

COMPANY PROFILE

Doewe Technologies, headquartered in Beijing, has been operating for a decade and currently has branches including the Beijing R&D Center, Chengdu R&D Center, Doewe Shanghai, Doewe Shenzhen, and Doewe Hong Kong. The company is fully committed to building its independent brand "Doewe," with its business covering two main categories: Advanced Sensing Measurement and Control (ASMC) and Professional Test and Measurement Solutions (PTMS).

The ASMC product line provides innovative high-precision sensing acquisition and data analytics solutions. PTMS focuses on industry-specific test and measurement solutions for audio, video, and RF applications. It has established the 5XC product system, serving sectors such as transportation, broadcasting, automotive electronics, consumer electronics, and university research institutes.

Through relentless effort, several of the company's products have become benchmark test instruments in their respective industries. Doewe Technologies also holds multiple core patents and software copyrights, participates in relevant industry standards working groups, and contributes to the formulation of national and industry standards. Building on past achievements, Doewe continues to increase its R&D investment. We have never forgotten our original aspiration, firmly believing that only profound technological accumulation creates value. We persistently pursue innovation in test and measurement technology, dedicated to technology development, application software services, and research in test and measurement solutions.

Leveraging its Beijing headquarters, related technical centers, and subsidiaries, Doewe Technologies has gradually established a nationwide pre-sales and after-sales service network, providing customers with professional technical consultation. Guided by the principles of "Rigorous, Efficient, Professional, Innovative," Doewe Technologies will continue steadfastly on this path, living up to the trust of every customer.

The journey ahead is long and challenging. We will accompany you on this path of growth to create a new future of technology together.

Product Introduction

ASMC-PXIE-A²B is a high-performance PXIE module designed by Duowei Technology for audio testing applications, specifically tailored to the testing needs of in-vehicle audio and intelligent cockpit systems. This product combines high-precision analog acquisition and playback functions, and integrates A²B bus transceivers, which can be widely used in various scenarios such as A²B bus node testing, waveform acquisition, and injection. By supporting multiple sampling rates and high signal-to-noise ratio, this card can achieve accurate restoration and high-quality transmission of audio signals, meeting the strict precision requirements in complex audio testing tasks.

This card is equipped with 32-bit Delta-Sigma DAC/ADC, supporting sampling rates from 48 KHz to 768 KHz, and capable of handling multi-channel audio signals with high dynamic range. The built-in A²B bus transceiver (AD2428) supports up to 11 nodes (1 master node and 10 slave nodes), covering a bus length of 40 meters, which meets the real-time transmission requirements of large-scale audio signals in vehicle systems. The device also supports simulation and testing of A²B bus master-slave nodes to ensure the synchronization and stability among audio devices in the system.

With excellent analog and digital audio processing capabilities, the ASMC-PXIE-A²B audio acquisition card is not only suitable for traditional audio testing but also meets the complex testing requirements of modern in-vehicle entertainment systems and intelligent cockpits. Through flexible input/output interfaces and highly integrated design, this card enables rapid deployment in various testing environments, helping customers improve efficiency in high-precision audio testing and A²B bus compatibility verification.

The core parameters of the A²B capture card

- Sampling rate: Configurable to support 48 kHz, 96 kHz, 192 kHz, 384 kHz, 768 kHz
- Input/Output Type: 32-bit Delta-Sigma ADC/DAC
- Input/Output SNR: >110 dB
- THD+N: < -110 dB (at 48 kHz sampling rate)
- Input/Output Voltage Range: 2 Vrms (supports analog input/output)
- Number of Input Channels: 2 channels with compatible single-ended and differential inputs
- Supports A²B Bus: Maximum cable length of 40 meters, up to 11 nodes (1 master node, 10 slave nodes), supports 32 upstream and 32 downstream channels
- Input Interface: 3.5mm TRS connector (compatible with both single-ended and differential inputs)
- IEPE Constant Current Source: Supports TEDS function compliant with IEEE 1451 standard, open-circuit voltage not less than 23.5V, output current accuracy 4.0mA (±5%)



Core Advantages

High-precision Audio Acquisition and Playback

The ASMC-PXle-A²B acquisition card supports 32-bit Delta-Sigma ADC/DAC, ensuring extremely high signal-to-noise ratio (SNR > 110 dB) and extremely low total harmonic distortion (THD+N < -110 dB) within the sampling rate range of 48 KHz to 768 KHz. This high-performance audio processing capability enables it to accurately restore and process complex signals from in-vehicle entertainment systems and audio devices, ensuring high fidelity and stability in testing.

The full-node support for the A²B bus

The ASMC-PXle-A²B acquisition card integrates an A²B bus transceiver (AD2428), supporting up to 11 nodes (1 master node and 10 slave nodes), and providing 32 upstream and 32 downstream channels. This capability meets the real-time transmission requirements of multi-node audio signals in vehicle systems. Whether testing a single device or a large-scale multi-node system, the high flexibility and large-scale support of the A²B bus significantly expand the application scope of this acquisition card.

Multi-functional Interface Integration Testing

The ASMC-PXle-A²B audio acquisition card supports a 3.5mm three-core TRS interface, compatible with both single-ended and differential inputs, facilitating connection and testing with various audio devices. Meanwhile, the card provides an IEPE constant current source bias and supports the TEDS function compliant with the IEEE 1451 standard, enhancing the compatibility of sensors and devices as well as the accuracy of signal measurement. Whether in the R&D stage or during actual production and verification, it can be quickly integrated to provide high-quality audio data.





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