ZESTECH 哲思特®

AKM7735EQ DSP

Version: 1.0

Date: 2022-08-15

Provider Name

SHENZHEN ZEST TECHNOLOGY CO., LTD.

ZESTECH 哲思特®

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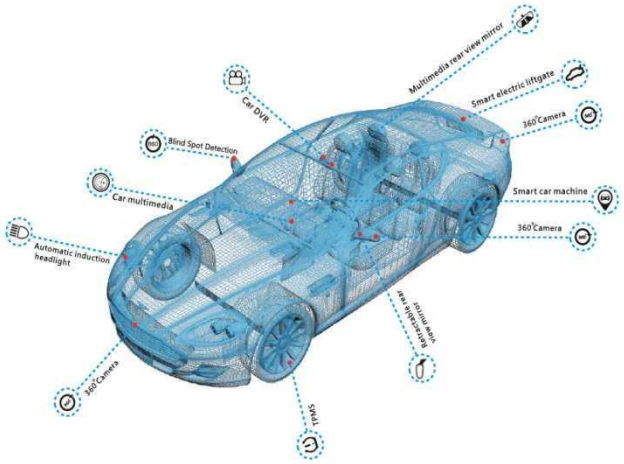
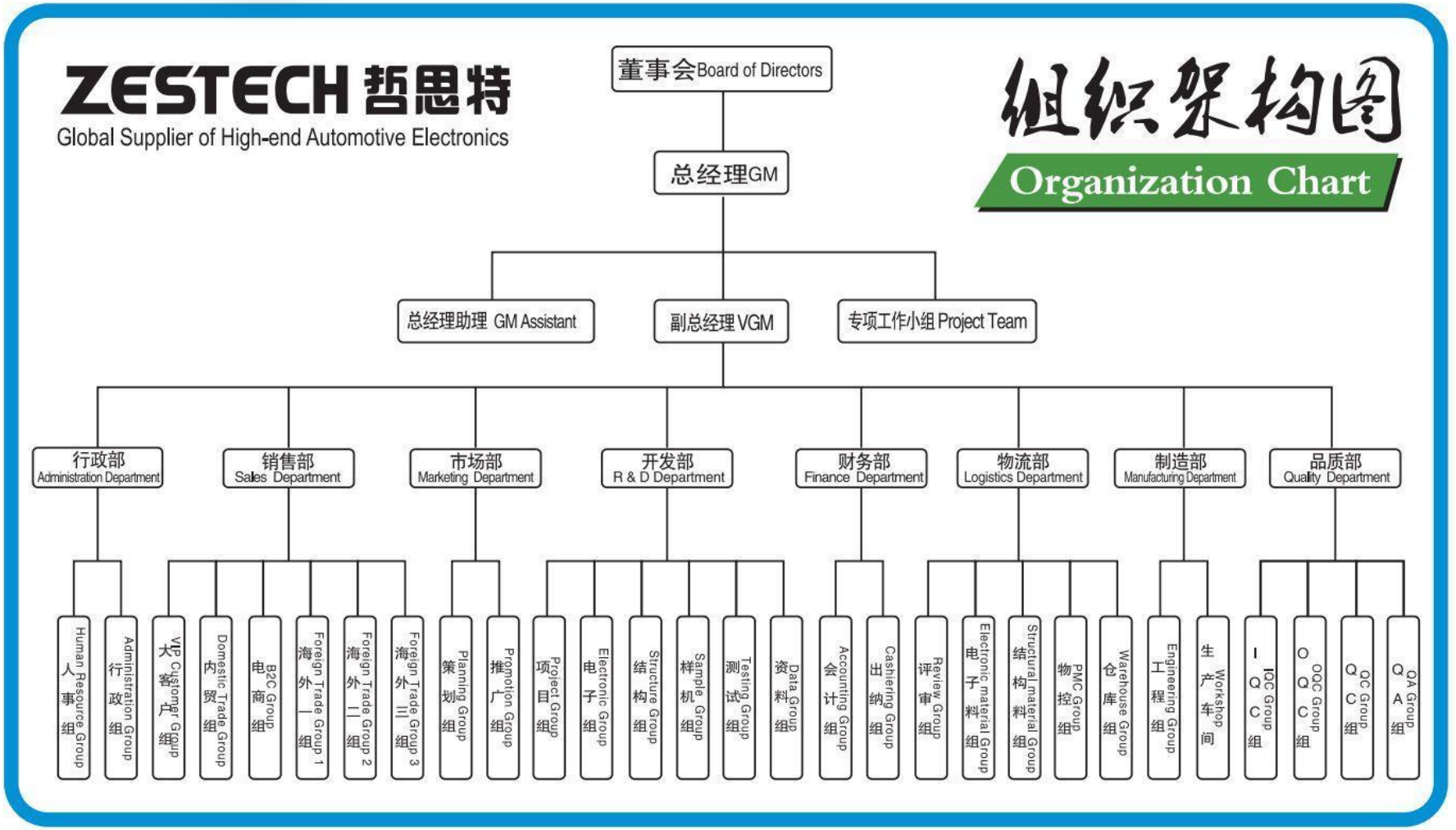
About ZESTECH

