

PRODUCT CATALOG



Measure Sound Better



CRYSOUND

CRYSOUND

Headquarters: No 10 Xianqiao Rd, Yuhang Dist, Hangzhou, China

U.S. Office: 515 S Fry Rd, Suite A-221, Katy, TX 77450, USA

Tel: +1-877-215-7752 (U.S.), +86-571-88225128 (China)

Web: www.crysound.com

E-mail: info@crysound.com



CRY SOUND

PIONEERING ACOUSTIC MEASUREMENT SOLUTIONS:

When our founder Mr. Ruiying Cao established CRY SOUND in 1997, he built a company dedicated to providing the best in acoustic measurement technology. Almost 30 years later, CRY SOUND remains at the forefront of the industry, using decades of expertise to engineer cutting-edge acoustic measurement solutions.

OUR LINES INCLUDE:

Sensors

Data Acquisition

Acoustic Imaging

Noise Measurement

Electroacoustic Test

We are proud to work with over 10,000 clients spanning 80 countries, including industry giants like Microsoft and Samsung as well as small, local businesses. Our clients choose CRY SOUND for a diverse array of needs, from consumer electronics to energy production, businesses know they get the best from CRY SOUND.



▼ Acoustic Imaging



▼ Data Acquisition



▼ Sensors



▲ Noise Measurement



◀ Electroacoustic Test



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Sensors

Specializing in acoustic sensing technology innovation, our product portfolio features high-precision microphones, ear and mouth simulators, and advanced testing systems. We deliver end-to-end acoustic testing solutions for the consumer electronics, smart vehicle cabin, aerospace and defense, and environmental monitoring industries, advancing industrial innovation through our core technologies.

Measurement Microphones

Generation 3 Titanium Diaphragm Technology – Premium Titanium Performance

- Wider frequency range and higher sensitivity.
- Exceptional corrosion resistance ensures reliable testing and long-term durability.
- Magnetic immunity for stable operation in strong magnetic fields.
- Reinforced titanium protective grid with high impact resistance and drop protection.

Fully Traceable

- Long-term performance data storage for every shipped microphone, allowing users to track performance trends anytime, anywhere.

Cleanroom Assembly

- Dust-free internal cavity construction ensures ultra-low noise floor and humidity-resistant stability.

Rigorous Aging Tests

- Every unit undergoes a strict 3-month aging test before delivery to guarantee long-term stability.

Multi-Interface Support

- Modular microphone kits with versatile connectivity options, enabling seamless integration into professional measurement systems.

Sensors – Star Product



The CRY3203 is a 1/2-inch prepolarized free-field measurement microphone. It is widely used in various acoustic testing applications. With a frequency range from 3.15 Hz to 20 kHz—closely matching the human auditory range—it is an ideal choice for both acoustic testing and environmental noise measurement.

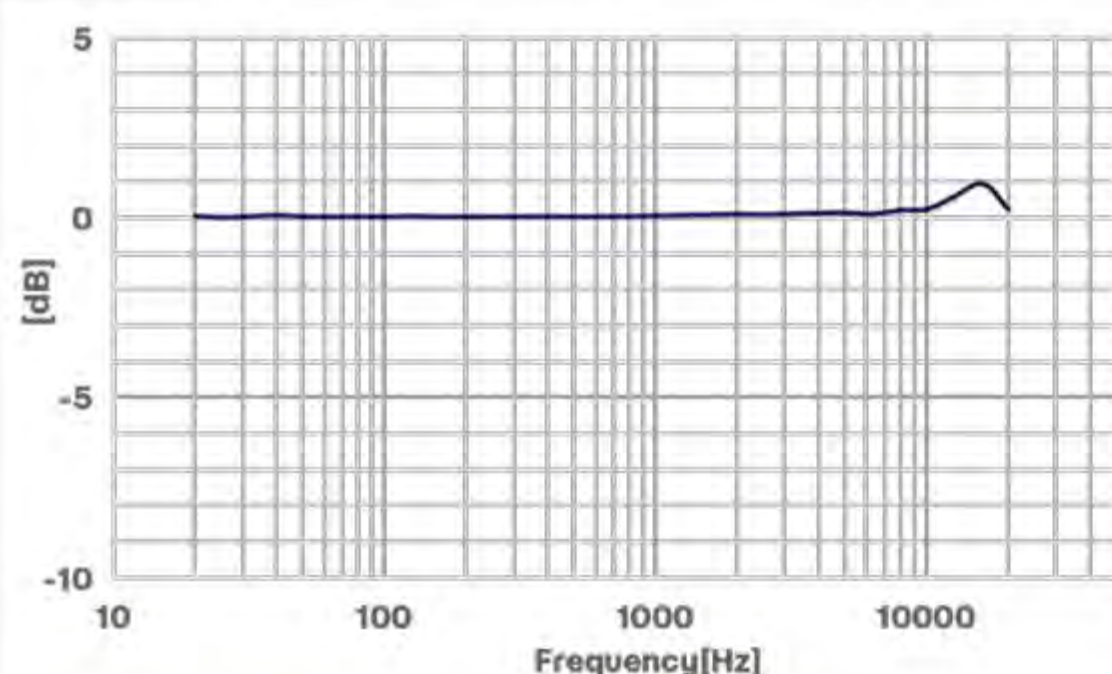
Applications

- Anechoic chamber
- Electroacoustic testing
- Noise measurement
- Automotive noise testing
- Human-like frequency response
- Human-like dynamic range
- Outstanding performance

Highlights

Frequency Response Curve

The solid line in the figure shows the frequency response curve of the CRY3203 at 0° incidence in a free-field environment.



Specifications

CRY3203

Field Type	Free Field
Sensitivity (± 1.5 dB)	50 mV/Pa
Frequency Range	3.15 Hz ~ 20 kHz
Polarization Voltage	0 V
Dynamic Range	16 dB ~ 146 dB
Operating Temperature	-30 ~ +80 °C
Temperature Coefficient	0.012 dB/°C
Static Pressure Coefficient	-0.01 dB/kPa
Operating Humidity Range	0~90% RH without condensation
Humidity Coefficient	<0.1 dB (0~90% RH without condensation)
Equalization Method	Rear Equalization
IEC 61094-4 Type	WS2F



The CRY3403 is a 1/4-inch prepolarized free-field ultra-wideband and high-sound-pressure measurement microphone. It delivers an extraordinarily wide and flat frequency response. Its effective measurement range extends up to 90 kHz, and it can reliably withstand sound pressure levels as high as 165 dB (re. 20 μ Pa).

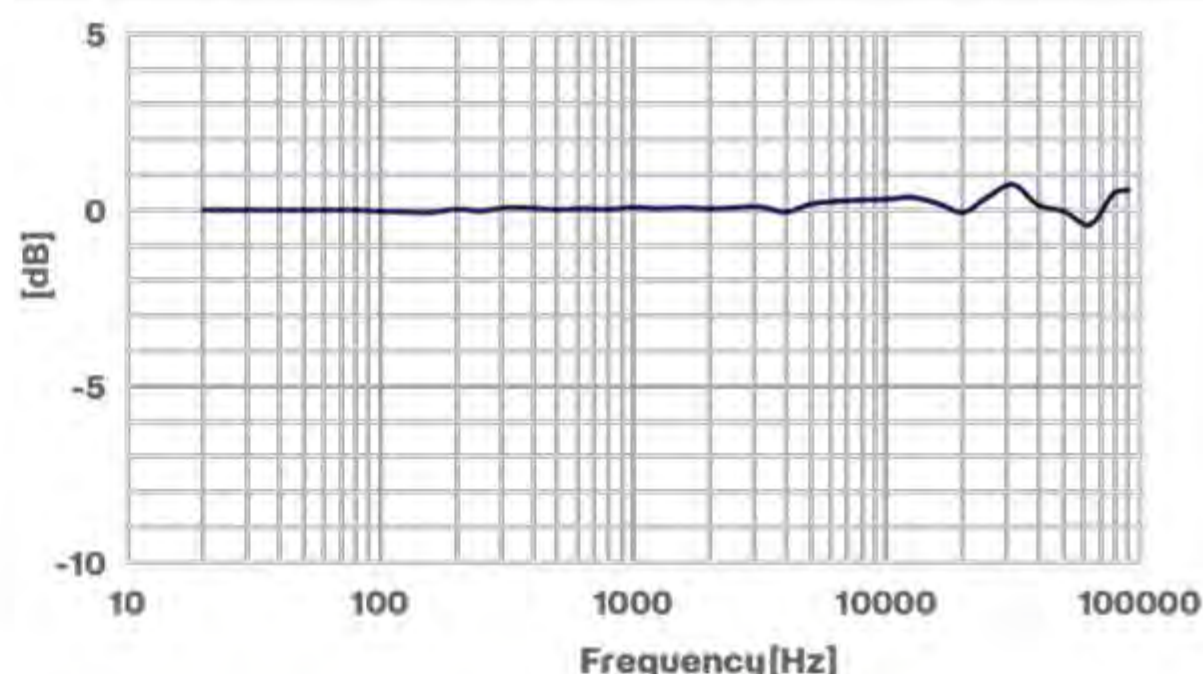
Applications

- Wide-frequency testing
- High-definition speaker testing
- High sound pressure testing
- Ultra-wideband testing
- High sound pressure testing
- Outstanding performance

Highlights

Frequency Response Curve

The solid line in the figure shows the frequency response curve of the CRY3403 at 0° incidence in a free-field environment.



Specifications

CRY3403

Field Type	Free Field
Sensitivity (± 1.5 dB)	4 mV/Pa
Frequency Range	4 Hz ~ 90 kHz
Polarization Voltage	0 V
Dynamic Range	35 dB-165 dB
Operating Temperature	-30 ~ +80 °C
Temperature Coefficient	0.01 dB/°C
Static Pressure Coefficient	-0.01 dB/kPa
Operating Humidity Range	0~90% RH without condensation
Humidity Coefficient	<0.1 dB (0~90% RH without condensation)
Equalization Method	Rear Equalization
IEC 61094-4 Type	WS3F



The CRY3404 is a 1/4-inch prepolarized pressure-field high-sound-pressure measurement microphone. It is widely used and recognized in many high-sound-pressure testing environments. With a frequency range from 10 Hz to 20 kHz, it is an ideal choice for gunshot, explosion, aviation, and aerospace acoustic testing.

Applications

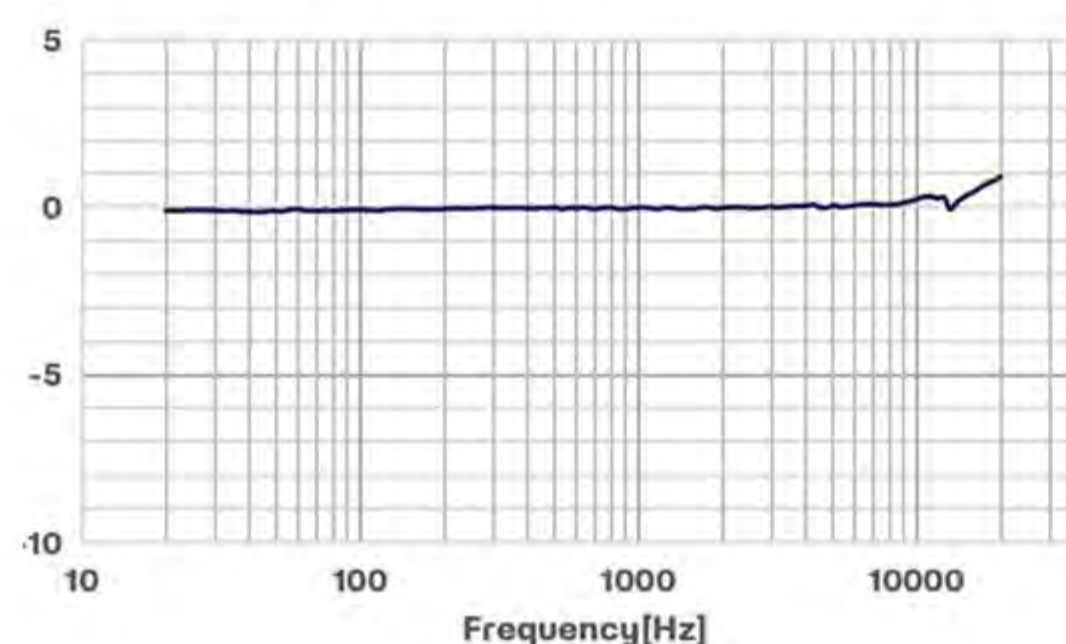
- Sound of gunshots
- Explosion sound
- Aviation engine noise

Highlights

- Human-like frequency response
- Ultra-high dynamic range

Frequency Response Curve

The solid line in the figure represents the pressure-field frequency response curve of the CRY3404.



Specifications

CRY3404

Field Type	Pressure Field
Sensitivity (± 1.5 dB)	0.56 mV/Pa
Frequency Range	10 Hz ~ 20 kHz
Polarization Voltage	0 V
Dynamic Range	59 dB ~ 175 dB
Operating Temperature	-30 ~ +70 °C
Temperature Coefficient	-0.002 dB/°C
Static Pressure Coefficient	-0.01 dB/kPa
Operating Humidity Range	0 ~ 90% RH without condensation
Humidity Coefficient	<0.1 dB (0 ~ 90% RH without condensation)
Equalization Method	Rear Equalization
IEC 61094-4 Type	WS3P



CRY3261-S02 is a 1/2-inch pre-polarized free-field high-sound-pressure measurement microphone set, designed for ultra-low noise measurements under 10 dB. With an exceptionally low background noise of just 6.5 dBA, it is ideal for highly accurate detection and measurement of ultra-low sound levels.

Applications

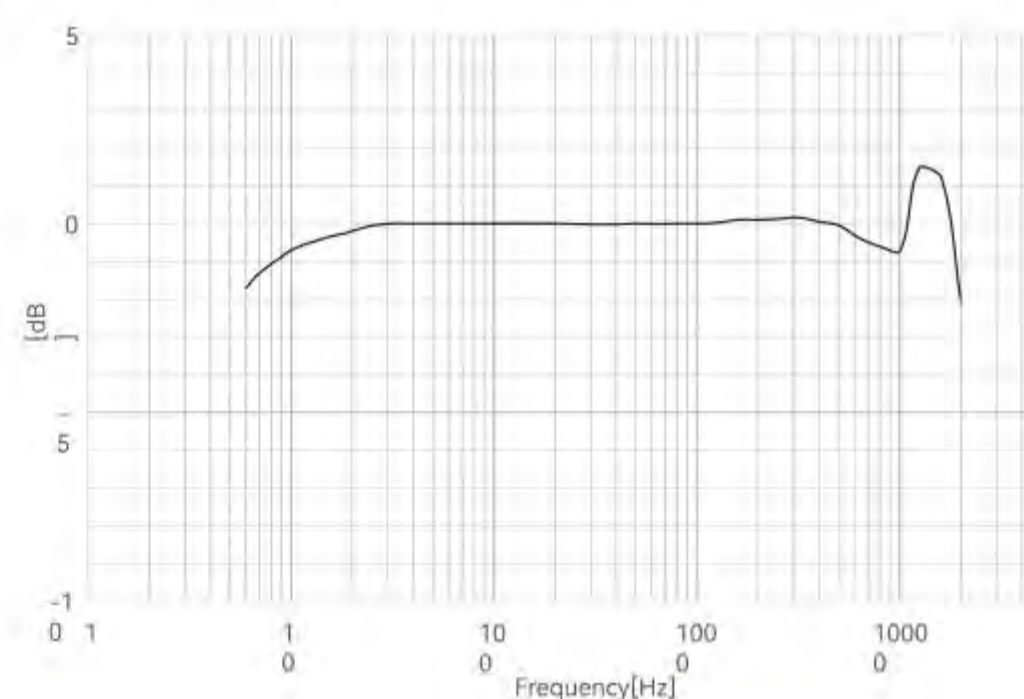
- Product self-noise
- Appliance noise
- Transformer current noise
- Ultra-low noise measurement

Highlights

- Ultra-low noise measurement
- Outstanding performance
- Wide compatibility
- Cleanroom precision assembly

Frequency Response Curve

The figure below shows the typical frequency response curve of CRY3261-S02.



Specifications

CRY3261-S02

Field Type	Free Field
Sensitivity (± 2 dB)	450 mV/Pa
Frequency Range	10 Hz ~ 16 kHz
Polarization Voltage	0 V
Dynamic Range	6.5 dB ~ 100 dB
Operating Temperature	-30 ~ +60 °C
Temperature Coefficient	-0.012 dB/°C
Static Pressure Coefficient	-0.01 dB/kPa
Operating Humidity Range	0 ~ 90% RH non-condensing
Humidity Coefficient	<0.1 dB (0 ~ 90% RH non-condensing)
Equalization Method	Rear Equalization
Interface	BNC



CRY3018 is a portable, high-precision acoustic calibrator compliant with IEC 60942:2017 Class 1. It operates at dual frequencies of 250 Hz and 1000 Hz, and supports sound pressure levels of 94 dB and 114 dB, with the option to switch to higher SPLs to overcome ambient interference. The calibrator features an internal acoustic feedback compensation loop and includes temperature, humidity, and barometric sensors for adaptive environmental compensation, ensuring linear response and consistent measurements. It also offers USB-C fast charging, a carbon-fiber housing, and a high-brightness OLED display—making it ideal for on-site calibration of sound level meters, measurement microphones, and acoustic systems.

Applications

- Sound level meter calibration
- Microphone sensitivity testing
- Acoustic system calibration

Highlights

- IEC 60942:2017 Class 1
- 94 dB / 114 dB dual sound pressure levels
- 250 Hz / 1000 Hz dual calibration frequencies
- Automatic shutdown feature
- Durable, compact, portable, high stability
- Calibration accuracy ±0.2dB

Specifications

Standards	IEC 60942:2017 Class 1
Calibration Sound Pressure	94 dB, 114 dB
Calibration Frequency	250 Hz, 1000 Hz
Supported Microphones	1 inch, 1/2 inch, 1/4 inch, 1/8 inch
Calibration Accuracy	0.2 dB



CRY802 ATF Hearing Protection Headphone Test Fixture

is designed for testing over-ear headphones and hearing protection devices such as earmuffs and earplugs. Constructed from oxidized and blackened aluminum, it offers enhanced robustness. The fixture is mounted on a resilient base to minimize the noise floor in typical test situations. Foam plugs are used to prevent sound leakage along the cables. It can be configured with the CRY711 Ear Simulator for headphone testing. Easy to assemble, it is primarily used with an anthropometric pinna and pinna holder plate. This setup is ideal for measuring the insertion loss of earmuffs and the sound quality of earphones.

Features

- Fitted with ear simulators complying with IEC 60318-4(2010), IEC 60318-1(2009).
- Compatible with multiple devices for wide range of applications.
- Used to reduce noise floor to a minimum in a typical test situation and avoid sound leakage.
- Easy to assemble.
- Manufactured with robust materials, ensuring the stability and longevity.
- Creates a realistic reproduction of the test scene when the user wears the headset.

Highlights

- Compatible with multiple instruments and has strong applicability
- Reduce test noise
- Restore the test scene when the user wears headphones.

Specifications

CRY802 ATF Hearing Protection Headphone Test Fixture	
Weight	11.6kg
Material	Oxidized and blackened aluminum
Max-width	155.6mm
Height	477.3mm
Diameter	135mm
Acoustic Isolation	63hz-250hz>50db; 315hz-4khz>65db
Design standard	ISO 4869-3

1 inch Measurement Microphone

CRYSOUND 1-inch Measurement Microphones are available in prepolarized pressure-field and free-field types, featuring low noise and wide frequency response. They are ideal for precise acoustic testing applications.



Specifications	CRY3101	CRY3102	CRY3103
Field Type	Free-field	Pressure-field	Free-field
Sensitivity (± 1.5 dB)	50 mV/Pa, -26 dBV/Pa	50 mV/Pa, -26 dBV/Pa	100 mV/Pa, -20 dBV/Pa
Frequency Range	4 Hz ~ 16 kHz	4 Hz ~ 8 kHz	4 Hz ~ 12 kHz
Polarization Voltage	0 V	0 V	0 V
Dynamic Range (re. 20 μ Pa)	12 dB ~ 146 dB	12 dB ~ 146 dB	10 dB ~ 130 dB
Operating Temperature	-20 $^{\circ}$ C ~ 60 $^{\circ}$ C	-20 $^{\circ}$ C ~ 60 $^{\circ}$ C	-20 $^{\circ}$ C ~ 60 $^{\circ}$ C
Diameter with Grid	23.77 mm	23.77 mm	23.77 mm
Height with Grid	19 mm	19 mm	19 mm

1/2 inch Measurement Microphone

CRYSOUND 1/2-inch Measurement Microphones are available in pressure-field, free-field, prepolarized, and externally polarized types, covering various models with low noise, wide frequency response, and high sensitivity. They are widely suitable for diverse acoustic testing scenarios.



