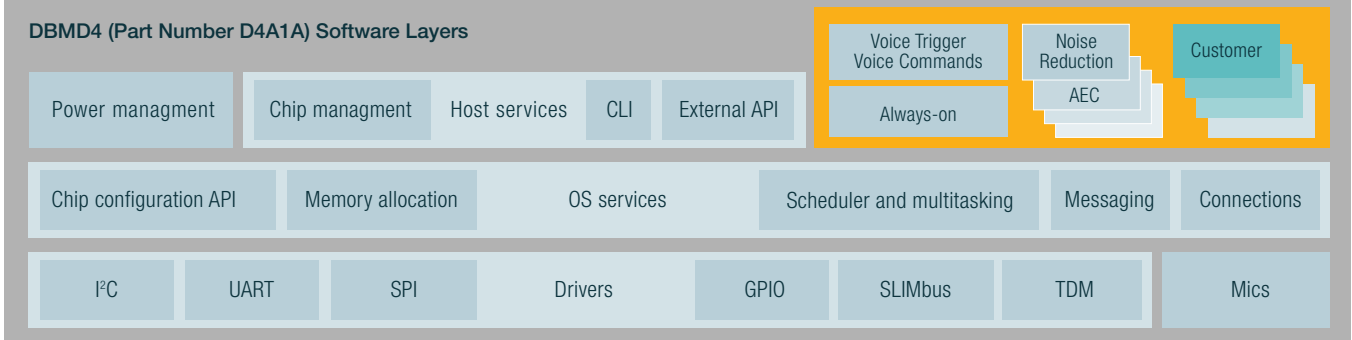


Software
Framework

Software Framework

- Comprehensive software framework
- Real-time operating system
- Drivers for all processor peripherals
- Stand-alone master or slave with external master mode option
- “Internal host” for management and communication with external master processor
- Easy connection with external processor running Linux OS
- Linux/Android drivers interface with DBMD4 (Part Number D4A1A)
- Dynamic Power Management

DBMD4 (Part Number D4A1A) Software Layers



SW components provided by DSP Group

Algorithms domain

Customer Algorithms

DSP Group® Inc. (NASDAQ: DSPG) is a leading global provider of wireless chipset solutions for converged communications. Delivering semiconductor system solutions with software and hardware reference designs, DSP Group enables OEMs/ODMs, consumer electronics (CE) manufacturers and service providers to cost-effectively develop new revenue-generating products with fast time to market. At the forefront of semiconductor innovation and operational excellence for over two decades, DSP Group provides a broad portfolio of wireless chipsets integrating DECT/CAT-iq, DECT ULE, Wi-Fi, PSTN, HDClear™, video and VoIP technologies. DSP Group enables converged voice, audio, video and data connectivity across diverse mobile, consumer and enterprise products – from mobile devices, connected multimedia screens, and home automation & security to cordless phones, VoIP systems, and home gateways. Leveraging industry-leading experience and expertise, DSP Group partners with CE manufacturers and service providers to shape the future of converged communications at home, office and on the go.

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