SHENZHEN ZEST TECHNOLOGY CO., LTD. is a national high-tech enterprise which has been devoted itself to developing, manufacturing, marketing and technical service of high-end automotive electronics. ZEST is Top Android In-car Entertainment Multimedia Auto radio Manufacturer. ZEST has been committed to providing a more entertaining, safe and comfortable electronic integrated solutions for the global car users.

ZEST's production workshop is equipped with modern production equipments and all kinds of instruments. The enterprise has passed the ISO9000, TS16949 system certification, and carried strictly. The whole product series are passed CCC, FCC, CE, E-Mark, NTRA etc. testing certifications. At present, the annual production capacity has reached 200,000 units for special cars. The product's main components are from Intel, Samsung, NXP, ST, MTK and other world famous companies. ZESTECH has always adhered to the craftsman spirit to make good products, constantly strive for perfection to provide better services. Stick to the value of make high quality products only to provide the most reliable products and services for the users.



Organization Chart



COMPANY IMAGE I

SMT

4 SMT lines

Mold Factory

more than 200 sets of molding

Engineer Team

30 people

Employees

About 300 people

■ 4SMT lines; 8 assembling lines;
■ Own tooling, plastic module & injection, metal module & stamping, complete all steps in-house
■ Engineer team more than 30 engineers with rich R&D experiences
■ More than 300 Employees, annually producing over 600,000pcs multimedia players

COMPANY IMAGE II

工厂区域
Factory Area

办公区域
Office Area

前台
Reception

车间
Workshop

老化室
Aging Test Room

车间
Workshop

质量控制
QC

实验室
Lab

COMPANY CERTIFICATIONS

China National High-tech Enterprise Certification

COMPANY CERTIFICATIONS

ISO9001 Quality Management System Certification

COMPANY CERTIFICATIONS

IATF16949 Quality Management System Certification

认证证书

此证书授予

深圳市哲思特科技有限公司

统一社会信用代码/组织机构代码：91440300078028900T

认证地址：深圳市宝安区沙井街道上南东路新丰泽工业区 2 号厂房三楼

符合 IATF 16949:2016 质量管理体系标准

认证范围：

车载导航系统的设计、生产，BSD 盲区监测系统及尾门电动推杆的生产（不包括 8.3 产品设计）

注册号：	证书发布日期：	认证日期：
101856/A/0001/SM/ZH	2018 年 09 月 20 日	2018 年 09 月 20 日
版次：	到期日期：	IATF No:
1	2021 年 09 月 19 日	0334591