Specifications	CRY3201	CRY3202	CRY3203	CRY3204
Field Type	Free-field	Pressure-field	Free-field	Pressure-field
Sensitivity (± 1.5 dB)	12.5 mV/Pa, -38 dBV/Pa	12.5 mV/Pa, -38 dBV/Pa	50 mV/Pa, -26 dBV/Pa	50 mV/Pa, -26 dBV/Pa
Frequency Range	3.15 Hz ~ 40 kHz	3.15 Hz ~ 20 kHz	3.15 Hz ~ 20 kHz	3.15 Hz ~ 10 kHz
Polarization Voltage	0 V	0 V	0 V	0 V
Dynamic Range (re. 20 μ Pa)	23 dB ~ 160 dB	23 dB ~ 160dB	16 dB ~ 146 dB	16 dB ~ 146 dB
Operating Temperature	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C
Diameter with Grid	13.2 mm	13.2 mm	13.2 mm	13.2 mm
Height with Grid	12.7 mm	12.7 mm	16.2 mm	16.2 mm



Specifications

	CRY3281	CRY3282	CRY3284	CRY3285
Field Type	Free-field	Pressure-field	Pressure-field	Free-field
Sensitivity (± 1.5 dB)	12.5 mV/Pa, -38 dBV/Pa	12.5 mV/Pa, -38 dBV/Pa	50 mV/Pa, -26 dBV/Pa	50 mV/Pa, -26 dBV/Pa
Frequency Range	3.15 Hz ~ 40 kHz	3.15 Hz ~ 20 kHz	3.15 Hz ~ 10 kHz	3.15 Hz ~ 20 kHz
Polarization Voltage	200 V	200 V	200 V	200 V
Dynamic Range (re. 20 μ Pa)	23 dB ~ 160 dB	23 dB ~ 160 dB	16 dB ~ 146 dB	16 dB ~ 146 dB
Operating Temperature	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C
Diameter with Grid	13.2 mm	13.2 mm	13.2 mm	13.2 mm
Height with Grid	12.7 mm	12.7 mm	16.2 mm	16.2 mm

1/4 inch Measurement Microphone

CRYSOUND 1/4-inch Measurement Microphones are available in pressure-field, free-field, prepolarized, and externally polarized types. These microphones feature high sound pressure tolerance, wide frequency response, and high sensitivity, making them particularly suitable for high sound pressure level (SPL) measurements.



Specifications

	CRY3401	CRY3402	CRY3403	CRY3404
Field Type	Free-field	Pressure-field	Free-field	Pressure-field
Sensitivity (± 1.5 dB)	15.8 mV/Pa, -36 dBV/Pa	1.6 mV/Pa, -56 dBV/Pa	4 mV/Pa, -48 dBV/Pa	0.56 mV/Pa, -65 dBV/Pa
Frequency Range	4 Hz ~ 40 kHz	4 Hz ~ 70 kHz	4 Hz ~ 90 kHz	10 Hz ~ 20 kHz
Polarization Voltage	0 V	0 V	0 V	0 V
Dynamic Range (re. 20 μ Pa)	26 dB ~ 144 dB	45 dB ~ 170 dB	35 dB ~ 165 dB	59 dB ~ 175 dB
Operating Temperature	-20 $^{\circ}$ C ~ 60 $^{\circ}$ C	-20 $^{\circ}$ C ~ 60 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 70 $^{\circ}$ C
Diameter with Grid	7.0 mm	7.0 mm	7.0 mm	7.0 mm
Height with Grid	10.5 mm	10.5 mm	10.5 mm	10.5 mm



Specifications

	CRY3406	CRY3408	CRY3482	CRY3485
Field Type	Pressure-field	Pressure-field	Pressure-field	Free-field
Sensitivity (± 1.5 dB)	15.8 mV/Pa, -36 dBV/Pa	0.14 mV/Pa, -77 dBV/Pa	1.6 mV/Pa, -56 dBV/Pa	4 mV/Pa, -48 dBV/Pa
Frequency Range	4 Hz ~ 20 kHz	10 Hz ~ 20 kHz	4 Hz ~ 70 kHz	4 Hz ~ 90 kHz
Polarization Voltage	0 V	0 V	200 V	200 V
Dynamic Range (re. 20 μ Pa)	26 dBA ~ 144 dB	70 dBA ~ 180 dB	45 dBA ~ 170 dBA	35 dBA ~ 165 dB
Operating Temperature	-20 $^{\circ}$ C ~ 60 $^{\circ}$ C	-30 $^{\circ}$ C ~ 70 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C	-30 $^{\circ}$ C ~ 80 $^{\circ}$ C
Diameter with Grid	7.0 mm	7.0 mm	7.0 mm	7.0 mm
Height with Grid	10.5 mm	10.5 mm	10.5 mm	10.5 mm

Preamplifier

CRYSOUND Preamplifiers are available in 1/2-inch and 1/4-inch sizes, offering multiple connector options, including BNC, 10-32UNF, and SMB. Supporting TEDS (Transducer Electronic Data Sheet) for reduced setup time, these preamplifiers are compatible with all prepolarized condenser microphones.



Specifications

	CRY3501	CRY3502	CRY3503	CRY3521
Frequency Response	1 Hz ~ 200 kHz	1 Hz ~ 200 kHz	1 Hz ~ 200 kHz	10 Hz ~ 100 kHz
Power Supply	IEPE (2mA ~ 20mA)	IEPE (2mA ~ 20mA)	IEPE (2mA ~ 20mA)	IEPE (2mA ~ 20mA)
Typical Operating Current	4 mA	4 mA	4 mA	4 mA
Maximum Output Voltage	>10.0 Vp	>10.0 Vp	>10.0 Vp	>7.0 Vp
Interface Type	BNC	SMB	10-32UNF	BNC
Thread Interface Diameter	11.7 mm - 60 UNS	11.7 mm - 60 UNS	11.7 mm - 60 UNS	11.7 mm - 60 UNS
Height	80.5 mm	29.2 mm	29.2 mm	/
TEDS	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0	/



Specifications

	CRY3541	CRY3542	CRY3543
Frequency Response	1 Hz ~ 200 kHz	3 Hz ~ 200 kHz	1 Hz ~ 200 kHz
Power Supply	IEPE (2mA ~ 20mA)	IEPE (2mA ~ 20mA)	IEPE (2mA ~ 20mA)
Typical Operating Current	4 mA	4 mA	4 mA
Maximum Output Voltage	>10.0 Vp	>10.0 Vp	>10.0 Vp
Interface Type	SMB	SMB	10-32UNF
Thread Interface Diameter	5.7 mm - 60 UNS	5.7 mm - 60 UNS	5.7 mm - 60 UNS
Height	47.8mm	33.8mm	47.8mm
TEDS	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0

1 inch Measurement Microphone Set

A CRYSOUND 1-inch Measurement Microphone Set includes a pressure-field or free-field microphone, along with an IEPE preamplifier. The CRY3103-S01 Microphone Set is specifically designed for sensitive acoustic testing in low-noise environments, making it ideal for applications that require precise acoustic measurements.



Specifications

	CRY3101-S01	CRY3102-S01
Field Type	Free-field	Pressure-field
Sensitivity (± 1.5 dB)	50 mV/Pa, -26 dBV/Pa	50 mV/Pa, -26 dBV/Pa
Frequency Range	4 Hz ~ 16 kHz	4 Hz ~ 8 kHz
Dynamic Range (re. 20 μ Pa)	12 dB ~ 138 dB	12 dB ~ 138 dB
Maximum Output Voltage	>10.0 Vp	>10.0 Vp
Power Supply	IEPE (2 ~ 20)mA	IEPE (2 ~ 20)mA
Interface Type	BNC	BNC
TEDA	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0

1/2 inch Measurement Microphone Set

CRYSOUND 1/2-inch Measurement Microphone Sets offer a selection of microphones with different characteristics to meet various testing requirements. When paired with CRYSOUND IEPE-powered preamplifiers, they deliver high-precision acoustic measurements. The CRY3203-S01 Microphone Set is a versatile solution suitable for general acoustic testing. The CRY3261-S01 Microphone Set, with its ultra-low 7.5 dBA inherent noise floor, is perfectly suited for precision measurements in ultra-quiet environments.



Specifications

Field Type
Sensitivity (± 1.5 dB)
Frequency Range
Dynamic Range (re. 20 μ Pa)
Maximum Output Voltage
Power Supply
Interface Type
TEDS

CRY3201-S01

Free-field
12.5 mV/Pa, -38 dBV/Pa
3.15 Hz ~ 40 kHz
23 dB ~ 148 dB
>10.0 Vp
IEPE (2 ~ 20)mA
BNC
IEEE 1451.4 V1.0

CRY3203-S01

Free-field
50 mV/Pa, -26 dBV/Pa
3.15 Hz ~ 20 kHz
15 dB ~ 138 dB
>10.0 Vp
IEPE (2 ~ 20)mA
BNC
IEEE 1451.4 V1.0

CRY3203-S02

Free-field
50 mV/Pa, -26 dBV/Pa
3.15 Hz ~ 20 kHz
15 dB ~ 138 dB
>10.0 Vp
IEPE (2 ~ 20)mA
10-32UNF
IEEE 1451.4 V1.0



Specifications

Field Type
Sensitivity (± 1.5 dB)
Frequency Range
Dynamic Range (re. 20 μ Pa)
Maximum Output Voltage
Power Supply
Interface Type
TEDS

CRY3202-S01

Pressure-field
12.5 mV/Pa, -38 dBV/Pa
3.15 Hz ~ 20 kHz
23 dB ~ 150 dB
>10.0 Vp
IEPE (2 ~ 20)mA
BNC
IEEE 1451.4 V1.0

CRY3202-S02

Pressure-field
12.5 mV/Pa, -38 dBV/Pa
3.15 Hz ~ 20 kHz
23 dB ~ 150 dB
>10.0 Vp
IEPE (2 ~ 20)mA
10-32UNF
IEEE 1451.4 V1.0

CRY3204-S01

Pressure-field
50 mV/Pa, -26 dBV/Pa
3.15 Hz ~ 10 kHz
15 dB ~ 138 dB
>10.0 Vp
IEPE (2 ~ 20)mA
BNC
IEEE 1451.4 V1.0



Specifications

Field Type
Sensitivity (± 1.5 dB)
Frequency Range
Dynamic Range (re. 20 μ Pa)
Maximum Output Voltage
Power Supply
Interface Type
TEDS

CRY3261-S01

Free-field
354 mV/Pa, -9 dBV/Pa
3.15 Hz ~ 20 kHz
7.5 dB ~ 115 dB (Typical: 6.5 dBA)
>7.0 Vp
/
BNC/DB9
IEEE 1451.4 V1.0

CRY3261-S02

Free-field
450 mV/Pa, -7 dBV/Pa
10 Hz ~ 16 kHz ± 2 dB
6.5 dB ~ 100 dB (Typical: 6.0 dBA)
>8.0 Vp
/
BNC
IEEE 1451.4 V1.0

1/4 inch Measurement Microphone Set

CRYSOUND 1/4-inch Measurement Microphone Sets offer versatile microphone options with specialized characteristics to meet diverse testing requirements and are compatible with CRYSOUND IEPE-powered preamplifiers.

- CRY3403-S01: Measures frequencies up to 90 kHz.
- CRY3404-S01: Withstands extreme sound pressure levels up to 175 dB, enabling reliable acoustic testing in high-intensity environments.



Specifications

	CRY3402-S01	CRY3402-S02	CRY3404-S01	CRY3406-S01
Field Type	Pressure-field	Pressure-field	Pressure-field	Pressure-field
Sensitivity (± 1.5 dB)	1.6 mV/Pa, -56 dBV/Pa	1.6 mV/Pa, -56 dBV/Pa	0.56 mV/Pa, -65 dBV/Pa	15.8 mV/Pa, -36 dBV/Pa
Frequency Range	4 Hz ~ 70 kHz	4 Hz ~ 70 kHz	10 Hz ~ 20 kHz	4 Hz ~ 20 kHz
Dynamic Range (re. 20 μ Pa)	45 dB ~ 168 dB	45 dB ~ 168 dB	53 dB ~ 175 dB	26 dB ~ 148 dB
Maximum Output Voltage	>10.0 Vp	>10.0 Vp	>10.0 Vp	>10.0 Vp
Power Supply	IEPE (2 ~ 20)mA	IEPE (2 ~ 20)mA	IEPE (2 ~ 20)mA	IEPE (2 ~ 20)mA
Interface Type	SMB	10-32 UNF	10-32 UNF	SMB
TEDS	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0



Specifications

	CRY3401-S01	CRY3403-S01	CRY3403-S02
Field Type	Free-field	Free-field	Free-field
Sensitivity (± 1.5 dB)	15.8 mV/Pa, -36 dBV/Pa	4 mV/Pa, -48 dBV/Pa	4 mV/Pa, -48 dBV/Pa
Frequency Range	4 Hz ~ 40 kHz	4 Hz ~ 90 kHz	4 Hz ~ 90 kHz
Dynamic Range (re. 20 μ Pa)	26 dB ~ 148 dB	35 dB ~ 160 dB	35 dB ~ 160 dB
Maximum Output Voltage	>10.0 Vp	>10.0 Vp	>10.0 Vp
Power Supply	IEPE (2 ~ 20)mA	IEPE (2 ~ 20)mA	IEPE (2 ~ 20)mA
Interface Type	SMB	SMB	10-32UNF
TEDS	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0	IEEE 1451.4 V1.0

Ear Simulator & Coupler

CRYSOUND Ear Simulators accurately replicate human ear acoustics, making them ideal for standardized testing of headphones, hearing aids, and similar devices. Compliant with IEC 60318 and other international standards, they provide globally recognized test solutions, ensuring precise evaluation and optimization of electroacoustic performance.



Specifications	CRY3711	CRY3718	CRY3717	CRY3719
Standard	IEC 60318-4	IEC 60318-1	IEC 60318-3	IEC 60318-5
Frequency Range	100 Hz ~ 10 kHz ± 1 dB (simulates human ear impedance) 20 Hz ~ 16 kHz (coupling cavity use)	100 Hz ~ 4kHz ± 1 dB (simulates human ear impedance) 20 Hz ~ 16 kHz (coupling cavity use)	100 Hz ~ 8 kHz ± 2 dB	125 Hz ~ 8 kHz
Equivalent Volume	1.26 cm ³	/	6 cm ³	2 cm ³
Weight	72 g	147 g	355 g	50 g

Ear Simulator & Coupler Set

CRYSOUND Ear Simulators and Couplers can be paired with microphones and preamplifiers to replicate human ear acoustics. Designed for standardized testing of headphones, hearing aids, and similar devices, they comply with IEC 60318 and other international standards, enabling precise evaluation and optimization of electroacoustic performance. The CRY3711-S01 Ear Simulator Set is widely used for acoustic measurements of in-ear headphones.



Specifications	CRY3721-S01	CRY3719-S01	CRY3717-S01
Standard	IEC 61094-4	IEC 61094-5	IEC 61094-3
Frequency Range	20 Hz ~ 20 kHz	125 Hz ~ 8 kHz	100 Hz ~ 8 kHz
Dynamic Range (re. 20 uPa)	7.5 dB ~ 115 dBA	23 dB ~ 146 dB	12 dB ~ 132 dB
Interface Type	/	SMB	BNC



Specifications	CRY3711-S01	CRY3718-S01	CRY3718-S05	CRY3718-S07
Standard	IEC 61094-4	IEC 61094-1	IEC 61094-1	IEC 61094-1
Frequency Range	100 Hz ~ 10 kHz (simulates human ear impedance) 20 Hz ~ 16 kHz (coupling cavity use)	100 Hz ~ 4 kHz (simulates human ear impedance) 20 Hz ~ 16 kHz (coupling cavity use)	100 Hz ~ 4 kHz (simulates human ear impedance) 20 Hz ~ 16 kHz (coupling cavity use)	100 Hz ~ 4 kHz (simulates human ear impedance) 20 Hz ~ 16 kHz (coupling cavity use)
Dynamic Range (re.20 uPa)	23 dB ~ 146 dBA	23 dB ~ 146 dB	23 dB ~ 146 dB	23 dB ~ 146 dB
Interface Type	BNC	BNC	BNC	SMB
Coupler	/	/	TA0701 IEC 60318-1	TA0701 IEC 60318-1
Accessories				TA0515 Adapter

Mouth Simulator

CRYSOUND Mouth Simulators are designed to replicate the acoustic environment of the human oral cavity, providing accurate sound field reproduction for audio equipment measurements in compliance with ITU-T P.51 and IEC 60268-16 standards. Available in wide-frequency and high-sound-pressure versions, they are ideal for high-quality acoustic testing applications.



Specifications

	CRY3602	CRY3603	CRY3605
Maximum Continuous Output SPL (25 mmMRP)	110 dB (200 Hz ~ 10 kHz) 100 dB (100 Hz ~ 10 kHz)	110 dB (500 Hz ~ 40 kHz) 100 dB (200 Hz ~ 50 kHz)	110 dB (200 Hz ~ 10 kHz) 100 dB (100 Hz ~ 10 kHz:)
THD (94 dB, 25 mmMRP)	<1.5% (200 ~ 10k) Hz, Typical: <1.0%	<1.5% (1K ~ 40k) Hz, Typical: <1.0%	<0.8% (200 ~ 10k)Hz, Typical: <0.5%
Lip Ring	Diameter: ø51 mm Height: 25 mm	Diameter: ø100 mm Height: 28 mm	Diameter: ø45 mm Height: 25 mm
Mouth Opening Diameter	ø20 mm	ø20mm	ø20mm
Built-in Power Amplifier Gain	20 dB	/	/
Built-in Power Amplifier Power	20 W	/	/
Interface Type	BNC	BNC	BNC

Sound Source

CRY3611 Speaker

The CRY3611 is a far-field coaxial reference sound source designed for precise acoustic testing. It delivers low distortion and a wide frequency response, ensuring accurate and reliable test results.



Specifications

Output Sound Pressure (After compensation)	94 dB ±0.2 dB (100 Hz~15 kHz)
THD (94 dB, 25 mmMRP)	200 Hz ~ 10 KHz: <1%, Typical:<0.5%
Continuous Maximum Power	45 W
Loudspeaker diameter	165 mm
Size (mm)	300 (H) × 240 (L) × 120 (W)

Accelerometer

CRYSOUND offers both IEPE piezoelectric accelerometers and charge-mode piezoelectric accelerometers for selection. Available in various models featuring high sensitivity and wide frequency response, these sensors can be paired with armored shielded cables for industrial equipment vibration monitoring, including parameters such as acceleration, velocity, and displacement.



Specifications

	CRY431	CRY432	CRY433	CRY434	CRY435
Sensitivity (160 Hz)	5 mV/g	5 mV/g	100 mV/g	100 mV/g	100 mV/g
Frequency Response	1 Hz ~ 12 kHz (±1 dB)	1 Hz ~ 12 kHz (±1 dB)	0.5 Hz ~ 8 kHz (±1 dB)	0.5 Hz ~ 8 kHz (±1 dB)	1 Hz ~ 6kHz(±10%) (0.5 ~ 10k)Hz(±3dB)
Measuring Range (Peak)	±1000 g	±1000 g	±50 g	±50 g	±50 g
Power Supply	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA
Connector Type	Top M5	Side M5	Top M5	Side M5	2-pin (MIL-C-5015)
Weight	9.5 g	9.5 g	13 g	13 g	70 g



Specifications

	CRY436	CRY437	CRY438	CRY441
Sensitivity (160 Hz)	100 mV/g	10 mV/g	10 mV/g	5 pC/g
Frequency Response	1 Hz ~ 12kHz (±10%) 0.5Hz ~ 20kHz(±3dB)	2Hz ~ 8kHz (±1dB)	1 Hz ~ 10kHz (±1dB) 0.6Hz ~ 20kHz (±3dB)	1 Hz ~ 10kHz (±10%)
Measuring Range (Peak)	±50 g	±500 g	±500 g	±2500 g
Power Supply	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	Self-powered
Connector Type	2-pin (MIL-C-5015)	M5	Top M5	Side M5
Weight	48 g	2 g	9,5 g	7.5 g



Specifications

	CRY442	CRY443	CRY445	CRY446
Sensitivity (160 Hz)	100 mV/g	50 mV/g	100 mV/g	10 mV/g
Frequency Response	0.5 Hz ~ 5 kHz (±1dB)	1 Hz ~ 4 kHz (±10%) 0.7 Hz ~ 8 kHz (±3 dB)	1 Hz ~ 4 kHz (±1 dB) 0.5 Hz ~ 8 kHz (±3 dB)	1 Hz ~ 5 kHz (±1 dB)
Measuring Range (Peak)	±50 g	±100 g	±80 g	±500 g
Power Supply	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA	IEPE (2 ~ 10)mA
Connector Type	1/4-28 4-pin	Side M12, 4-pin	Side M12, 4-pin	Side 1/4-28 4-pin
Weight	18 g	95 g	95 g	12 g

Accessories



TA0701 Type 1 Adapter

The TA0701 Adapter is a Type 1 adapter designed for sound leakage measurements of circumaural and supra-aural headphones. It complies with the IEC 60318-1 standard.



TA0501 1/2" to 1" Adapter

The TA0501 Adapter is used to connect a 1-inch microphone and a 1/2-inch preamplifier.



TA0502 1/4" to 1/2" Adapter

The TA0502 Adapter is used to connect a 1/2-inch microphone and a 1/4-inch preamplifier.



TA0503 1/2" to 1/4" Adapter

The TA0503 Adapter is used to connect a 1/4-inch microphone and a 1/2-inch preamplifier.



TA0301 1" Electrostatic Actuator

The TA0301 is a device that complies with the IEC 61094-6 standard and is used to test the frequency response of 1-inch microphones and 1/2-inch microphones (with an adapter required).



