

Drive System for Rotating Smart Speaker Facilitates Voice Interaction

Drive System for Rotating Smart Speaker



Los Angeles, Aug 24, 2020 ([Issuewire.com](https://www.issuewire.com)) - ZHAOWEI Drive has proudly upgraded the [microdrive system for a rotating smart speaker](#). Confronted with the pain points of smart speakers on the market, ZHAOWEI optimizes the intelligent rotary deceleration module to facilitate voice interaction, turning the “functional era” into the “intelligent era”.

In conventional speakers, the pickup process is done manually by controlling the movement of the speaker. This type of arrangement may not function effectively in a space where persons are talking at a given time. Sometimes, the speakers are mounted at fixed points thus forcing members in a room to awkwardly facing towards the speakers throughout the discussion. Additionally, the sound of those sitting at the far end of the table is poorly captured and thus it is not clear who is speaking, lack of personality and interaction. Therefore, together with artificial intelligence (AI), [ZHAOWEI](#) aims to provide a drive system composed of PMDC motor and planetary gearhead for smart speaker rotation that will help to automatically track the sound signals, enabling responsive voice interaction and a feast for the ears.

Adjusting Position Automatically

The smart speaker drive system from ZHAOWEI is applied to the encoder of the speaker and placed at the bottom of the speaker. The rotating base is connected with the controlling part, both of whom are fixed devices. The latter is electrically connected with the audio part. Based on continuous innovation and improvement, this deceleration module features a compact structure and small size. The speaker cabinet realizes audio playback through audio components. In the process of use, when the volume adjustment is required, the rotating part is driven by the deceleration module from ZHAOWEI to make the rotary encoder work. The rotary encoder will transmit the displacement signal to the controlling part which further controls the volume according to the signal received. This enables users to adjust the volume of audio playback flexibly, solves the problem of locating far-field pickup sound source, and improves the efficiency of recognition. It is no longer hard for speakers to automatically adjust the position, form a beam, suppress the noise and reduce echo.

Empowering 360° Free Rotation

ZHAOWEI's drive system for smart speakers empowers 360° free rotation. Compared with the ordinary smart speaker, it performs better since it adopts [permanent magnet DC motor](#) as the driving source and it effectively diminishes the vibration and noise of the speaker by virtue of the planetary gear drive system consisting of worm and helical gear set. Therefore, an amazing auditory experience without any unexpected sound can be accessible. Based on finite element analysis of tooth profile, ZHAOWEI removes the obstacle of short service life and poor backlash. It makes separation and alternation between dual-channel stereo and four-channel dual stereo possible. Thus, the stereo listening range can be wide enough and a marvelous background effect can be achieved owing to the synchronous operation of sound and light.

Voice interaction is one step of smart speakers' AI strategy. In the future, the improvement of voice interaction ability and the intelligent upgrade of voice systems will further promote the development of the AI market. Nowadays, related manufacturers are actively exploring new forms. Smart speaker manufacturers embracing the opportunities, ZHAOWEI gives renewed impetus to it by unveiling such an advanced gear drive system.

"We realize that there is much room for the development of interactive smart speakers. To empower each manufacturer in this field, we are excited to roll out such an upgraded micro-drive system for the smart speaker. The ultimate goal of ours is to help achieve its sensitive voice tracking, hassle-free voice interaction and flexible rotation." said the Project Manager of ZHAOWEI.



Media Contact

Shenzhen ZHAOWEI Machinery & Electronics Co., Ltd

sales@zwgearbox.com

+86-755-27322645

Building 101, No. 62, Yanhu Road, Yanchuan Community, Yanluo Street, Bao'an District, Shenzhen, 518127, Guangdong, China

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