发证人：　　认证经理

本证书信息可在国家认证认可监督管理委员会官方网站（www.cnca.gov.cn）上查询。

优克斯认证（杭州）有限公司，地址：中国浙江省杭州市拱墅区湖州街 599 号天恩国际大厦 3 幢 805、806 室

Certificate of Registration

This certificate has been awarded to

SHENZHEN ZEST TECHNOLOGY CO., LTD

3F, Factory Building 2, Xinfengze Industrial Zone, Shangnandong Road, Shajing Town, Bao'an District, Shenzhen City, Guangdong Province, China

in recognition of the organization's Quality Management System which complies with

IATF 16949:2016

The scope of activities covered by this certificate is defined below

The Design and Manufacture of Portable Navigation Device for Automobiles, The Manufacture of BSD Blindspot Information System and Power-driven Push Rod for Trunk (Not Include 8.3 Product Design)

Certificate Number:	Date of Issue of Certification Cycle:	
101856/A/0001/SM/En	20 September 2018	
Issue No:	Expiry Date:	IATF No:
1	19 September 2021	0334591

Issued by:　　On behalf of the Schemes Manager

Engineer Update History

No.	Date	Change Content	Version	Remark
1	2022-08-15		1.0	

Chip Description

The AK7735 is a highly integrated digital signal processor, including a 24-bit stereo ADC with MIC gain amplifiers, a 24-bit stereo ADC with input selector, two 32-bit stereo DACs, 2 stereo sampling rate convertors supporting the sampling frequency up to 192kHz and dual DSPs for Audio/HF process. Each DSP has 3072step/fs (when fs=48kHz) parallel processing power.