TA0302 1/2" Electrostatic Actuator

The TA0302 is a device conforming to the IEC 61094-6 standard, which is used to test the frequency response of 1/2-inch microphones, 1/4-inch microphones (requiring an adapter), and 1/8-inch microphones (requiring an adapter).



TA0515 1/4" to 1/2" Adapter, Base-type

The TA0515 Adapter is used to connect a 1/2-inch microphone to a 1/4-inch preamplifier, suitable for use with the CRY3718 Ear Simulator.



TA0517 1/2" to 1" Adapter, Base-type

The TA0515 Adapter is designed to connect a 1-inch microphone to a 1/2-inch preamplifier, compatible with the CRY3717 6cc Coupler.

Test Fixture



CRY801B Headphone Test Fixture

The CRY801B Headphone Test Fixture is designed for testing over-ear, in-ear, and ANC headphones. Its flexible base minimizes background noise during testing, making it an ideal fixture for acoustic measurements of over-ear headphones on production lines.



CRY802 ATF Hearing Protection Headphone Test Fixture

The CRY802 Headphone Test Fixture is designed for testing hearing protection devices, including over-ear headphones and earplugs. It can be used with the CRY3711 Ear Simulator, making it ideal for measuring insertion loss and the acoustic performance of headphones.



CRY806 TWS Headphone Test Fixture

The CRY806 Headphone Test Fixture is specifically designed for testing TWS headphones. Mounted on a flexible base to minimize background noise, it is easy to assemble and can be used with the CRY3711 and CRY718 Ear Simulators, as well as the CRY3605 Mouth Simulator. This makes it an ideal fixture for TWS headphone testing on production lines.

Test Fixture Kit

CRY801B-S11 Headphone Test Fixture Kit

The CRY801B-S11 can be used for testing in-ear headphones, over-ear headphones, and ANC headphones.

Components:

- CRY801B Headphone Test Fixture
- CRY3711 Ear Simulator (with built-in CYR3202 Measurement Microphone)
- CRY3502 1/2" IEPE Preamplifier
- CRY3602 Mouth Simulator
- BNC Male-to-Male Cable / 1.6m
- SMB Right-Angle to BNC Cable / 1.5m



CRY801B-S12 Headphone Test Fixture Kit

The CRY801B-S12 can be used for testing in-ear headphones and over-ear headphones.

Components:

- CRY801B Headphone Test Fixture
- CRY3718 Ear Simulator
- CRY3202 1/2" Pressure-field Measurement Microphone
- CRY3502 1/2" IEPE Preamplifier
- CRY3602 Mouth Simulator
- BNC Male-to-Male Cable / 1.6m
- SMB Right-Angle to BNC Cable / 1.5m



Calibrator



CRY563A 1/2 inch Sound Calibrator

The CRY563A is a portable 1/2-inch sound calibrator, featuring high stability, compact size, and low power consumption. Its dual sound pressure levels of 94 dB and 114 dB ensure accurate calibration even in noisy environments.



CRY3018 Sound Calibrator IEC 60942 Class 1

The CRY3018 Sound Calibrator is a portable sound source with high stability, compact size, and low power consumption. It features temperature, air pressure, and humidity compensation, and provides dual sound pressure levels of 94 dB and 114 dB, as well as dual calibration frequencies of 250 Hz and 1000 Hz.

Power Supply



CRY575L Dual-Channel Microphone Power Supply

The CRY575L is a dual-channel microphone power supply, providing the constant voltage required for single-supply preamplifiers on each channel. It features high input impedance, low output impedance, low background noise, and a wide frequency response.

The CRY575L offers gain options of 0 dB ($\times 1$) and +20 dB ($\times 10$), with BNC output for easy connection.



CRY575 Three-Channel Microphone Power Supply

The CRY575 is a three-channel microphone power module. Channels 1 and 2 provide the constant current required for IEPE preamplifiers, while Channel 3 supplies the constant voltage needed for single-supply preamplifiers.

The CRY575 offers gain options of 0 dB ($\times 1$), +20 dB ($\times 10$), and +40 dB ($\times 100$), with high input impedance, low output impedance, low background noise, and a wide frequency response.

Specifications

	CRY575	CRY575L
Frequency Response	10 Hz ~ 60 kHz ± 0.5 dB	10 Hz ~ 60 kHz (± 0.5 dB)
Gain	0dB ($\times 1$), +20dB ($\times 10$), +40dB ($\times 100$)	0dB ($\times 1$), +20dB ($\times 10$)
Background Noise	-103 dBV	-119 dBV
Power Supply	4 mA	± 6 V
Input Interface	BNC, DB9	BNC
Output Interface	BNC	DB9



Data Acquisition

Pioneering high-speed, precision signal acquisition technology, we deliver multi-channel synchronized DAQ cards, modular designs, high-dynamic-range ADCs, and real-time AI processing on edge-computing platforms. Our professional-grade solutions provide a complete signal-to-insight toolchain for automated testing, energy and power, rail transit, and scientific research applications.

SonoDAQ & OpenTest

Next Generation

Intelligent Acoustic and Vibration Testing System



SonoDAQ

Next Generation Sound & Vibration DAQ

- Rugged carbon fiber chassis with **IP67 protection**
- **Hot - swappable dual lithium batteries**
- Gigabit Ethernet supporting daisy chaining and **90 W PoE**
- Modular design for **1000+ channels**
- PTP synchronization with sampling accuracy **better than 100 ns**
- **160 dB** dynamic range
- **1000V** electrical isolation between slot
- **Built-in AI and real-time edge computing**
- Local data recording on microSD card



Typical Applications

Electroacoustic testing, NVH, industrial control, aerospace, and other fields.

Product Features



High-Precision Performance

- Sampling rate up to 384 kS/s, 32-bit resolution
- Dual-gain ADC synchronous sampling with seamless data integration, achieving a dynamic range of 160 dB



Technological Innovation

- Proprietary multi-channel synchronous sampling technology: channel-to-channel skew < 100 ns
- Intelligent caching algorithm to prevent loss of high-frequency data
- Supports hot-swappable dual lithium batteries



User-Friendly Design

- Plug-and-play on Windows, Linux, and macOS; full SDK included
- Accompanying data visualization software, supporting real-time waveform display and offline analysis



Reliability Assurance

- Industrial-grade protection standard: IP67, operating temperature range: -40°C to 70°C

Chassis Technical Specifications



SonoDAQ LT

System Configuration
24 Channels

/

/

6 Modules

Dual Ethernet

/

/

Operating Temperature:
-10 °C to 50 °C

Vibration, Shock: EN60068-2

1000 V Slot Isolation

IP43



SonoDAQ Pro

System Configuration
Over 1000 Channels

PTP (IEEE 1588v2)

AI & Edge Computing

6 Modules

Daisy Chain Ethernet + PoE

External microSD Card Storage:
Default 256 GB, Optional Up to 2 TB

GPS & BDS / Wi-Fi

Operating Temperature:
-10 °C to 50 °C

Vibration, Shock: EN60068-2

1000 V Slot Isolation

IP43



SonoDAQ Ultra

System Configuration
Over 1000 Channels

PTP (IEEE 1588v2)

AI & Edge Computing

6 Modules

Daisy Chain Ethernet + PoE

External microSD Card Storage:
Default 256 GB, Optional Up to 2 TB

GPS & BDS / Wi-Fi

Operating Temperature:
-40 °C to 70 °C

Vibration, Shock: GJB 150

1000 V Slot Isolation

IP67

Module Technical Specifications

Released



Analog In - Medium

4 Channels, BNC

32-bit Resolution

Maximum Sampling Rate
of 204.8 kHz

Input Range: 31.4 Vpk

Dynamic Range: 160 dB

TEDS

Noise Floor: ≤ -117 dBV

Crosstalk:
 $\leq (115 \text{ dB} + 0.1 \mu\text{V})$ at 20 kHz

In Planning



Analog In - Lite

4 Channels, BNC

24-bit Resolution

Maximum Sampling Rate
of 204.8 kHz

Input Range: 10 Vpk

Dynamic Range: 136 dB

TEDS

Noise Floor: ≤ -116 dBV

Crosstalk:
 $\leq (115 \text{ dB} + 0.1 \mu\text{V})$ at 20 kHz

In Planning



Analog In - High

4 Channels, BNC

32-bit Resolution

Maximum Sampling Rate
of 409.6 kHz

Input Range: 230 Vpk

Dynamic Range: 160 dB

TEDS

Noise Floor: ≤ -121 dBV

Crosstalk:
 $\leq (130 \text{ dB} + 0.1 \mu\text{V})$ at 20 kHz

Contents

Sensors

Data Acquisition

Acoustic Imaging

Noise Measurement

Electroacoustic Test

Released



In Planning



Analog Output + Class D

Analog Output Mode	Amplifier Mode
2 Channels, BNC	2 Channels, BNC, Class D Amplifier
32-bit Resolution	Output Impedance: 190 mΩ
204.8 kHz / 192 kHz Sampling Rate	Minimum Load: 4 Ω
Output Voltage: 0–21.21 Vrms (60 Vpp) Balanced Mode 0–10.61 Vrms (30 Vpp) Unbalanced Mode	Output Voltage: 9.475 Vrms (8 Ω load)
Frequency Range: 0.1 Hz – 160 kHz	Supported Output Power: 10 W @ <0.2% THD+N (8 Ω load) 6 W @ <0.3% THD+N (4 Ω load) TEDS
Amplitude Accuracy: ±0.03 dB	Noise Floor: ≤ -80 dBV
Frequency Accuracy: ±0.0003% + 100 uHz	Impedance Measurement Range: 4 Ω – 600 Ω
Crosstalk: ≤ (-130 dB + 0.2 μV) to 20 kHz	Impedance Measurement Accuracy: ≤ 0.5% (20 Hz – 20 kHz)

Analog Output - High

Analog Output Mode
2 Channels, BNC
32-bit Resolution
204.8 kHz / 384 kHz Sampling Rate
Output Voltage: 0–26.66 Vrms (75.4 Vpp) Balanced Mode 0–13.33 Vrms (37.7 Vpp) Unbalanced Mode
Frequency Range: 5 Hz – 180 kHz
Amplitude Accuracy: ±0.04 dB
Frequency Accuracy: ±0.0003% + 100 uHz
Crosstalk: ≤ (-130 dB + 0.2 μV) to 20 kHz

In Planning

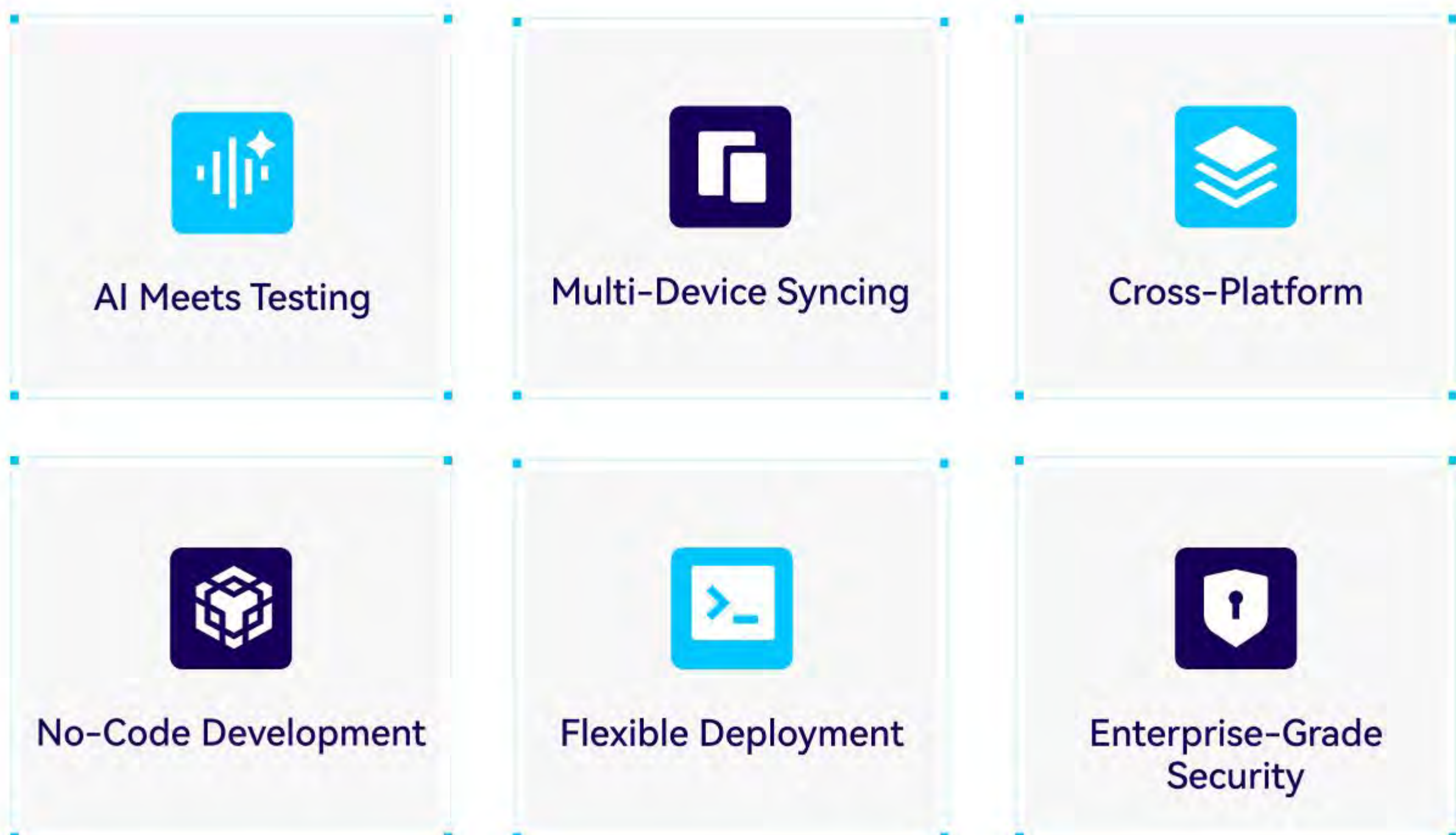
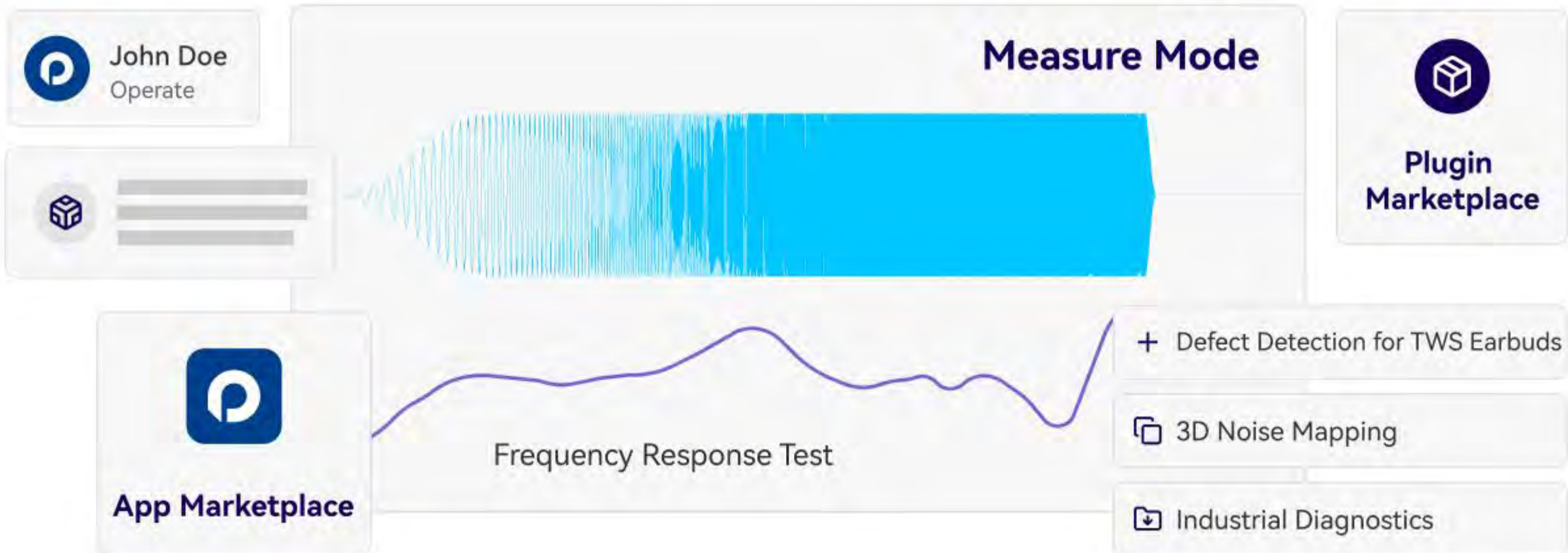
In Planning

NO.	Module	Features	NO.	Module	Features
1	Bluetooth	2 × SMA Bluetooth 5.3	7	HDMI	2 × HDMI Audio In and Out
2	LE Audio	Bluetooth Low Energy	8	DSIO (Digital Serial IO)	I2S / TDM
3	A2B	4 × Phoenix Terminal	9	Battery Module	12.6V / 6600mAH
4	PDM	3 × PDM	10	STG	8 × Strain Gauge
5	LVI Module	8 × Logic Voltage / Tacho	11	THI	8 × Thermocouple
6	CHG	4 × Charge Input	12		 More



A new acoustic measurement software
Revolutionize acoustic measuring with openness, AI, and universal compatibility

Q www.opentest.com



Contents

Sensors

Data Acquisition

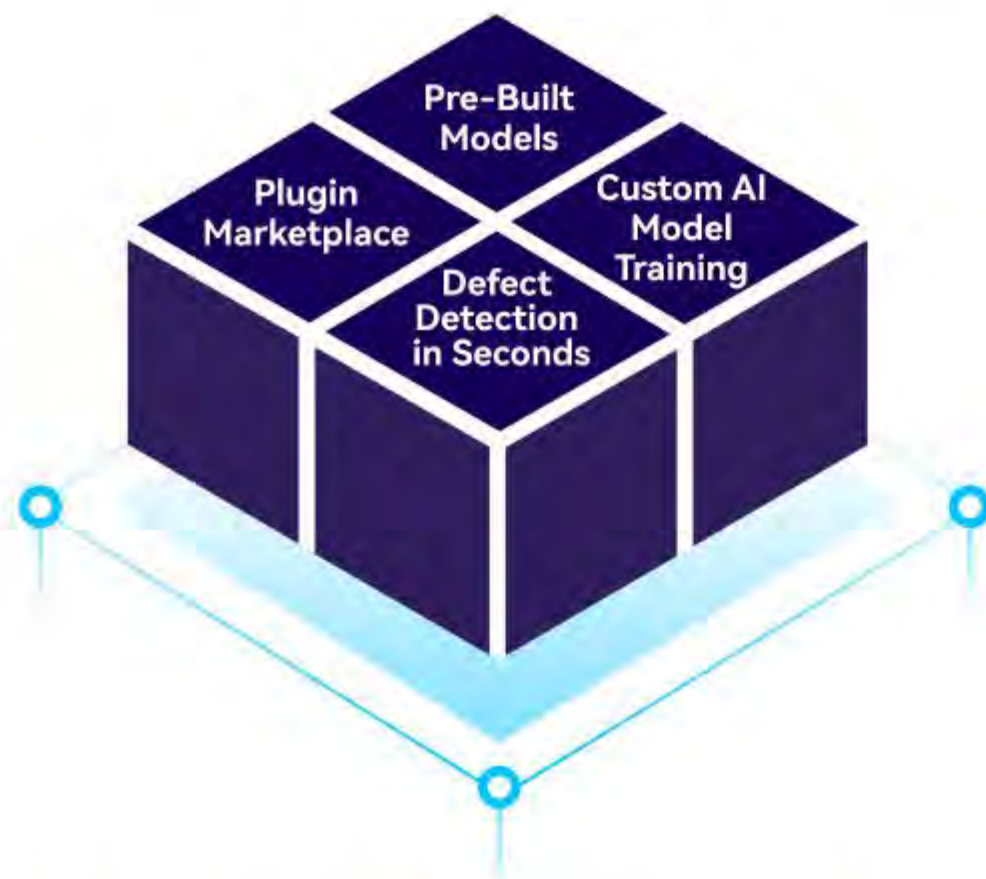
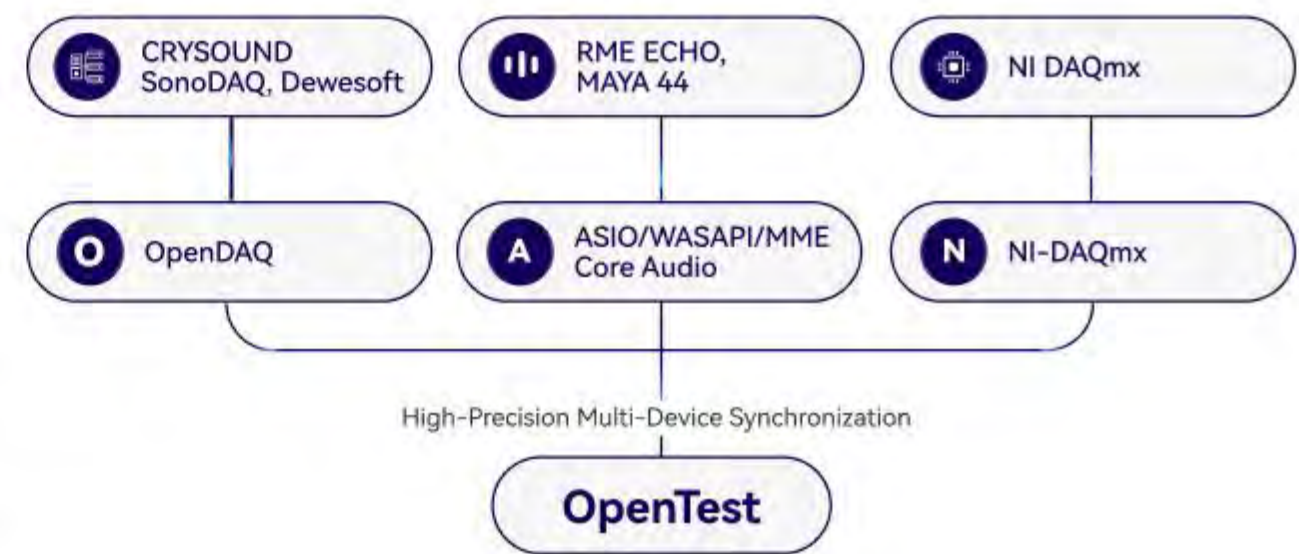
Acoustic Imaging

Noise Measurement

Electroacoustic Test

Manage Multi-Brand Hardware On One Platform

OpenTest delivers cross-platform compatibility across professional-grade interfaces, consumer audio devices, and embedded systems, providing centralized control of multi-vendor hardware to eliminate driver conflicts and streamline workflows.



Pluggable Architecture

- Pre-Built Models
- Custom AI Model Training
- Support for Python/LabVIEW/MATLAB Algorithm Integration
- Complete API for Students to Write Personalized Testing Logic
- One-Stop Signal Acquisition and Custom Algorithm Processing

Adaptive Orchestration Framework

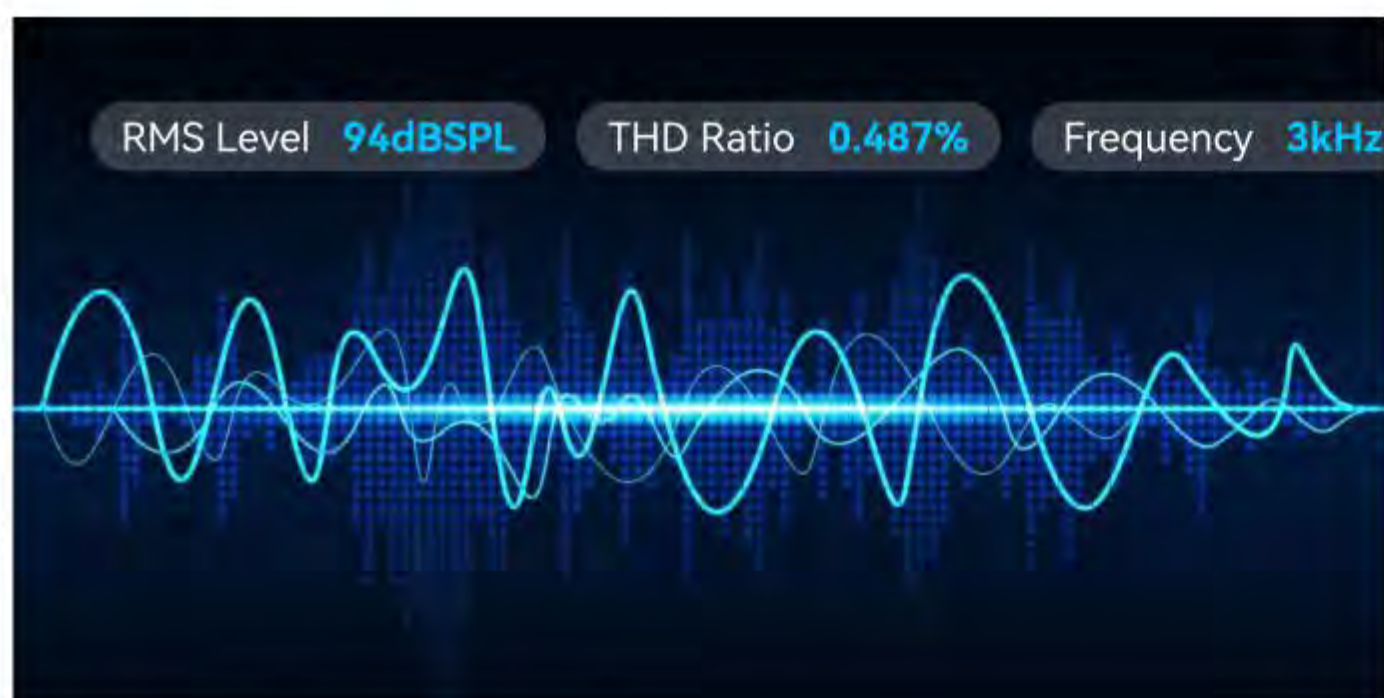
- **No-Code Workflows**
Drag-and-drop interface to design test sequences (e.g., signal generation → data capture → AI analysis → report generation).
- **Code-Friendly**
Call Python, MATLAB, LabVIEW scripts or REST APIs for custom logic.



Industry Solutions

			
Consumer Electronics AI-powered defect detection for TWS earbuds, speaker performance validation, etc.	Industrial Diagnostics Predictive maintenance 2.0, smart production line QC, etc.	Research & Innovation Acoustic material R&D, 3D noise mapping, etc.	Automotive Engineering Full-vehicle NVH (noise, vibration, harshness) profiling

Features



Monitors & Meters

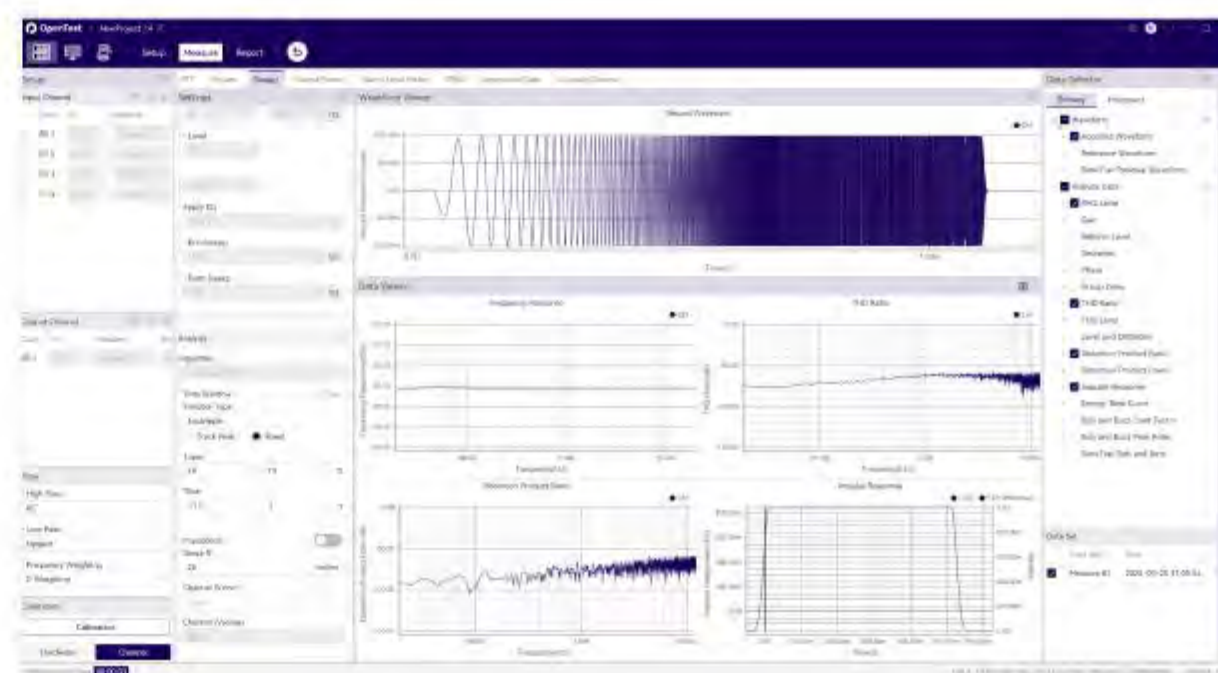
Dynamic Tracking, Instant Anomaly Detection

Continuous waveform monitoring and FFT spectrum analysis enable real-time identification of signal anomalies, such as clipping, clock jitter, and other issues. It simultaneously tracks key metrics, including RMS level, THD, SND, and frequency response, with configurable high-pass/low-pass filters and A/C/Z frequency weighting.

Sweep Analysis

Full-Range Rapid Measurement

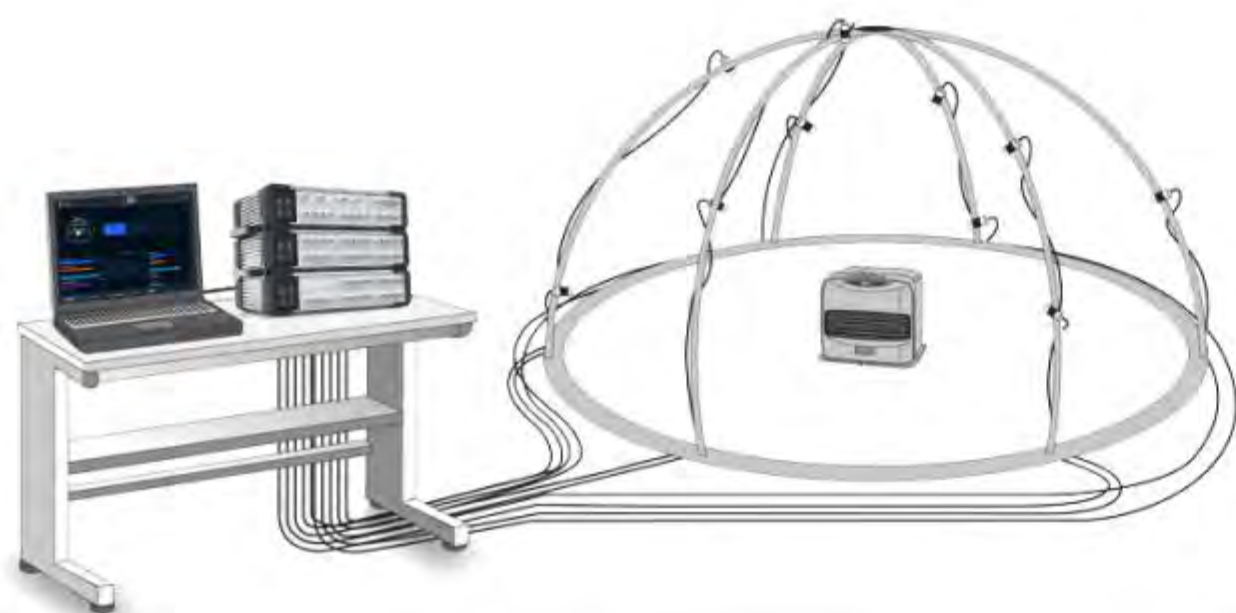
This function utilizes logarithmically varying sweep signals to extend energy accumulation time in low-frequency ranges, ensuring measurement accuracy. At the same time, it significantly improves test efficiency. It enables fast and reliable testing for applications such as resonance peak detection in speakers, phase continuity analysis in headphones, and frequency response flatness evaluation in amplifiers. Results automatically comply with industry standards and generate professional test reports. It is an indispensable tool for audio R&D, production, and quality control.



Sound Power Testing

Precise Quantification of Acoustic Performance

This solution supports sound pressure-based sound power measurement, fully compliant with international standards ISO 3744 (Engineering Method), ISO 3745 (Precision Method), and ISO 3746 (Survey Method), meeting various accuracy requirements in different scenarios. It is suitable for R&D and quality control in consumer electronics, automotive audio systems, and professional audio equipment.



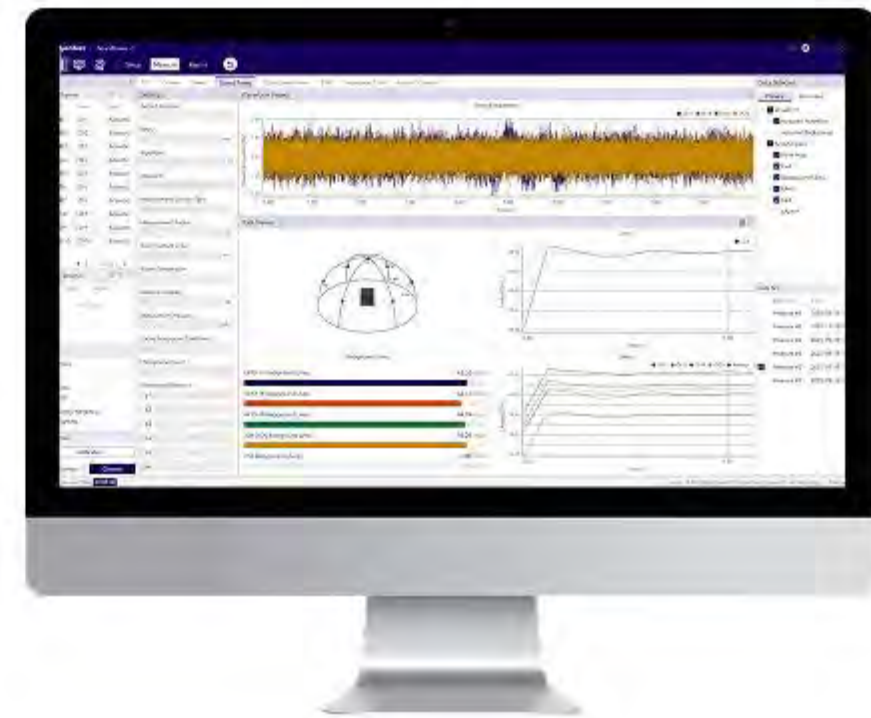
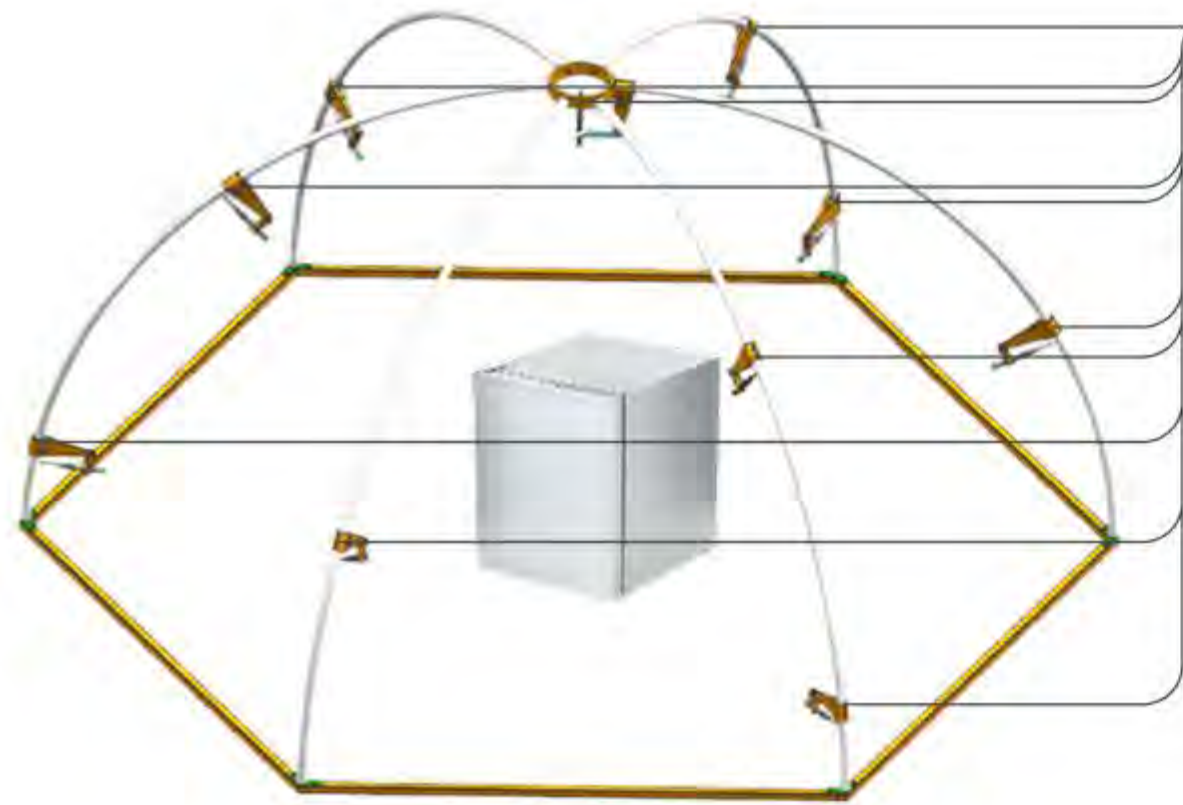
Lightweight & Easy Deployment

Cross-Platform Compatibility (Windows/Linux/macOS)

Multi-Language Support (Python/LabVIEW/MATLAB)

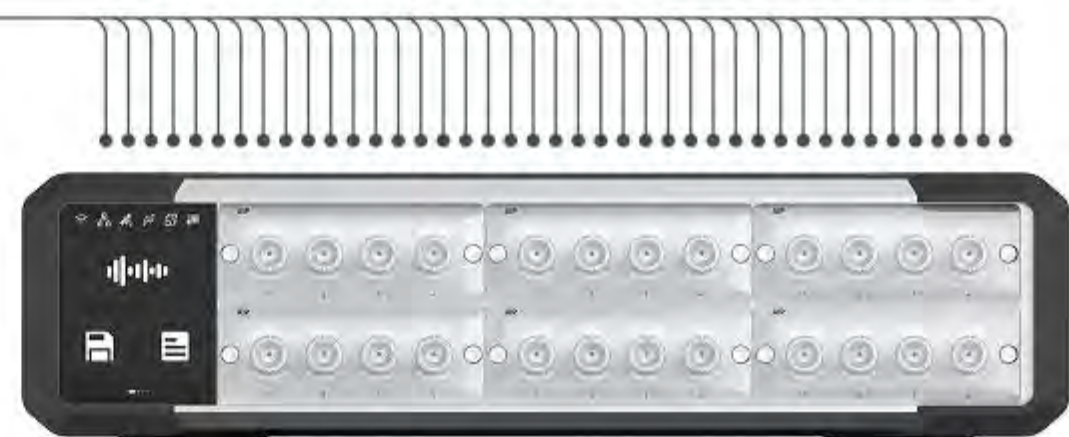
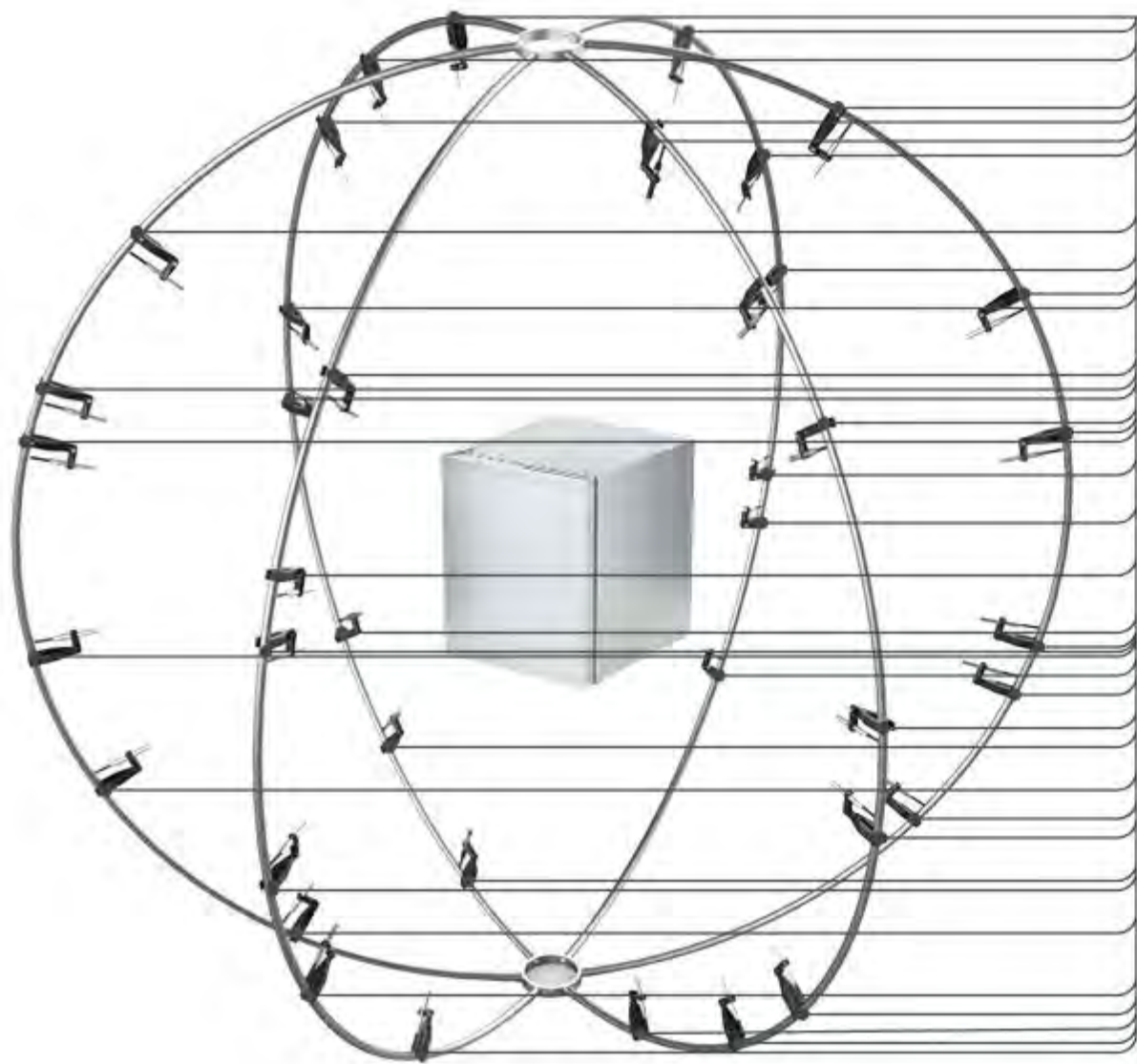
To learn more, please visit www.opentest.com