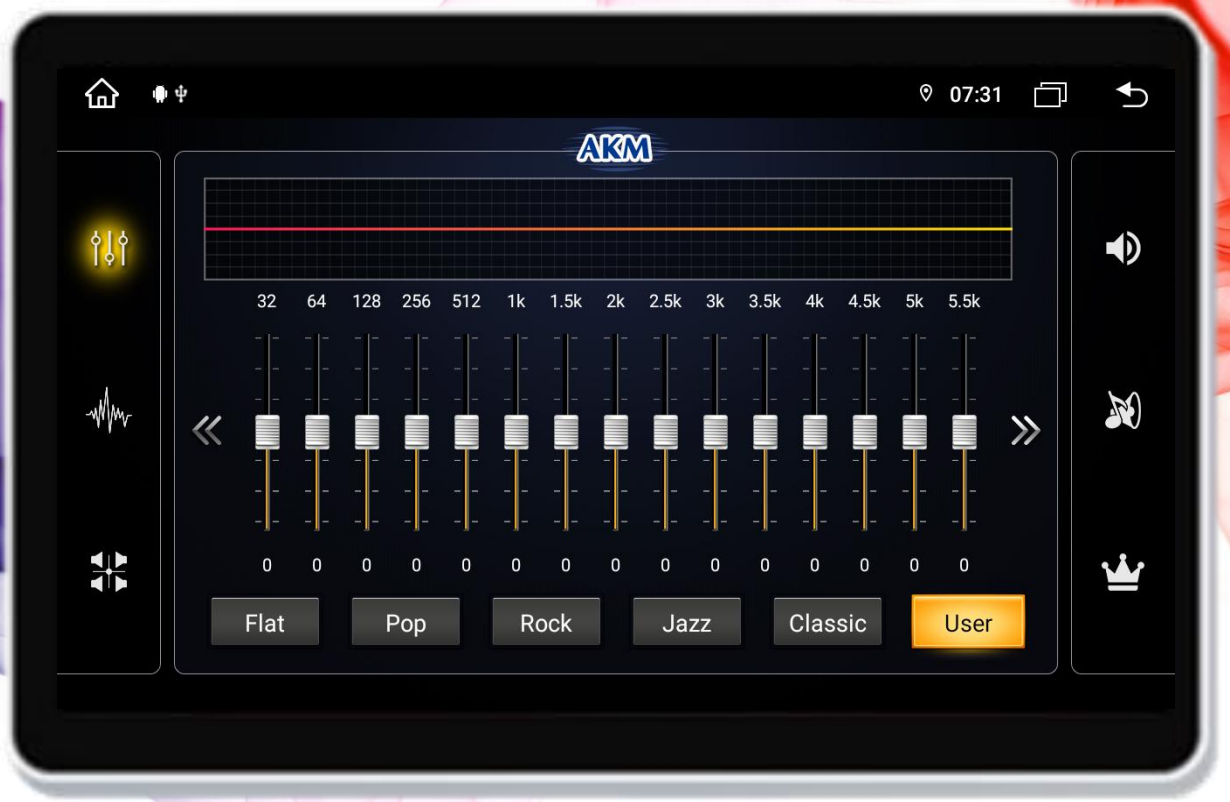
Functional UI display picture

ZESTECH AKM7735EQ DSP UI

Feature Introduce 1: 30-Bands EQ Adjustment

30-band EQ adjustment

By adjusting different electrical signals to make up for the defects of speakers and sound field, it supports a variety of styles of music.

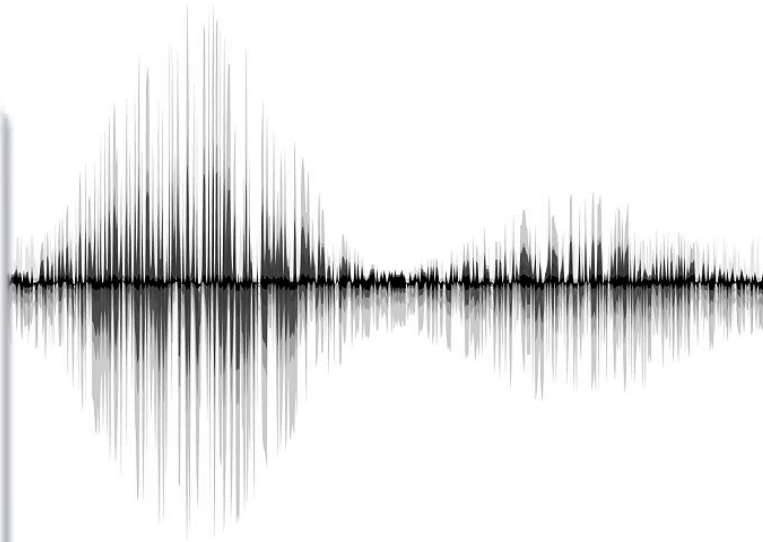


Feature Introduce 2: Sound Field Adjustment

Sound field adjustment

By adjusting the amplitude and phase of the input signal of each speaker, reproduce the spatial sound field or control the spatial sound field distribution pattern.