Sound Power



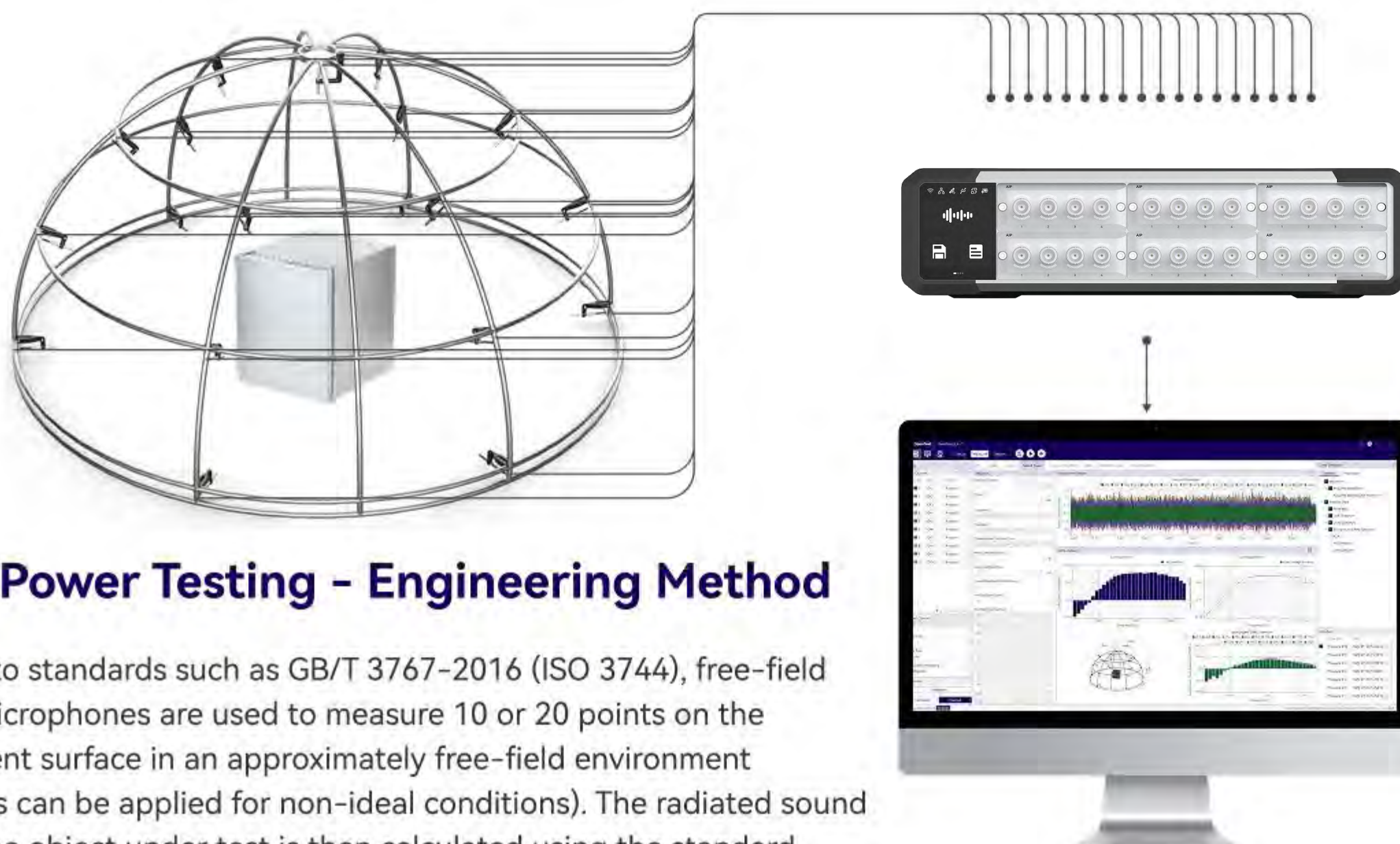
Sound Power Testing - Survey Method

According to standards such as GB/T 3768-2017 (ISO 3746), free-field 1/2-inch microphones are used to measure 4–10 points on the measurement surface. The radiated sound power of the object is then calculated using the standard algorithm.



Sound Power Testing - Precision Method

According to standards such as GB/T 6882-2016 (ISO 3745), free-field 1/2-inch microphones are used to take measurements at 20 or more points on the measurement surface in an anechoic or semi-anechoic environment. The radiated sound power of the object under test is then calculated using the standard algorithms.



Sound Power Testing - Engineering Method

According to standards such as GB/T 3767-2016 (ISO 3744), free-field 1/2-inch microphones are used to measure 10 or 20 points on the measurement surface in an approximately free-field environment (corrections can be applied for non-ideal conditions). The radiated sound power of the object under test is then calculated using the standard algorithm.

System Components



Test Rack

- Standardized test point placement
- Quick microphone mounting



OpenTest Software

- Performs sound power measurements using the surface sound pressure method
- Applies background noise and environmental corrections
- Analyzes data according to standards and outputs sound power and other results



SonoDAQ Pro

- Microphone signal collection
- Multi-channel parallel acquisition
- Data transmission to host computer



Measurement Microphone Set

- Meets GB/T 3785.1 Class 1 Accuracy Requirements

Bracket

CRY806 Hemispherical Bracket (1 Meter Radius)

CRY806 is easy to install and suitable for various on-site testing requirements. It allows quick and precise mounting of microphones on the hemispherical surface specified by testing standards, ensuring accurate measurement of sound power levels.

Supported Standards

- GB/T 3768-2017 (ISO 3746)
- GB/T 3767-2016 (ISO 3744)
- GB/T 6882-2016 (ISO 3745)
- Multi-point measurement
- High stability
- Flexible design for easy use and adjustment



Data Acquisition Hardware

CRY2708 & CRY2716 Multichannel Data Acquisition Card

The CRY2708 and CRY2716 multi-channel noise and vibration acquisition cards are high-performance testing instruments. This system supports multi-point testing and can meet the needs for noise and vibration testing in various scenarios, and has been widely used in household appliance noise testing, industrial quality control, and vehicle noise assessment.

Main Features

- High-precision acquisition: Supports IEPE/ICP sensor input, with 8 or 16 channels per device
- Flexible software: User-friendly OpenTest software with analysis functions including time domain, sound pressure, vibration, octave band, FFT, and sound power
- Network integration: RJ45 interface, TCP/IP support for industrial monitoring, with programmable interfaces for system integration
- Stable performance: Reliable operation in various environments, ensuring accurate data

Applications

- Acoustic monitoring of industrial equipment to detect faults
- Appliance noise testing to ensure compliance with standards
- Vehicle noise analysis to enhance ride comfort
- Acoustic monitoring on production lines to ensure product quality
- Environmental noise monitoring for assessment and control
- High-precision data support for acoustic research
- Integrating with smart platforms for real-time data transmission and remote monitoring



Technical Specifications

	CRY2708	CRY2716
Connection Method	RJ45	RJ45
Number of Channels	8	16
Channel Interface	BNC	BNC
Input Type	DC / IEPE	DC / IEPE
IEPE Excitation Source	4 mA / 24 V	4 mA / 24 V
Gain	x1 / x10 / x100	x1 / x10 / x100
Signal Input Range	x1 Gain: 7.32 Vrms x10 Gain: 732 mVrms x100 Gain: 73 mVrms	x1 Gain: 6.958 Vrms x10 Gain: 751 mVrms x100 Gain: 75.1 mVrms
Sampling Rate	128kHz/64kHz/32kHz/16kHz/8kHz	256kHz/128kHz/64kHz/32kHz/16kHz/8kHz
Dimensions	269 (W) × 68 (H) × 234 (D) mm	269 (W) × 68 (H) × 234 (D) mm
Weight	2.5kg	2.5kg
Dimensions	220V, 50Hz / 110V, 60Hz	220 V, 50 Hz / 110 V, 60 Hz

SonoDAQ

The SonoDAQ series is a new-generation multi-physics data acquisition system. It not only captures sound and vibration signals with high accuracy, but also measures voltage, strain, temperature, and other physical quantities—meeting diverse testing needs across multiple scenarios. With a modular design, users can easily swap modules without specialized tools, enabling one system to flexibly cover a wide range of applications. Built with advanced technology, SonoDAQ combines a robust enclosure, excellent build quality, and superior performance, ensuring reliability in demanding environments while delivering precise and efficient measurements.

Main Features

- Modular design, up to 24 channels per unit
- Easy module replacement for flexible testing scenarios
- Dual CAN-FD channels for efficient, high-speed data acquisition
- Supports both Gigabit Ethernet and USB communication
- Multi-device synchronization for parallel data collection
- Host computer communication via the OpenDAQ protocol
- Compatible with third-party testing software for collaborative testing and analysis

Applications

- High-precision NVH analysis for vehicle performance and quality
- Acoustic evaluation and intelligent diagnostics for consumer electronics
- Predictive monitoring to improve efficiency and yield
- Reliable noise, vibration, and structural monitoring for aerospace applications
- Structural health and noise control in trains, metros, and infrastructure to enhance passenger comfort and safety



Technical Specifications

Number of Input Channels
Sampling Method
ADC Sampling Bit Depth
ADC Sampling Rate
Input Method
IEPE Power Supply
Test Frequency Range
Voltage Input Range
Gain
Dynamic Range
Background Noise
Mechanical Parameters

SonoDAQ Pro

24 Channels
Parallel Synchronous Continuous Sampling
32-bit
24 kHz ~ 204.8 kHz Multi-Range Adjustable
Voltage / IEPE, Software Configurable
4 mA (24 VDC)
0.1 Hz ~ 90 kHz
1.3 uVrms ~ 31.4 Vrms
-20 dB, -10 dB, 0 dB, +10 dB, +20 dB
Single Range > 120 dB, Full Range > 160 dB
≤1.3 uVrms
314 mm × 198 mm × 79 mm, approximately 4 kg

CRY333N-S01

1/2" Free-Field Prepolarized High-Sensitivity Measurement Microphone Set

The CRY333N-S01 is a free-field, prepolarized microphone and preamplifier set, specifically designed for automotive NVH noise testing.

Its frequency response closely aligns with the auditory range of the human ear, making it ideal for precise noise detection. The CRY333N-S01 is also widely applied in electroacoustic measurements, audio testing, and acoustic research.

Main Features

- Applications of high-sensitivity free-field microphones
- Excellent compatibility
- TEDS measurement microphone set
- Calibration

Each CRY SOUND microphone set is factory-calibrated using traceable equipment and comes with a calibration certificate.



Technical Specifications

CRY333N-S01

Sound Field Type	Free Field
Sensitivity (± 2 dB)	50 mV/Pa, -26 dB re 1V/Pa
Frequency Response	3.15 Hz ~ 20 kHz ± 2 dB
Polarization Voltage	0 V
Dynamic Range (re. 20 μ Pa)	17 dBA-132 dB
Operating Temperature Range	-30°C ~ +70°C (-22°F ~ +158°F)
Temperature Coefficient	0.012 dB/°C (-10°C ~ +50°C) 0.007 dB/°F (+14°F ~ +122°F)
Static Pressure Coefficient	-0.01 dB/kPa
Operating Humidity Range	0-90% RH no condensation
Humidity Coefficient	< 0.1 dB (0 ~ 90% RH no condensation)
Equalization Method	Rear Equalization
IEC 61094-4 Type	WS2F
Output Impedance	< 50 Ω
Maximum Output Voltage	>8.0 Vp
DC Bias Voltage	12 V ± 2 V
Current Source	IEPE (2 mA ~ 20 mA)
Typical Operating Current	4 mA
Interface Type	BNC



One-Click Calculation and Automatic Sound Power Report Generation

- Supports multiple international standards for sound power testing
- Automatically generate reports and support customizing and adjusting templates, including report descriptions, selecting test data, adjusting displayed content

💡 Solves issues with calculation, report writing, and standards familiarity

Intelligent Guided Testing, Beginner-Friendly

- Provides preset device layouts (hemisphere, parallelepiped, spherical)
- Step-by-step flowchart: sensor connection → calibration → data collection → calculation → report generation
- Multilingual support, ideal for small/medium factories and overseas teams

💡 Reduces technical barriers, simplifies operations, lowers training costs

Real-Time Sound Power Monitoring with Acoustic Spectrum Analysis

- Displays real-time sound pressure and sound power level graphs
- Supports multi-channel synchronization with external data (current, speed, etc.)

💡 Detects sudden anomalies and simplifies debugging

Open Interface, Supports Various Microphones / Data Acquisition Cards

- Provides SDK/API for LabVIEW, MATLAB, and Python integration
- Works with major acoustic front-end brands (CRY2708, CRY2716, SonoDAQ, NI, Dewesoft, AP, etc.)

💡 Solves closed-interface and low-reuse issues



Acoustic Imaging

Based on real-time beamforming algorithms, our acoustic imaging technology enables precise localization of gas leaks, partial discharge, and mechanical degradation. It offers multi-modal solutions for handheld, drone-mounted, and online monitoring, empowering intelligent operation and maintenance in industries such as power, energy, and manufacturing.

「Acoustic Imaging Camera」

- 208 MEMS Microphones for Precise Partial Discharge & Gas Leak Localization
- Intelligent PRPD Mapping and Discharge Type Recognition
- Integrated Acoustic, Optical and Thermal Imaging
- Supports Bluetooth, Wi-Fi
- Swappable Battery with Extended Operating Time



CRY8120 Series Acoustic Imaging Camera

Real-time Visualization and Location of Far-Field Sound Sources

CRY8120 series utilizes a microphone array with over 208 high-sensitivity MEMS microphones to achieve ultra-high-resolution acoustic imaging. With advanced algorithms, the test bandwidth is extended to 100 kHz, and the computing power of the hardware platform is increased tenfold.

The Best Performance in the Industry

CRY8120 series is equipped with 208 high-sensitivity MEMS microphones, a 100 kHz bandwidth, and the fastest processor in the industry. CRY8120 can accurately locate smaller gas leaks at greater distances.

Thermal & Acoustic Imaging Display Simultaneously

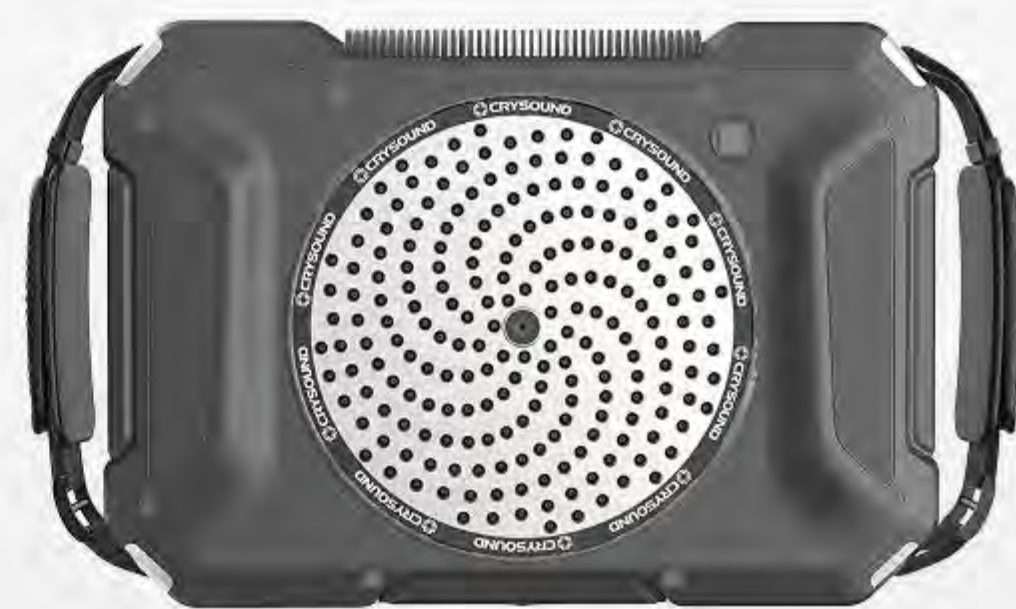
CRY8120 series combines thermal imaging and acoustic imaging, with the two technologies complementing each other to enhance detection accuracy. This design enables real-time synchronized display of both thermal and acoustic images.

New Software for Leak Detection & Partial Discharge (PD)

CRY8120 series boasts a fully revamped software interface that simplifies the detection of gas and vacuum leaks, partial discharge (PD) localization, and PD type identification. This user-friendly interface enables operators to swiftly and accurately identify the sources of leaks, minimizing downtime and boosting operational efficiency.

Advanced Reporting Software

The wireless data transmission feature enables users to seamlessly transfer inspection data from the acoustic imager to the reporting software, eliminating the hassle of wiring. Additionally, the software supports infrared data analysis and offers powerful post-processing capabilities for both acoustic and thermal images.



-  **Frequency Range**
2k - 100kHz
-  **The Smallest Detectable Leak Amount in the Industry**
10 m, 2.7 bar, 0.0029 L/min
0.5 m, 1.9 bar, 0.0028 L/min
-  **Intrinsically Safe**
II 3 G Ex ic IIC T5 Gc
II 3 D Ex ic IIC T100°C Dc
-  **Expandable Capability**
Thermal imaging sensor, ultrasonic sensor, valve internal leakage sensor
-  **Multiple Software Functions**
Supports Wi-Fi, Bluetooth, GPS positioning
-  **Replaceable Battery**
Equipped with a smart battery, a single battery provides up to 5 hours of runtime

Technical Specifications

Type	CRY8124	CRY8125
Gas Leak Detection	Included	Included
PD Identification	Included	Included
Explosion-proof Rating	None	II 3 G Ex ic IIC T5 Gc II 3 D Ex ic IIIC T100°C Dc

Acoustic Specifications

Microphone Array	208 channels
Frequency	2k ~ 100k Hz
Test Distance	0.2 ~ 200 m

Basic Specifications

Size	270 × 190 × 51 mm
Weight	1.4 kg
FOV	66°
Focal Length	4.3 mm fixed focal length
Camera Pixels	13M pixels
Digital Zoom	1× ~ 6×
Wi-Fi	802.11a/b/g/n/ac
Bluetooth	BT 5.2
GNSS	GPS+BDS+GLONASS+GALILEO+QZSS
Operating Temp.	-20 ~ +50 °C, 10 ~ 95 % no cond.
Storage Temp.	-20 ~ +70 °C, 10 ~ 95 % no cond.
USB-C 1	USB 3.0 for charging, HDMI, data export
USB-C 2	USB 2.0, USB-C sensor
3.5 mm Audio Jack	Headphone output
IP Rating	IP54

Storage

Storage Space	64 GB (internal), 64 GB (microSD card)
Storage Format	.jpg (picture) .mp4 (video) .wav (audio recording) .cdat (data)
Recording Duration	5 minutes

Screen

Resolution	1920 × 1200
Size	8 inches
Touch Screen	capacitive touch screen
Brightness	600 nits, auto adjustment

Analog Input

Channel	4-channel analog input
Frequency Range	20 ~ 100k Hz
Power	IEPE, phantom power

Contents

Sensors

Data Acquisition

Acoustic Imaging

Noise Measurement

Electroacoustic Test

CRY2600 Series Industrial Acoustic Imager

High-Performance Microphone Array

CRY2600 series industrial acoustic imager uses cutting-edge technology and is equipped with a 12 cm diameter microphone array with up to 128 channels. The device employs beamforming technology to accurately locate sound sources. Advanced algorithms convert this data into detailed acoustic maps.

Gas/Vacuum Leak Detection & Leak Rating

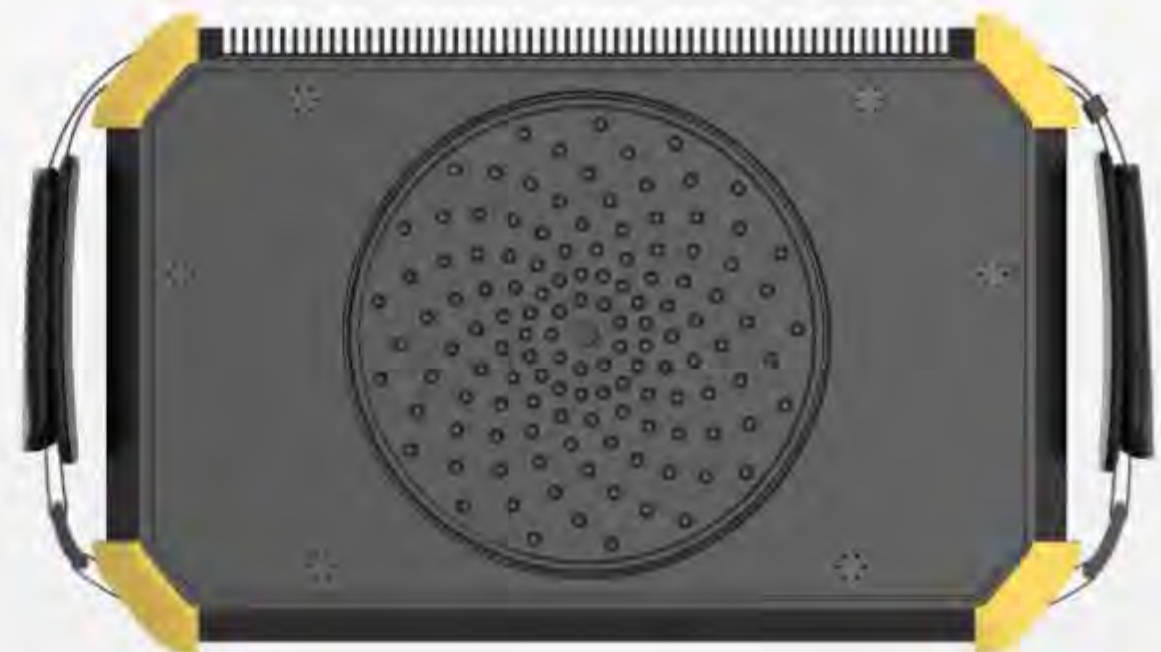
Using advanced acoustic imaging technology, the CRY2600 series can quickly detect leaked gases and accurately locate the leak source. The CRY2600 is also capable of quantifying the amount of leakage, enabling precise assessment of the economic losses caused by gas leaks.

PD Localization & PD type Recognition

CRY2600 series provides advanced capabilities for partial discharge (PD) localization and type recognition, essential for evaluating the integrity of electrical insulation in high-voltage equipment. Its high spatial resolution allows for precise pinpointing of PD sources within the equipment.

Designed for Harsh Industrial Environments

Designed to be exceptionally robust and durable, the CRY2623 is capable of withstanding significant pressure and unexpected drops. Built with aluminum alloy materials and engineered for resilience, it ensures reliable performance in challenging environments.



-  **Frequency Range**
2k -48kHz
-  **Test Distance**
0.5-150 m
-  **IP54 Rating**
High IP rating, suitable for various harsh environments
-  **High Efficiency, Accuracy, and Range**
Positioning error within ± 3 mm at 1 meter, with a testing range of 150 meters.
-  **Strong Anti-Interference Capability**
Noise filtering algorithm, focusing, and other functions
-  **Multi-Point Imaging, Beamforming**
Comprehensive software features, capable of locating multiple fault positions simultaneously

Technical Specifications

Type	CRY2620	CRY2623	CRY2624
Gas Leak Detection	Included	Included	Included
PD Identification	None	Included	Included
Microphone Array	64 channels	128 channels	128 channels
Explosion-proof Rating	None	None	Ex ic IIC T5 Gc
Frequency Range	2k ~ 40k Hz	2k ~ 48k Hz	2k ~ 48k Hz
Leakage Detection	10 m 5 bar 144 ml/min	10 m 5 bar 55 ml/min	10 m 5 bar 55 ml/min
	0.5 m 5 bar 72 ml/min	0.5 m 5 bar 33 ml/min	0.5 m 5 bar 33 ml/min

Acoustic Specifications

Dynamic Range	0.5 dB ~ 12 dB adjustable
Test Sound	28 ~ 120 dBA
Pressure Range	
Threshold	-40 ~ 100 dB

Camera

FOV	62°
Focal Length	3.04 mm fixed focal length
Pixel	8M pixels

Screen

Resolution	1024 × 600
Size	7 inches
Color Palette	Rainbow, grayscale, iron red
Brightness	Adjustable

Basic Specifications

Size	272 × 174 × 42 mm
Weight	1.7 kg
Storage	8 GB internal storage; 64 GB external storage, expandable up to 256 GB
Data Type	.jpg(picture), .mp4(video), .wav(audio recording)
Recording Duration	5 minutes
Battery Life	4.5 h
Charging	USB-C interface, supporting USB PD protocol
Power	Charging power 15W, 29W while charging and using
Interface	USB-C 3.0, 3.5mm headphone jack
IP Rating	IP54
Certificate	CE-EMC,CE-ROHS,FCC,PSE
Language	Simplified Chinese, Traditional Chinese, English, Korean, French, Japanese, Russian, German, Italian, European Spanish, Portuguese, Hungarian, Dutch, Cambodian, Vietnamese, Turkish, Thai, Macedonian, Swedish, Bulgarian, LATAM Spanish, Polish, Czech

CRY8500 Series SonoCam Pi Acoustic Camera Array

Customizable and Replaceable Mic Array

Up to 208 digital MEMS microphones and an array with a diameter of 30 cm. The SonoCam Pi is a hand-held acoustic camera array development kit designed for quick and accurate sound imaging application.

Optional Far-Field Beamforming or Near-Field Holography

The SonoCam Pi development kit is capable of both near-field and far-field measurements in a single system.

Beamforming frequency range: 400 Hz – 20 kHz

Holography frequency range: 40 Hz – 20 kHz

API for Real-time Waveform Output

SonoCam Pi provides API for real-time 208 channels waveform and video output. Users can develop their own algorithm and application with the hardware platform. Algorithms can be applied on PC via Matlab software.

Class 1 Frequency Response

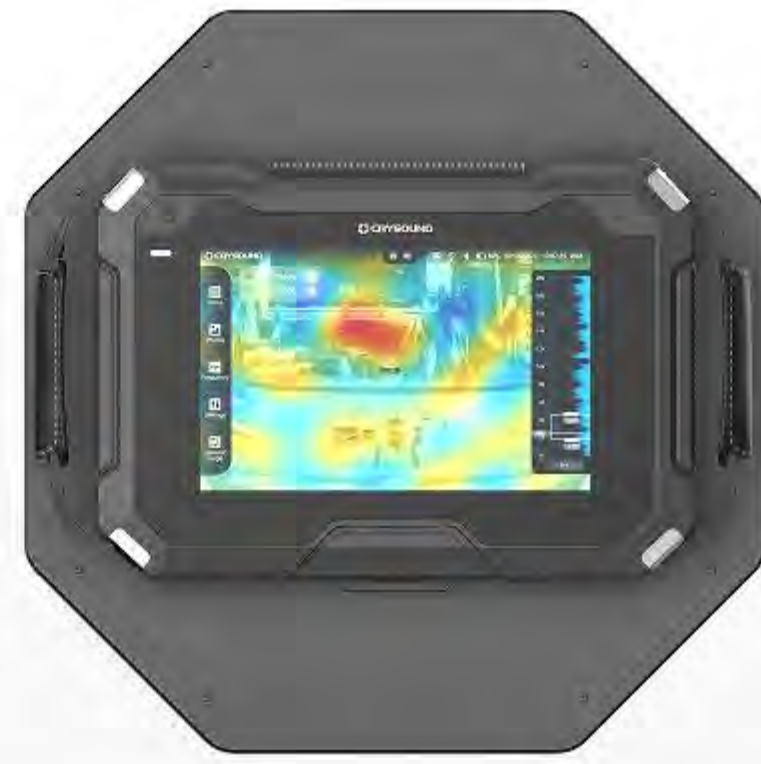
SonoCam Pi is designed and calculated as sound level meter performance, meeting the Class 1 frequency response requirements, enabling you to show highly accurate sound levels and localize where sound is coming from on the 8-inch touch display.

Drone Detection and Tracking up to 500 Meters

Capable of detecting and tracking drones up to 500 meters away

Up to 8 Hours of Operation

A single rechargeable Li-ion battery provides up to 4 hours of continuous operation. SonoCam Pi comes standard with 2 batteries, offering a total runtime of up to 8 hours.



Frequency Range

Reach up to 40 Hz ~ 20 kHz with Near-field Acoustic Holography App



Dynamic Range

Up to 40 dB with advanced algorithm



Measurement Distance

0.01 m ~ 500 m



Multi-Analysis Mode

Sound pressure, velocity and sound intensity



Multiple Software Functions

- Beamforming and NAH
- Sound pressure and transfer paths visualization
- Real time time-domain waveform
- Spectrogram and FFT spectrum charts
- Acoustic weak spots and radiating components visualization
- Recording measurement by photos and videos

Technical Specifications

Type	CRY8504	CRY8505
Far-field Beamforming	Included	Included
Near-field Acoustic Holography	None	Included
Matlab API and Demo Apps	Included	Included
Acoustic Specifications		
Microphone Array	208 channels	
Frequency Range	40 ~ 20k Hz	
Test Distance	0.01 ~ 500 m	
Basic Specifications		
Size	334 × 334 × 92.5 mm	
Weight	2.9 kg	
FOV	94°(H) x 76 °(V)	
Focal Length	2.3 mm	
Camera Pixels	13M pixels	
Digital Zoom	1× ~ 6×	
Wi-Fi	802.11a/b/g/n/ac	
Bluetooth	BT 5.2	
Operating Temp.	-20 ~ +50 °C, 10 ~ 80 % no cond.	
Storage Temp.	-20 ~ +70 °C	
USB-C 1	USB 3.0 for charging, HDMI, data export	
USB-C 2	USB 2.0 for USB sensor	
3.5 mm Audio Jack	Headphone output	
MicroSD Card Slot	External storage	
IP Rating	IP20	
Storage		
Storage Space	64 GB (internal), 64 GB (external microSD card)	
Storage Format	.jpg (picture) .mp4 (video) .wav (audio recording) .cdat (data)	
Recording Duration	Maximum 5 minutes	
Screen		
Resolution	1920 × 1200	
Size	8 inches	
Touch Screen	capacitive touch screen	
Brightness	600 nits, auto adjustment	
Analog Input		
Channel	4-channel analog input	
Frequency Range	20 ~ 100k Hz	
Power	IEPE, Phantom power supply	

CRY2600M Series Fixed Acoustic Imaging Camera

24/7 Real-Time Monitoring

The CRY2623M offers continuous, round-the-clock real-time monitoring, which is essential for industries that require constant surveillance of acoustic data and anomalies, such as manufacturing plants, energy facilities, and critical infrastructure.

Gas Leak Detection & PD Type Recognition

CRY2623M captures the sound signals generated by leaks through a highly sensitive microphone array and displays the leak points in real-time using a sound image cloud map, enabling quick fault repairs. The CRY2623M can accurately capture high-frequency discharge signals in insulated equipment, identify the discharge type, and assist in optimizing maintenance processes to improve equipment reliability.

Integration with Robotic Dogs & Wheeled Robots

Integrating the CRY2623M with robotic dogs and wheeled robots significantly amplifies monitoring and surveillance capabilities across diverse environments. This synergy leverages the camera's continuous acoustic signal detection to provide real-time insights into environmental conditions and potential anomalies.

Powerful, Web-Based Software Platform

The web-based software platform is engineered to offer robust monitoring and analysis capabilities, facilitating efficient data management and insightful diagnostics. It enables continuous data collection, secure storage, and real-time analysis of acoustic signals.



-  **Frequency Range**
2k -48kHz
-  **IP Rating**
IP66
-  **Excellent Testing Performance**
Detects 53CCM leaks at 10 meters, unaffected by gas type
-  **Powerful Web-Based Platform**
Real-time data display, support data storage and alarm recorder
-  **Outstanding Expandability**
Multi-device expansion with open secondary development interface
-  **Excellent Compatibility**
Multi-protocol support, cross-platform compatibility

Product specifications

Type	CRY2623M
Gas leak detection	Included
PD identification	Included
IP rating	IP66
Acoustic specifications	
Microphone array	128 channels
Frequency	2k ~ 48k Hz
Test distance	0.5 ~ 50 m
Basic specifications	
Size	183 × 169 × 85 mm
Weight	1.6 kg
Pixel	8M pixels
FPS	25FPS
Focal length	3.04 mm fixed focal length
Installation method	Bottom 1/4-20UNC threads & M5 screw mounting
Operating temp.	-20 ~ +60 °C
Storage temp.	-40 ~ +80 °C
Humidity	10% ~ 95% ,no cond.
Operating voltage	DC 12 ~ 20V
Power	14W
Storage	
Internal storage	8 G
External storage	64 G (microSD card)
Storage format	.jpg (picture) .mp4 (video) .wav (audio recording)
Software	
Development protocol	RESTful、RPC
Streaming protocol	RTSP、RTMP
Language	Chinese, English
Platform	
Platform	Web-based platform, VMS software platform
Network interface	RJ45

CRY2626G

Drone-Mounted Acoustic Imaging Camera

Detect Partial Discharges and Leaks from Kilometers Away

The drone-mounted acoustic imaging camera is a state-of-the-art solution ideal for long-distance inspections of power transmission lines and gas pipelines. This advanced technology excels in detecting and identifying PD types along extensive power lines, ensuring the reliability and safety of electrical assets.

Advanced System Design

The CRY2626G uses advanced acoustic sensors and intelligent algorithms to precisely locate and visualize leaks and partial discharges. Real-time acoustic image mapping enhances maintenance efficiency. The dual-axis electric gimbal, combined with an adaptive stability algorithm, ensures accurate targeting even during flight.

Instant Insight Through Your Drone Controller

The CRY2626G Drone-mounted Acoustic Imaging Camera brings unparalleled convenience to industrial inspections by allowing real-time result viewing directly on the drone controller. The system transmits live acoustic imaging data to the controller's display, providing operators with immediate access to critical information.

Advanced Reporting Software

The CRY2626G Drone-mounted Acoustic Imaging Camera is complemented by reporting software designed to enhance the analysis and documentation of inspection data.



- Lightweight Design, High IP Rating**
Lightweight design, total weight 1.4 kg, IP42 rating
- Excellent Testing Performance**
PD information can be tested at distances up to 35 meters
- 2-Axis Gimbal Design, Easy to Operate**
Equipped with a 2-axis motor-controlled gimbal, supporting adjustments for azimuth and pitch angles
- Noise-Reducing Structural Design, Optimal Performance**
Three-layer noise isolation: aluminum alloy, soundproof cotton, sound-absorbing cotton
- Smart Design, Real-Time Display of Test Results**
Remote controller displays real-time PRPD spectrum and PD types
- Standardized Interface Design for Easy Installation**
Integrated with DJI SKYPORT interface for rapid deployment by a single technician in one minute
- Long Endurance**
Operate for 30 minutes in light rain

Technical Specifications

Acoustic Specifications

Microphone Array	128 channels
Frequency	2k ~ 48k Hz
Test Distance	0.5 ~ 35 m

Basic Specifications

Size	340 × 232 × 167 mm
Weight	1.4 kg
IP Rating	IP42
Installation	SKYPORT V2
Operating Temp.	-20 ~ +50 °C
Storage Temp.	-20 ~ +70 °C
Humidity	10% ~ 95% ,no cond.
Altitude	Up to 5000 m
Drone	Dji M300 RTK, M350 RTK

Software

Function	PRPD spectrum, identification of partial discharge types, microphone test
Report Type	ISO 50001 template for gas leak and partial discharge
Protocol	Dji PSDK protocol

Camera

FOV	62 °
Focal Length	3.04 mm
Camera Pixels	8M pixels

Gimbal

Pan	-90 ~ +90 °
Tilt	-90 ~ -20 °
Accuracy	1 °

Storage

Internal Storage	8G
External Storage	64G external microSD card
Data Format	.jpg (picture), .mp4 (video), .wav (audio recording)
Recording Duration	5 minutes
Data Export	Export data via microSD card

Accessories

IA1101 Ultrasound Generator

IA1101 is an ultrasonic emitter that supports a frequency range of 20 kHz to 48 kHz. It can be powered via a USB-C interface or AA battery. It is capable of playing audio files stored on a microSD card and supports .WAV file format audio. IA1101 can be used for cloud map calibration and sound pressure level calibration of the CRY2600 and CRY8120 series.



Frequency	20k - 48k Hz
Size	173 × 80 × 35 mm, 600g
Certificate	CE-EMC, CE-ROHS
Interface	USB-C, 5V (DC) power supply
Battery	AA(4)

IA1301 Thermal Imaging Camera Module

IA1301 Thermal Imaging Camera Module is designed for CRY8120 series Acoustic Imaging Camera. By connecting to the acoustic imaging camera with USB-C, it can detect the temperature of electrical equipment and overheating mechanical equipment.



Type	IA1301	IA1302
Resolution	384 × 288	640 × 512
FOV	28.4° × 21.4°	32.9° × 26.6°
NETD	60 mK @ 25 °C, F#1.0	
Temp. Measurement Range	-20 °C ~ 120 °C 120 °C ~ 550 °C	

IA2001 Smart Battery Pack

Integrated LED battery indicator, single battery provides 5 hours of runtime, with protection against overcharge, over-discharge, overcurrent, overtemperature, and short circuits. Compliant with CE, FCC, KC, PSE, UKCA, and other international regulations.



Voltage	7.2 V
Rated Capacity	6600 mAh / 47.52 Wh

IA2101 Smart Battery Charger

Independent charging protection for each battery, with overvoltage, overcurrent, and reverse polarity protection. Compliant with CE, FCC, and other safety regulations.



Input Voltage	DC 10V ~ 24V
Rated Capacity	DC 8.4 V / 3.0 A

IA3104 Contact Ultrasound Sensor

The Contact Ultrasound Sensor delivers fast, reliable valve leak detection for gases and liquids. Powered by advanced ultrasonics and AI-driven analysis, it ensures accurate results and higher efficiency—making inspections safer, smarter, and more effective in any industrial environment.



Type	IA3104
Center Frequency	40 kHz
Frequency Range	15k ~ 70k Hz
Peak Sensitivity	> 75 dB ISO 12714: 1999
Noise Floor	< 10 μ VRMS (15 kHz ~ 70kHz)

Noise Measurement

Leveraging sound level meters, noise sensors, data acquisition units, and automated online monitoring systems, we deliver a comprehensive product matrix for full chain acoustic monitoring. Designed for real-time measurement and source tracing of noise at construction sites, industrial boundaries, and urban environments, our solutions enable accurate environmental noise assessment, enabling precise noise pollution control and a tranquil and healthy environment.

「Sound Level Meter」

- Wide Range Measurement
- Low Noise Floor
- Versatile and Cost-Effective Product Configuration
- Comprehensive Features



Sound Level Meter

The CRY2800 Series Sound Level Meters are precision instruments designed for noise monitoring, industrial safety, and environmental assessment. This series offers a range of options from basic to intelligent models to meet the needs for accurate measurement and data analysis in various application scenarios. All models comply with the international IEC 61672 standard, ensuring reliable and authoritative data.



CRY2831

CRY2831 is designed for quick, basic noise measurement tasks. Its simple button operation and intuitive display interface allow users to get started easily and begin measurements immediately.

- Meets the IEC 61672-1:2013 Class 2 standard
- Direct control via panel buttons with clear readouts, requiring no complex setup.
- Capable of measuring Lp and Lmax indicators, providing professional and reliable noise measurements



CRY2833 & CRY2834

CRY2833 & CRY2834 form the color display series, centered around a high-resolution TFT LCD screen for superior data visualization. They integrate advanced functions like data logging, statistical analysis, and optional octave analysis, supporting flexible connectivity for comprehensive monitoring solutions.

- Meets the IEC 61672-1:2013 Class 1 or Class 2 standard
- Supports USB, RS232, Bluetooth/WiFi or GPS (Select one)
- IP54 waterproof rating (electronics enclosure only)
- Optional extension cable and outdoor protection device available



CRY2850 & CRY2851

As the flagship models, the CRY2850 & CRY2851 combine top-tier hardware with a large touchscreen and comprehensive connectivity. They are engineered for in-depth acoustic analysis, including FFT, and seamless integration into sophisticated monitoring networks.