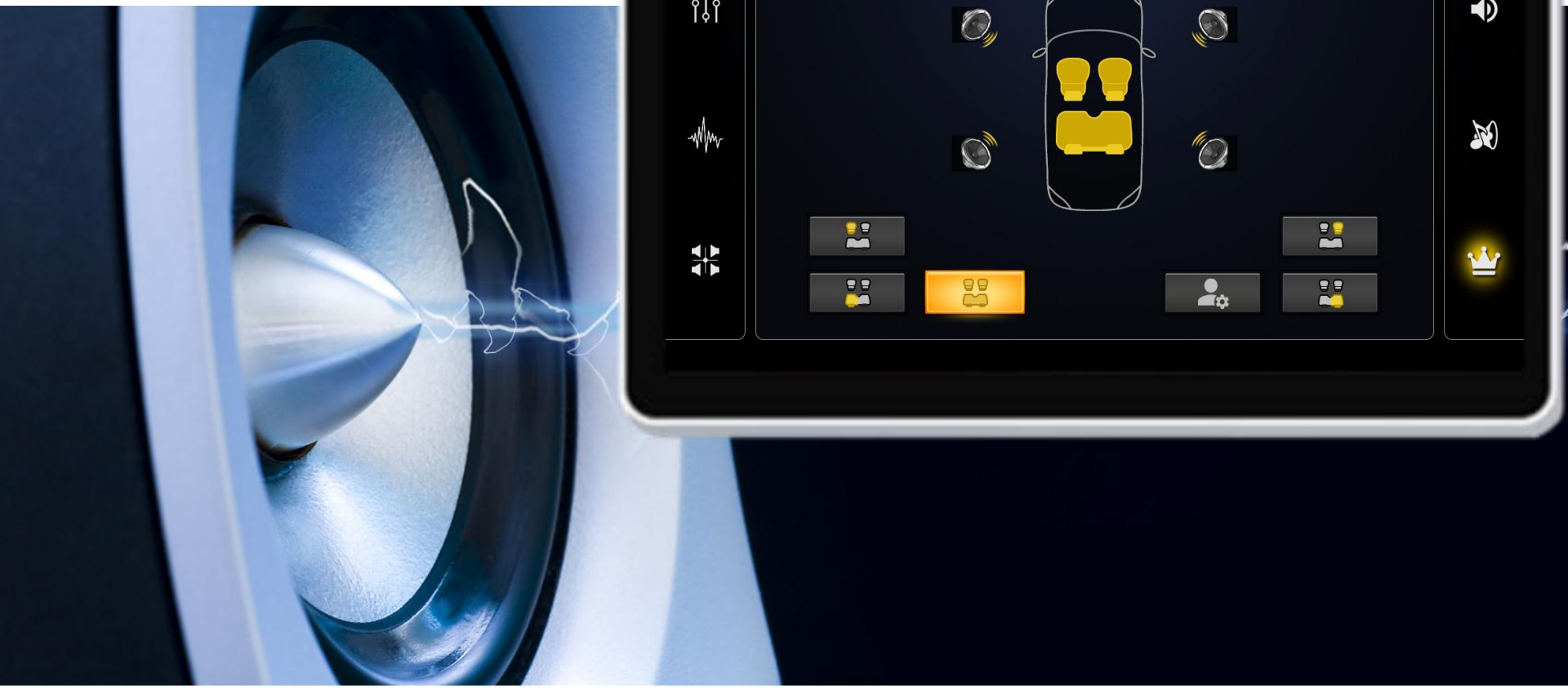
Feature Introduce 3: Delay Setting



Taking the driver as a reference, by adjusting the delay parameters of different distances, the sounds of different distances can be conveyed to the drivat the same time, which sounds more cleer ar and powerful

Feature Introduce 4: Intelligent remix and bass adjustment

The middle and high frequency sounds are clear and bright, with distinct layers, the human voice is restored to reality, and the low frequency is strong and powerful, improving the strength and loudness of the sound.



Feature Introduce 5: Intelligent sound effect adjustment

Reverberation, sound field, bass, vocal， simple and clear user interface, easy to operate. Improve the loudness of the listening sense, increase the sense of warmth and dynamics, and the appropriate amount of reverberation can enhance the sense of layering and ambience.

Feature Introduce 6: high and low pass filters

Front and rear Speaker high and low pass filters，generate harmonics, modify and beautify the sound, produce pleasing auditory effects, enhance the frequency dynamics of the sound, improve clarity, brightness, volume, warmth and heaviness, and make the sound more tension.

How to get into DSP page

1 Find the Music app, then click the DSP button inside, you can adjust the sound effect you want

or

2 Find the DSP APP and click it, then you can adjust the sound effect you want

Solution Support

Compatible with MTK8667 soluiton, 8core, 8+128GB Ram&Rom, support wireless carplay and Android auto, 4G SIM card, 360 camera

Customized Service

Support UI customization，please share us with your idea and we will design it for you.