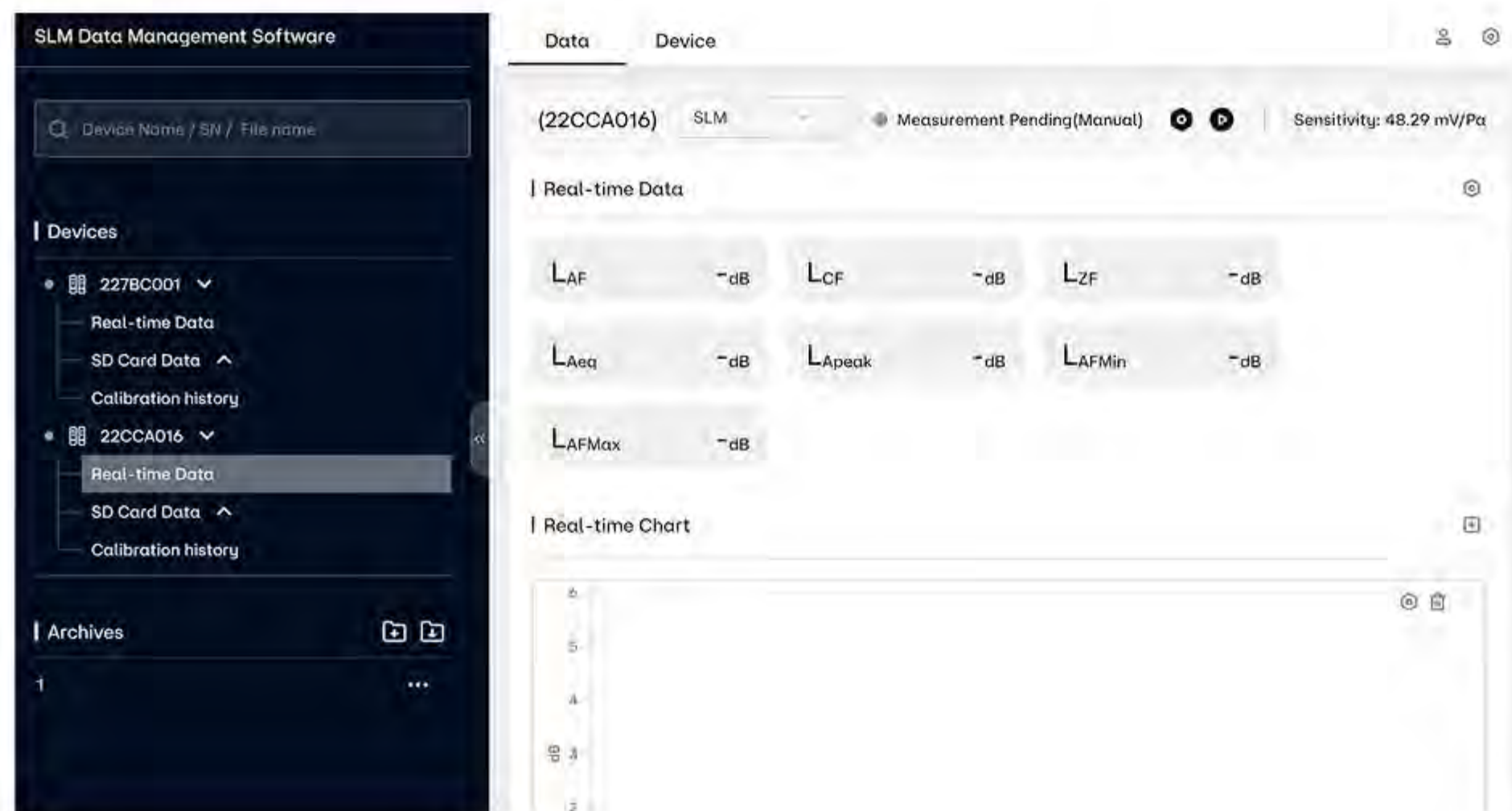
- Meets the IEC 61672-1:2013 Class 1 or Class 2 standard
- Support PC Software
- Supports Bluetooth, WiFi, USB, Ethernet and GPS
- Optional extension cable and outdoor protection device available

Technical Specifications

Type	CRY2831	CRY2833	CRY2834	CRY2850	CRY2851
Accuracy	CLASS-2	CLASS-1	CLASS-2	CLASS-2	CLASS-1
Microphone	CRY321	CRY333	CRY331	CRY331	CRY333
Measurement Range	30 ~135 dBA	25 ~ 140 dBA	25 ~ 140 dBA	23 ~ 145 dBA	21 ~ 143 dBA
Self-Generated Noise	< 25 dBA	< 17 dBA	< 19 dBA	< 19 dBA	< 16 dBA
Frequency Range	20 Hz ~ 12.5 kHz	10 Hz ~ 20 kHz	20 Hz ~ 12.5 kHz	20 Hz ~ 12.5 kHz	10 Hz ~ 20 kHz
Frequency-Weighting	A, C, Z	A, C, Z			
Time-Weighting	F, S	F, S, I			
Measurement Parameters	CRY2831	CRY2833	CRY2834	CRY2850	CRY2851
Measurement Functions	Noise Measurement	Integration Statistical 1/1 OCT 1/3 OCT		Sound Level Meter Statistical 1/1 OCT 1/3 OCT FFT	
Measurement Indicators	Lp, Lmax	Lp, Leq, Lmax, Lmin, Lpeak, LN, SD		Lp, Leq,Lmax, Lmin, Lpeak, LN(1-99), SD, LAE, EA	
Basic Parameters	CRY2831	CRY2833	CRY2834	CRY2850	CRY2851
Dimensions	249 × 76 × 30.5 mm			260 × 90 × 40 mm	
Interface	AC/DC	AC/DC, USB-C, RS232, Bluetooth/WiFi or GPS (Select one)		USB-C, Bluetooth, GPS WiFi, Ethernet	
Weight	300 g	330 g		460 g	
Power Supply	5V DC, 4 × AA	5V DC, 5V USB-C, 4 × AA		5V USB-C Lithium Battery	
Display	128 × 64 Dot Matrix LCD	320 × 240 TFT Display		800 × 480 4-Inch Touch Screen	
Storage Capacity	/	32GB microSD card		32GB SD card	
Stored Data	/	.csv (data), .wav (recording)		.tsv (data), .wav (recording)	

Sound Level Meter Analysis Software

The sound level meter analysis software is specifically developed for the control and data integration of sound level meters. This software can connect to sound level meters via Ethernet or Wi-Fi, allowing remote data viewing. Users can utilize the management software for real-time data monitoring, historical data queries, test report exports, and monitoring data downloads. Within the management software, important acoustic parameters such as Lp, Lmax, Lmin, Leq, Lpeak, LN, SD, EA, LAE(SEL), 1/1 OCT, 1/3 OCT, and FFT can be viewed.



Product Features



Centralized Device Management

Easily add, search, and manage multiple sound level meters. Supports device grouping, auto-connection, and remote configuration for streamlined monitoring.



Multi-Mode Real-Time Measurement

Supports manual, automatic, timed, and triggered measurement modes. Displays all key acoustic parameters in real time, such as Lp, Leq, Lmax, Lmin, Lpeak, LN, 1/1 OCT, 1/3 OCT, and FFT.



Flexible Data Visualization

Customize the real-time data interface and charts (time history, LN distribution, spectrum, etc.). Adjust display parameters to intuitively understand noise characteristics.



Intelligent Historical Data Playback

Stores complete test data with full traceability. Review and analyze data trends and details from specific time periods with easy filtering options.



One-Click Report Generation

Quickly export standardized test reports. Supports data and graph exports for archiving, sharing, and compliance submissions.



Calibration History Management

Centrally store and review the calibration history of device, ensuring long-term measurement accuracy and traceability.

Noise Sensor

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Electroacoustic Test

CRY2100 series noise sensor is compact and features a robust and corrosion-resistant stainless steel enclosure. It is equipped with a precision measurement microphone, and the internal components include an integrated preamplifier, high-precision ADC, and a high-speed DSP. The excellent hardware design provides a dynamic range of up to 110 dB and is capable of measuring ambient noise as low as 25 dBA.



Specifications	CRY2110	CRY2112	CRY2120
Microphone	CRY331 Free-field 1/2" Microphone 40 mV/Pa (-28 dB re 1 V/Pa)	CRY333 Free-field 1/2" Microphone 50 mV/Pa (-26 dB re 1 V/Pa)	CRY333 Free-field 1/2" Microphone 50 mV/Pa (-26 dB re 1 V/Pa)
Self-Generated Noise	< 19 dBA	< 17 dBA	< 17 dBA
Frequency-Weighting	A, C, Z	A, C, Z	A, C, Z
Time-Weighting	F, S	F, S	F, S
Measurement Range	25 ~ 130 dBA	25 ~ 130 dBA	25 ~ 130 dBA
Frequency Range	20 Hz ~ 12.5 kHz	10 Hz ~ 20 kHz	10 Hz ~ 20 kHz
Measuring Parameter	Lp, Lmax, Lmin, Leq	Lp, Lmax, Lmin, Leq	Lp, 1/3 OCT
Signal Output	RS485; 4~20 mA, 1~5 V, or 2~10 V (select one)	RS485; 4~20 mA, 1~5 V, or 2~10 V (select one)	RS485; 4~20 mA, 1~5 V, or 2~10 V (select one)
Dimensions	φ24.5 × 111 mm, 115 g	φ24.5 × 111 mm, 115 g	φ24.5 × 111 mm, 115 g
Working Conditions	-10 ~ +50 °C, relative humidity ≤ 90%, no condensation	-10 ~ +50 °C, relative humidity ≤ 90%, no condensation	-10 ~ +50 °C, relative humidity ≤ 90%, no condensation

Noise and Vibration Analyzer



CRY2301 Noise Spectrum Analyzer

CRY2301 noise spectrum analyzer currently supports single-channel operation. The system is capable of real-time sound pressure level measurement, as well as 1/1 OCT, 1/3 OCT, 1/6 OCT, 1/12 OCT, 1/24 OCT, and FFT analysis. In addition to providing a wide range of software analysis functions, CRY2301 has been widely applied in industries such as mechanical processing, home appliance component manufacturing, and automotive component manufacturing.

Technical Specifications

Microphone	CRY333 Free-field 1/2" Microphone 50 mV/Pa (-26 dB re 1 V/Pa)
Self-Generated Noise	< 25 dBA
Frequency-Weighting	A, C, Z
Time-Weighting	F, S
Measurement Range	27 ~ 132 dBA
Frequency Range	10 Hz ~ 20 kHz
Measuring Parameter	Sound pressure time curve, voltage waveform curve, FFT spectrum curve, Octave (1/1, 1/3, 1/6, 1/12, 1/24) curves, Lp, Lpeak, Leq, Lmax
Interface	USB
Dimensions	φ24.5 × 111 mm, 115 g
Working Conditions	-10 ~ +50 °C, relative humidity ≤ 90%, no condensation



CRY2304 Noise and Vibration Analyzer

CRY2304 is designed for noise and vibration analysis. CRY2304 host communicates with the upper computer using the USB2.0 transmission protocol and supports the synchronous input of four channels of noise and vibration signals. The analysis frequency range is from 10 Hz to 90 kHz, and the background noise level is as low as -110 dBV (A-weighting), which is sufficient to meet the requirements for high-precision acquisition and high-quality analysis of noise and vibration in most scenarios.

Technical Specifications

Number of Acquisition Channels	4 Channels
ADC Sampling Bit Depth	24 bits
ADC Sampling Rate	44.1 kHz ~ 192 kHz
Frequency Range	10 Hz ~ 90 kHz
Dynamic Range	115 dB (Typical Value)
IEPE Power Supply	4 mA (24VDC)
Input Impedance	10k Ω
Frequency Response	< ±0.1 dB (20 Hz ~ 20 kHz)
Gain	-20 dB ~ 30 dB
Noise Floor	-110 dBV (A-weighting)
Power Supply	50 Hz, 220 V ± 10%
Dimensions	332 × 284 × 70 mm, 3.5 kg
Working Conditions	0°C to 40°C, for indoor use, humidity < 80%, no condensation

CRY585 Electrostatic Actuator Amplifier



The CRY585 Electrostatic Actuator Amplifier is designed for static excitation calibration testing of microphones. It features a single input and dual output interfaces. The device provides a gain of approximately 39.5 dB, delivering a peak DC voltage of up to 800 V and a peak AC voltage of up to 90 V.

Frequency Range	30 Hz ~ 30 kHz ±1 dB
Gain	39.5 dB
Power Supply	12V DC
Operating Temperature Range	-15°C ~ +55°C

NA1001 Bluetooth Printer



The Bluetooth Printer adopts thermal printing technology, eliminating the need for ribbons or ink. It communicates with the sound level meter via Bluetooth to enable data transmission and printing.

Battery	Lithium battery, DC7.4 V (8.4 V ~ 6.8 V), 1300 mAh
Dimensions	93.5 × 81.6 × 47.4 mm, thermal roll paper57 mm, 40 mm

NA41/43 Outdoor Protection Device



The NA41/NA43 Outdoor Protection Device provides effective protection for microphone kits against rain and dust, suppresses wind noise, and prevents bird perching, ensuring reliable performance in outdoor noise monitoring applications.

Type	NA41	NA43
Electrostatic Excitation	Not Supported	Supported
Configuration	Noise Sensor 1/2-Inch Microphone Preamplifier Kit	1/2-Inch Microphone Preamplifier Kit
Dimensions	Without support stand: 346.5 × Φ70 (± 1 mm) With support stand: 386.5 × Φ70 (± 1 mm)	
Protection Rating	IP65	
Wind Noise Attenuation	> 30 dB@10m/s (No Damage at Wind Speeds up to 30 m/s)	

Electroacoustic Test

We specialize in acoustic measurement systems for consumer electronics and automotive applications, delivering advanced solutions that span R&D through mass production. Our integrated modular hardware clusters and scalable software solutions are engineered to seamlessly adapt to both laboratory and production environments, enabling customers to maximize product quality and boost operational efficiency.

Electroacoustic Analyzer

- Supports full-feature device testing
- Scalable for synchronous 8-channel acquisition and 4-channel output
- Easy USB data communication
- Ideal for both laboratory and production-line environments
- Compact, space-saving enclosure design



CRY6151B Electroacoustic Analyzer

CRY6151B is a full-featured electroacoustic tester, delivering powerful and stable performance.

It can measure performance indicators of headphones (USB, Bluetooth, noise-cancelling), microphones (electret, MEMS, moving-coil), headphone and microphone assemblies, receiver and headphone speakers, speakers and loudspeakers (wired, Bluetooth), loudspeaker crossover devices, and other electroacoustic components.

Supported measurements include sensitivity (SPL), impedance, distortion (THD), resonance frequency (F0), left/right headphone balance and positioning, phase polarity, microphone current and voltage, SNR, microphone directivity, speaker T&S parameters, and telephone receive/send loudness ratings.

It supports test frequencies ranging from 20 Hz ~ 20 kHz.



Key Features

- High-performance hardware, scalable for synchronous 8-channel acquisition and 4-channel output.
- Compact chassis design and simple USB data communication, suitable for a wide range of test environments.
- The hardware includes modules for sound card, power amplification, signal processing, and USB communication, and works together with software to perform various electroacoustic device tests.

Applications

CRY6151B is designed for versatile device testing, including:

- Wired headphones (USB, USB-C, Lightning, etc.)
- Microphones (electret, moving-coil type, MEMS)
- Headsets and microphone assemblies
- Speakers, horns and receivers
- Bluetooth headphones
- Bone conduction headphones
- Hearing aids
- Other consumer electronics (smartwatches, smart speakers, AR/VR devices, etc.)

Technical Specifications

Sound Card (CRY6138)	Quantity of Channels	All channels for simultaneous sampling at 44.1 kHz ~ 192 kHz, with 24-bit
	Sampling Rate	4-channel input/output (scalable for synchronous 8-channel input/4channel output)
	Input Dynamic Range	115 dB typical value
	Output Dynamic Range	115 dB typical value
	Noise Floor	-115 dBV (1.8 μ V), bandwidths 20-22 kHz A weighting
	Coupling Method	AC
	Frequency Response	20 ~ 20 kHz (± 0.03 dB)
	THD & 1 kHz	0.001%
	Crosstalk @1 kHz	-118 dB
Signal Output	Power Amplifier	20 W (2-way mouth simulator) 1 W (2-way headphone)
	Frequency Response	20-20 kHz (± 0.1 dB), can be customized to support 1-96 kHz
	Stimulus Signal	Valid value, fast step sweep, precise step sweep, noise signal, polyphonic signal
	Octave Mode	1/3, 1/6, 1/12, 1/24 optional
	Output Impedance	1 Ω , 33 Ω , 150 Ω , 600 Ω , 750 Ω
	Distortion	$\leq 0.01\%$
	Max. Output Voltage	5 V
Signal Input	Input Amplitude Range	Electrical signal (-95 dB ~ 10 dB), acoustic signal (50 dB ~ 140 dB)
	Max Input Voltage	3 V
	Noise Floor	-105 dBV (5.6 μ V)
	IEPE Microphone Power Supply	4 channels 4 mA (24 VDC)
	Traditional Microphone Power Supply	2 channels traditional dual-power (DB9)
	ECM Electret Mic Power Supply	0 ~ 6.25 V (software control)
	ECM Electret Mic Resistance	0 ~ 10 k Ω (software control)
Measurement	Input	1 bit input (foot switch)
	Output	14-bit output, maximum current 10 mA
	Power Level	High level +3.3 V, low level GND
Measurement	ECM Electret Mic Current	0 ~ 1 mA $\pm 1\%$
	Speaker Impedance	0 ~ 2 k Ω $\pm 1\%$, supports differenal,signal ended
Other	Power Supply	50 Hz, 220 V $\pm 10\%$
	Usage Environment	0 ~ +40 $^{\circ}$ C, usage environment $\leq 80\%$
	Dimension	330 mm $\times$ 280 mm $\times$ 75 mm

Bluetooth Interface

CRY576 Bluetooth Interface

CRY576 Bluetooth Interface has been upgraded from the CRY574 Pro, with the latest Bluetooth chip and optimized firmware, higher RF power and shielding performance, which ensures trouble-free Bluetooth testing. It can be used not only with CRY6151B electroacoustic tester, but also as a separate module with other testing equipment.



Key Features

- Supports a range of audio codecs (aptX, AAC, etc.) and faster connection, improved interaction logging allows users to locate problems quickly
- Supports DFU remote firmware upgrades when new Bluetooth features are released
- Supports SPP communication and combines USB Audio and USB CDC serial ports to enable Bluetooth audio testing without drivers
- Supports Bluetooth version 4.2, HFP v1.7, HSP v1.2, AVRCP v1.4, and A2DP v1.3

Technical Specifications

Buletooth Version	4.2
Communication Protocol	A2DP Source
	HFP Audio Gateway
	AVRCP Controller/Target
	SPP
Codec	SBC
	apt-X
	AAC
	CVSD
	mSBC
A2DP Sampling Frequency	48 kHz, 44.1 kHz, 32 kHz, 16 kHz
HFP Sampling Frequency	16 kHz, 8 kHz
USB Connector	USB-C
Antenna Connector	SMA
Communication Connector	UART, HID
Dimension	125 mm x 66 mm x 16 mm (without antenna)
RF Input Impedance	50 Ω
RF Output Impedance	50 Ω
RF Power	Maximum value +8 dBm
RF Sensitivity	≤ -81 dBm

CRY578 Bluetooth LE Audio Interface

CRY578 Bluetooth LE Audio Interface is a Bluetooth device specifically designed for Bluetooth audio and UI testing. It updates to Bluetooth v5.4 and supports LE Audio features. It is suitable for use in R&D laboratories and production line testing. It can be used in conjunction with CRY6151B audio analyzer, or as a standalone module in combination with other testing equipment. Users can control CRY578 Bluetooth LE Audio Interface using the CRY6151B testing software or the independent CRY578 tool software for searching, pairing, connecting, playing audio, and recording, etc.

Key Features

-  **Supports LE Audio**
Support Bluetooth v5.4, including LE Audio function.
-  **Multi-headphone Solution**
Adapt to various headphone solutions with fast connection and high efficiency.
-  **Multi-codec Solution**
Support multiple codec such as LHDC, LDAC, AAC, LC3, LC3 plus, aptX-HD, aptX Adaptive.
-  **Multi-interface of Input and Output**
Support UAC audio data transmission, 3.5mm input/output as well as SPDIF interface.
-  **Multi-communication Methods**
Support SPP, HID and serial port communication methods.
-  **Support Subjective Listening Test**
Support recording, playback, listening test with song switch, volume control, pause/answer function.
-  **DFU Upgrade**
Support for remote firmware upgrade via DFU protocol.