Technique Specifications

Content	Specification
Operating system	Android 10.0
Chip model	AKM7735eq
Maximum Power	4*25W
Response Frequency	17hz：0db 127hz：0db 10007hz：0db 19997hz：0db
Signal noise ratio	85db
Distortion	0.05%
RCA output power	3.6V (bilateral)
Subwoofer output power	5V (bilateral)
Center output power	5V (bilateral)
Dual DSP	RTL8761BTV 4DSP1 and DSP2 have the same specification. Memory areas are shared by them
ADC1	24-bit Stereo ADC with MIC Gain Amplifiers
ADC2	24-bit Stereo ADC with Input Selector

Block Diagrams

Model: AMK7735 DSP

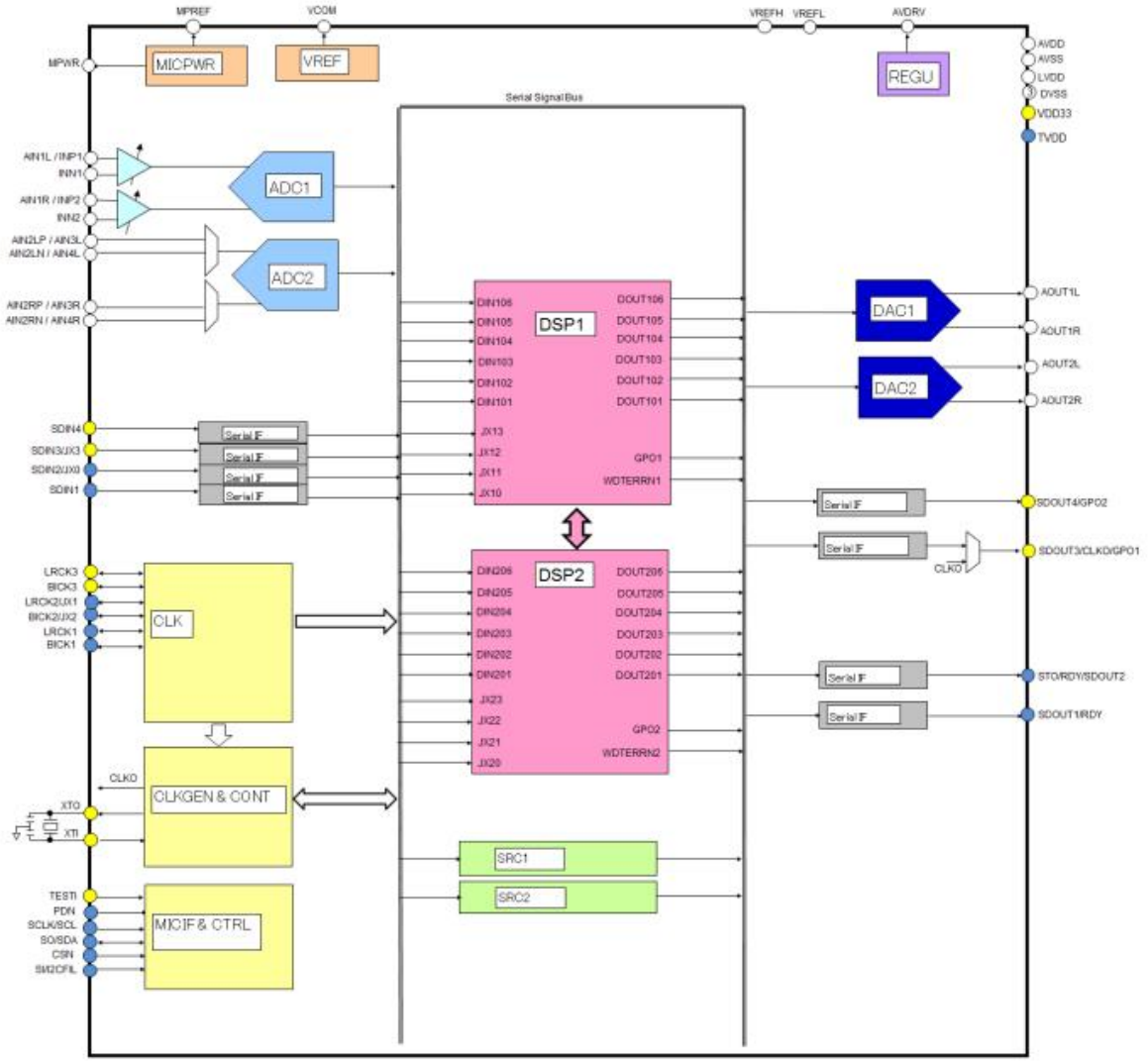
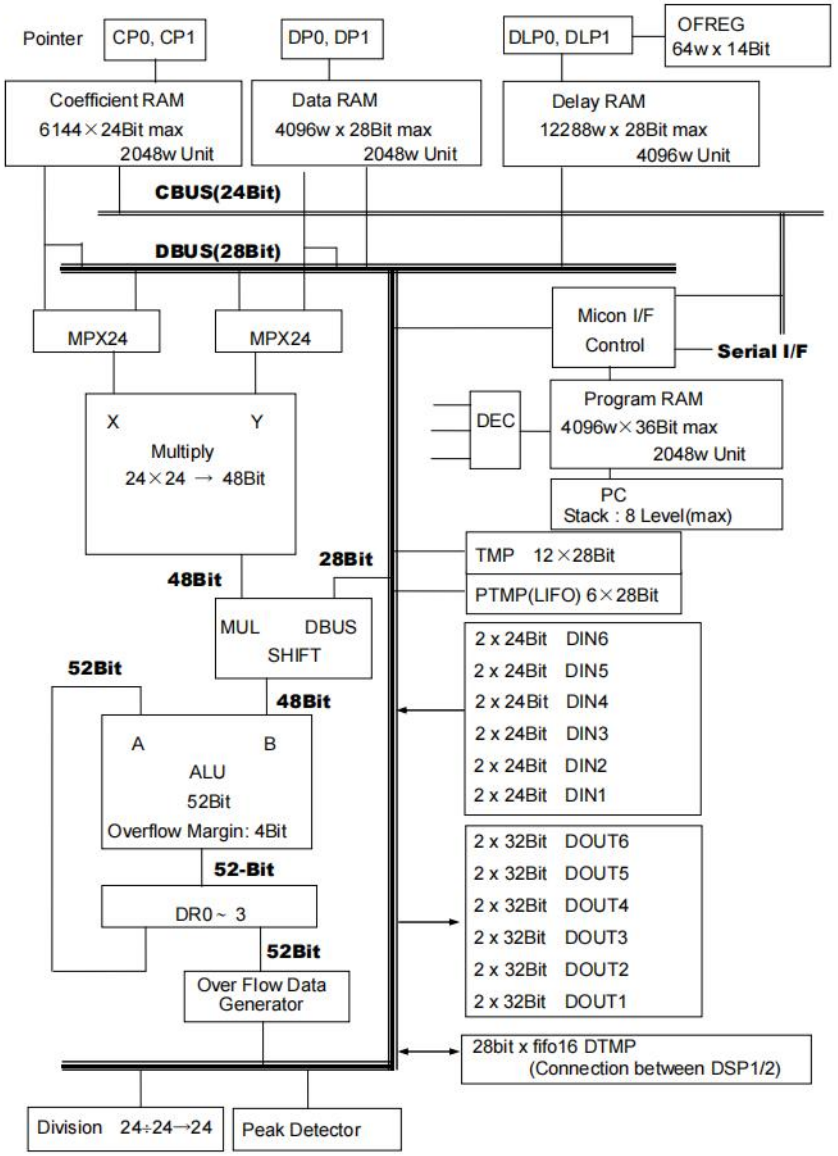


Figure 1. Block Diagram

Block Diagrams

Model: AKM7735 DSP

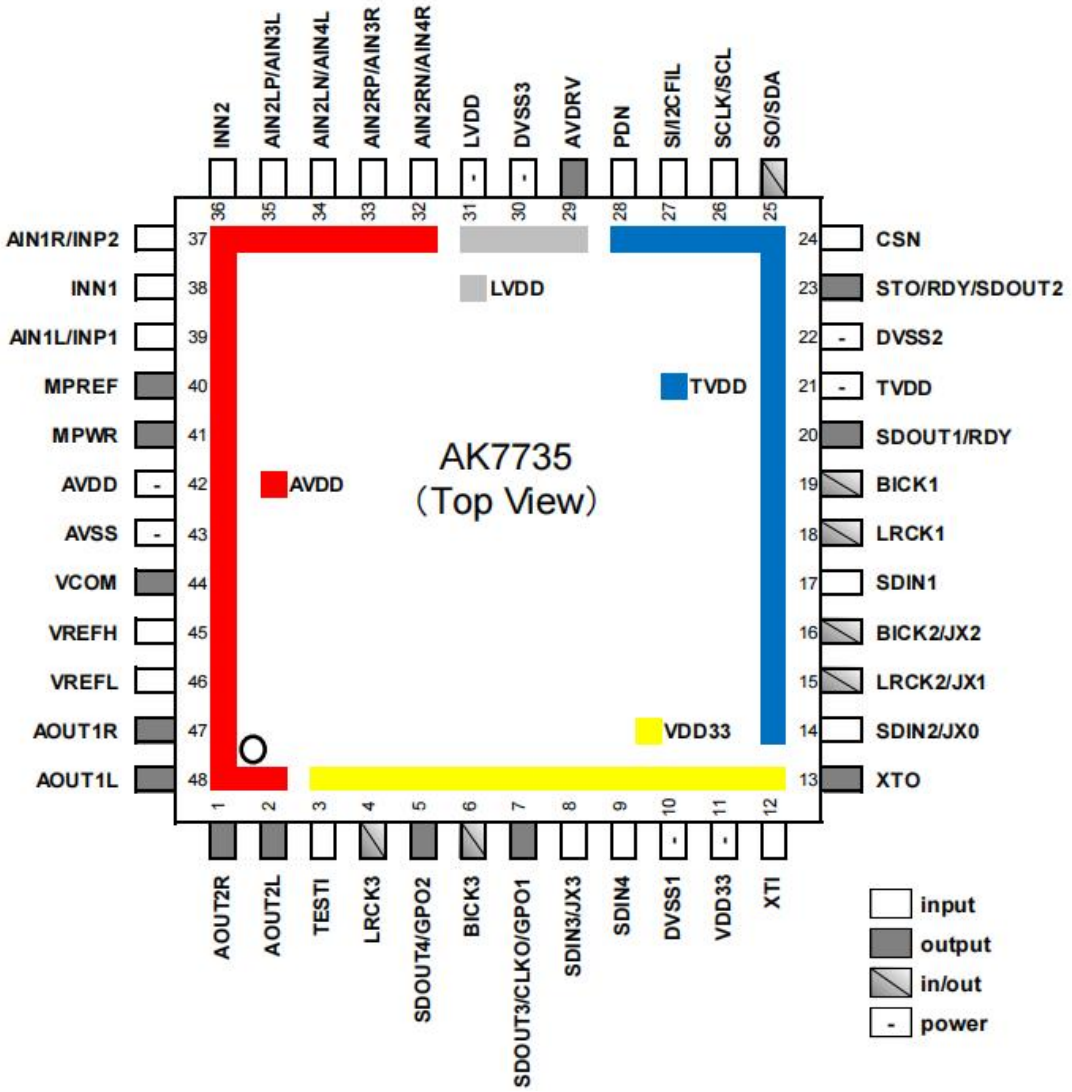


Note

* 1. Coefficient RAM, Data RAM, Delay RAM, Program RAM areas are shared by DSP1 and DSP2 and the sizes are configurable by control registers.

Pin Configurations and Functions

Model: AKM7735 DSP



Thank you for your support!