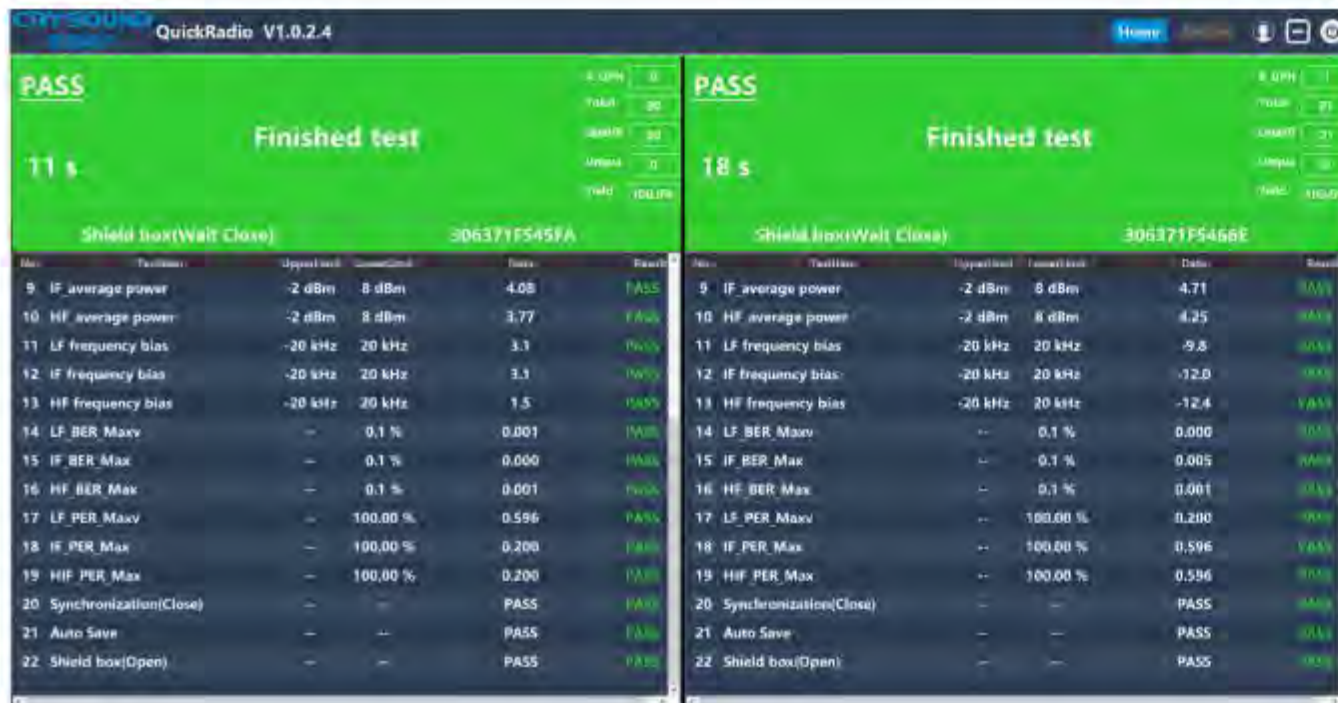


Technical Specifications

Bluetooth Version	v5.4
Bluetooth Mode	Source
Codec	SBC AAC aptX-HD aptX Adaptive LHDC LDAC LC3 LC3 plus CVSD mSBC
A2DP Sampling Rate	96 kHz, 48 kHz, 44.1 kHz, 32 kHz, 16 kHz
HFP Sampling Rate	16 kHz, 8 kHz
Interface Type	USB-C, 3.5 mm Input/Output, S/PDIF Input/Output
Communication Method	UART, HID
RF Interface	SMA
RF Output Impedance	50 Ω
Dimension	125 mm x 66 mm x 16 mm (without antenna)

Software

QuickRadio-Radio Frequency Analysis Software



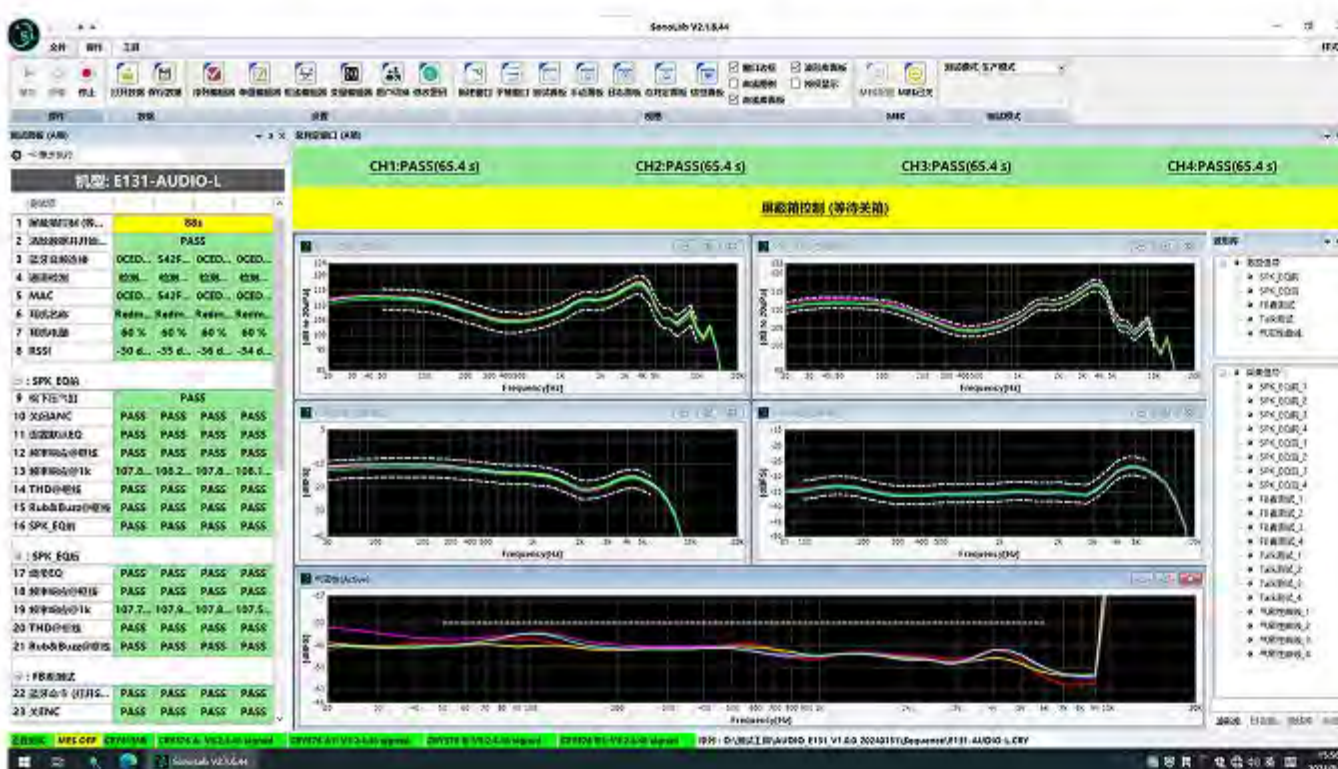
Key Features

- Auto-save configuration and test data for inquiry at any time.
- Industry-leading RF testing instruments are supported.
- Integral sequence editor with multiple languages supported.
- Customizable and compatible with MES systems.

QuickRadio, an applet, provides a platform for simultaneous testing of RF front-end interaction and validation by DC, digital, analog, and RF instruments.

The software fully adopts CRY SOUND's self-developed algorithm. Various sequence templates have been configured and can be used to create tailored workflows, including RF (Radio Frequency), charging case, and fixture control testing. The innovative user interface is easily customized so you can adapt it to the needs of different users within your organization, enabling expert users and operator technicians to work together with maximum efficiency and productivity.

SonoLab-Acoustic Analysis Software



Key Features

- Various sweep measurements supported.
- Achieving shorter testing time and more accurate results with a single command.
- Comprehensive functions for sequence editing to meet laboratory and production needs.
- Customizable and compatible with MES systems.

SonoLab is a comprehensive and easy-to-use acoustic analysis software with flexible assignment of modules, ensuring high measurement accuracy.

The software fully adopts CRY SOUND's self-developed algorithm. More than 70 functional modules are provided, and the interface is user-friendly, thereby satisfying different testing needs for production and laboratory measurements. Our 8-channel input, 4-channel output version of CRY6151B enables testing of multiple items and stations simultaneously.

CRY580 A²B Interface

CRY580 A²B Interface plays a critical role in automotive audio systems. It converts A²B-transmitted digital audio and control signals into formats that amplifiers, speakers, and other devices can use for playback and processing. It transmits bidirectional PCM data, clock signals and sync signals over a single differential pair, supporting multi-channel I²S/TDM. It ensures stable communication over node distances of up to 15 meters (49 feet), with 1 to 1 or 1 to many connections enabling shared time-division channels.

Key Features

- 
High Bandwidth
 Featuring a 50Mbps high-bandwidth digital bus, it meets system needs for transmitting large audio data.
- 
Low Latency
 Minimizes latency caused by bus collisions or packet reconfiguration, typically keeping it below 50 μ s.
- 
Flexible Topology
 Adopts single-master multi-slave linear topology with daisy-chain support, requiring no extra processor overhead for easy system expansion and layout.
- 
Flexible Interfaces
 Supports multi-channel I²S/TDM audio interfaces for bidirectional A²B network connectivity (input/output).
- 
Clock Synchronization
 Ensures synchronous sampling and data transmission across all system nodes in each frame.
- 
Multi-Microphone Input
 Supports PDM interfaces, with up to 4 PDM mic inputs per node and simultaneous I²S data reception from multiple mics.



Technical Specifications

Topology	Single-master multiple-slave linear topology
3.5 mm Audio Interface	Supports analog audio output
S/PDIF Interface	Supports digital audio output
A ² B MAIN/SLAVE Interface	Supports 4 high-dynamic-range microphone inputs
USB Interface	Hardware programming
Bandwidth	50 Mbps
Transmission Distance	15 meters
Rated Voltage	12 V (DC)
Rated Current	1.5 A
Operating Temperature	-10 ~ 40 °C

Main Application Scenarios

• Automotive Microphone Testing

Through multi-channel connections with automotive micro-phones, it captures audio data transmitted over the bus while using clock synchronization to ensure data alignment, enabling testing of microphone sensitivity, frequency response, and other performance indicators.

Programmable Battery Simulator

CRY5240 Programmable Battery Simulator

Designed specifically for manufacturing lines, CRY5240 Programmable Battery Simulator delivers exceptional stability and high-precision measurements through its four fully independent channels, each capable of handling diverse voltage and current testing requirements. This cost-effective solution combines robust performance with production-optimized reliability, making it ideal for testing consumer electronics with industry-leading accuracy while maintaining continuous operation efficiency in demanding manufacturing environments.



Key Features

- USB communication circuit with galvanic isolation from power supply circuit.
- 4 channels with galvanic isolation (no electrical connection between channels).
- Precision-adjustable power supply output: 0.810 V ~ 5.175 V.
- External leakage current testing supported with auto-ranging (measurement range: 5 nA ~ 1.5 A).
- Four levels supported for current test: nA, μ A, μ A2, mA.
- Range mode: auto-switch and fixed value mode.
- Voltage and current threshold parameters can be set, with each current unit threshold parameter saved independently.
- Single-channel isolated voltage input measurement, independent parameter.
- Communication through PC serial ports, available to set parameters and upload results to MES.
- USB power supply, supporting battery charging simulation and constant current load function.
- Supports three power supply modes: external power supply mode, self-powered mode, simulated battery power mode.
- Automatic disconnection and over-range alarm.
- AC 90 ~ 240 V / 50 ~ 60 Hz powered with integrated industrial switching PSU.

Technical Specifications

Parameter	Description	Limit Value	Unit
AC Supply		AC 90-240 V / 50-60 Hz	V
Input Voltage: PI+/P-	Differential-model voltage (P+)/(P-)	-0.3 ~ +26	V
Group 1 Input Voltage Measurement	Differential-model voltage	+9.90	V
Input Current		3.5	A
Simulation of Supply Current		2	A
Simulation of Charging Current		2	A
Storage Temperature		-40 ~ 125	°C
Operating Temperature		5 ~ 45	°C
ESD Rated Value	Human Body Model (HBM)	2500	V
	Charging Device Model (CDM)	1000	V
	Machine Model (MM)	150	V

Technical Specifications

Parameter	Condition	Minimum Value	Typical Value	Maximum Value	Unit
Voltage Input					
PI+/PI- Voltage Input Measurement Range		0.81		5.15	V
Voltage Programming Resolution			0.0125		V
Repeatability	Measurement at 0.1 A load current		0.2	0.5	%
Absolute Value Error	Measurement at 0.1 A load current		0.1%+5	0.2%+5	mV
Current Measurement: mA Grade					
Range		-3500		3500	mA
Step Amplitude at LSB			0.125		mA
Repeatability			0.05%+1 mA	0.2%+1 mA	%
Absolute Value Error	Calculate after applying -1 mA absolute error		0.5%+1	1%+2	mA
Current Measurement: μA Grade					
Range		-1300	60	1300	μ A
Step Amplitude at LSB			0.671		μ A
Repeatability			0.1%+1	0.5%+2	μ A
Absolute Value Error	Calculate after applying -4 μ A absolute error		0.5%+4	1%+4	μ A
Current Measurement: μA2 Grade					
Range		-70	0.6	70	μ A
Step Amplitude at LSB			0.04		μ A
Repeatability			0.1%+0.1	0.5%+0.2	μ A
Absolute Value Error	Calculate after applying -4 μ A absolute error		0.5%+0.3	1%+0.5	μ A
Current Measurement: nA Grade					
Range		-700	5	700	nA
Step Amplitude at LSB			0.403		nA
Repeatability			0.1%+1	0.5%+2	nA
Absolute Value Error	Calculate after applying -4 nA absolute error		0.5%+4	1%+4	nA
Voltage Measurement					
Channel			1		
Range				9.90	V
Step Amplitude at LSB			3		mV
Repeatability			0.3%+3	0.6%+3	mV
Absolute Value Error			0.5%+3	1%+3	mV

Clamshell Pneumatic Acoustic Test Chamber



CRY723 Pneumatic Acoustic Test Chamber

CRY723 is a shell-shaped acoustic test chamber with soundproofing and RF shielding capabilities. Its cost-effectiveness and high performance make it an ideal choice for testing smartphones, wireless devices, and wearable products. When two CRY723 chambers are combined with a CRY6151B, integrated audio, ENC, and ANC measurements of TWS headphones can be performed. A single operator can manage two test stations, reducing labor costs and improving efficiency.



CRY710 Pneumatic Acoustic Test Chamber

CRY710 is constructed from welded steel plates, providing RF shielding for Bluetooth, Wi-Fi, and other wireless products to prevent production-line interference, while offering an acoustically isolated environment for audio performance testing. Its pneumatic lid operates through serial-port control. In a typical configuration, two CRY710 chambers combined with CRY6151B enable one-to-four audio testing of TWS earbuds. With a compact footprint, CRY710 integrates into most production-line layouts, allowing a single operator to manage two stations and maximize efficiency.



CRY723D Pneumatic Acoustic Test Chamber

CRY723D is a pneumatic, shell-type shielded acoustic chamber. Compared with CRY723, CRY723D offers superior sound insulation and is suitable for building low-noise test solution platforms. By modifying the inner acoustic-absorption structure, it can be extended to support hearing-aid testing. In typical applications, two CRY723D units paired with a CRY6151B enable 1-to-4 parallel low-noise testing for TWS earphones. A single operator can run two stations to maximize labor efficiency.



CRY721C Pneumatic Acoustic Test Chamber

CRY721C is a pneumatic, shell-type shielded acoustic chamber. It offers a larger overall form factor than other models in the series and provides superior acoustic field conditions, accommodating larger DUTs and more complex fixtures. It is suitable for test scenarios such as smart-speaker testing, over-ear headphone ANC testing, and earphone VPU testing, and provides a clean test environment with low noise and minimal RF interference for both production lines and laboratories.

Technical Specifications

Type	CRY723	CRY723D	CRY710	CRY721C
Color	White			
Material	Sheet metal / stainless steel			
Weight (with cabinet)	About 246 kg	About 204 kg	About 158 kg	About 207 kg
Weight(without cabinet)	About 160 kg	About 143 kg	About 72 kg	About 127 kg
Overall Dimension	1380(L)×750(W) ×1780(H) mm	720(L)×750(W) ×1760(H) mm	1050(L)×700(W) ×1750(H) mm	1100(L) × 830(W) × 1290(H) mm
Working Dimension	320(L) × 380(W) × 325(H) mm	295(L) × 350(W) × 280(H) mm	320(L) × 364(W) × 295(H) mm	750(L) × 500(W) × 490(H) mm
Shielding Performance	800 MHz ~ 6 GHz, >60 dB	800 MHz ~ 6 GHz, > 60 dB	800 MHz ~ 6 GHz, > 70 dB	800 MHz ~ 6 GHz, > 60 dB
Sound Insulation Performance	Exterior noise ≤ 80 dBA, ≤ 35 dBA	Exterior noise ≤ 80 dBA, ≤ 25 dBA	Exterior noise ≤ 80 dBA, ≤ 45 dBA	Exterior noise ≤ 80 dBA, ≤ 35 dBA
Operating Voltage	AC 100 ~ 220 V, 50/60 Hz			
Rated Power	< 15 W			
Pneumatic Pressure	> 5 kg/cm ²			

Contents

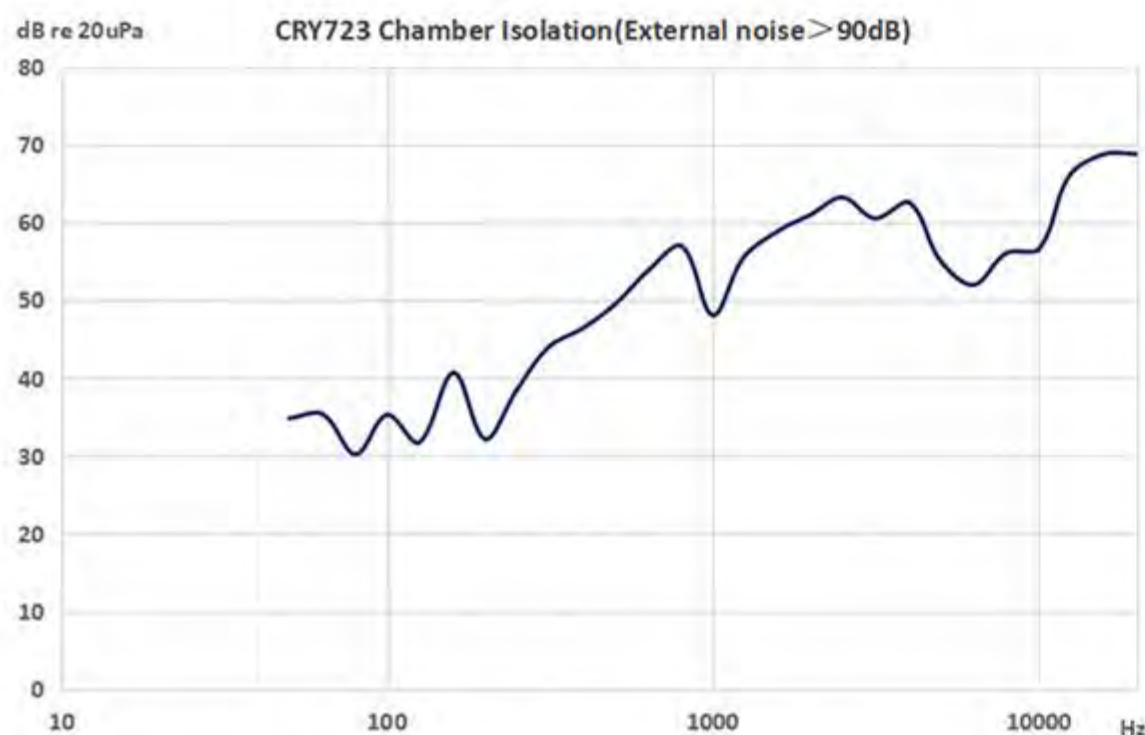
Sensors

Data Acquisition

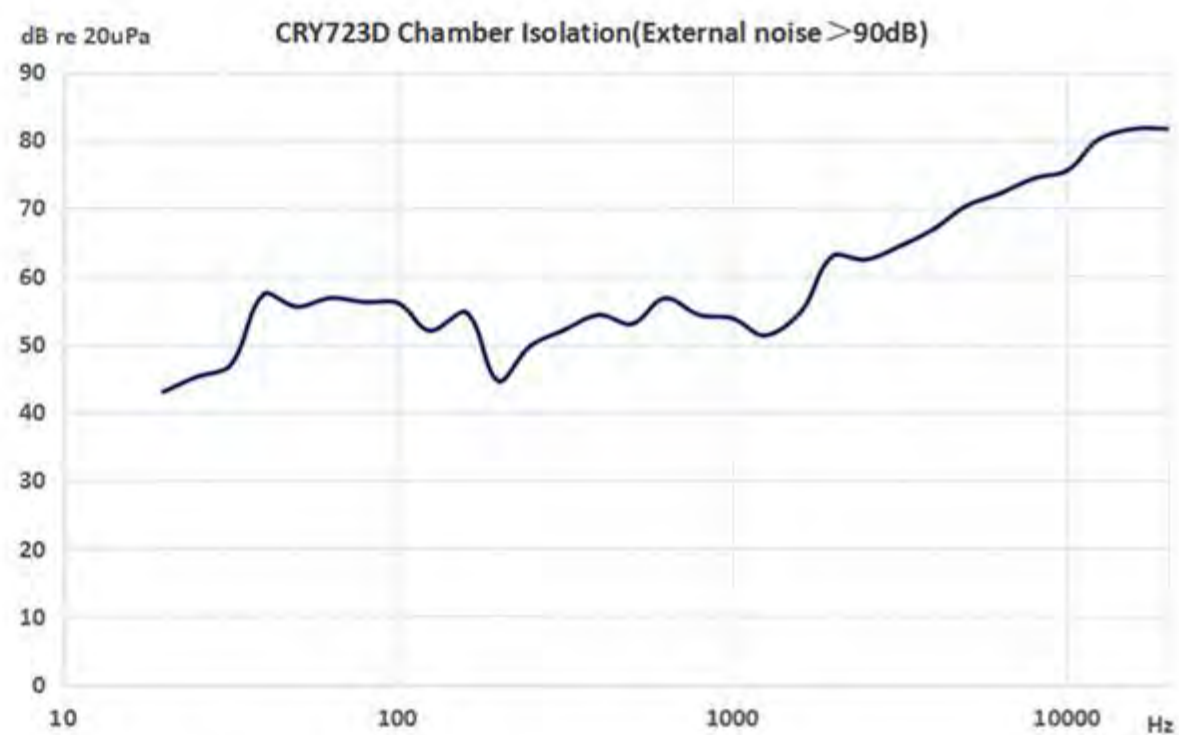
Acoustic Imaging

Noise Measurement

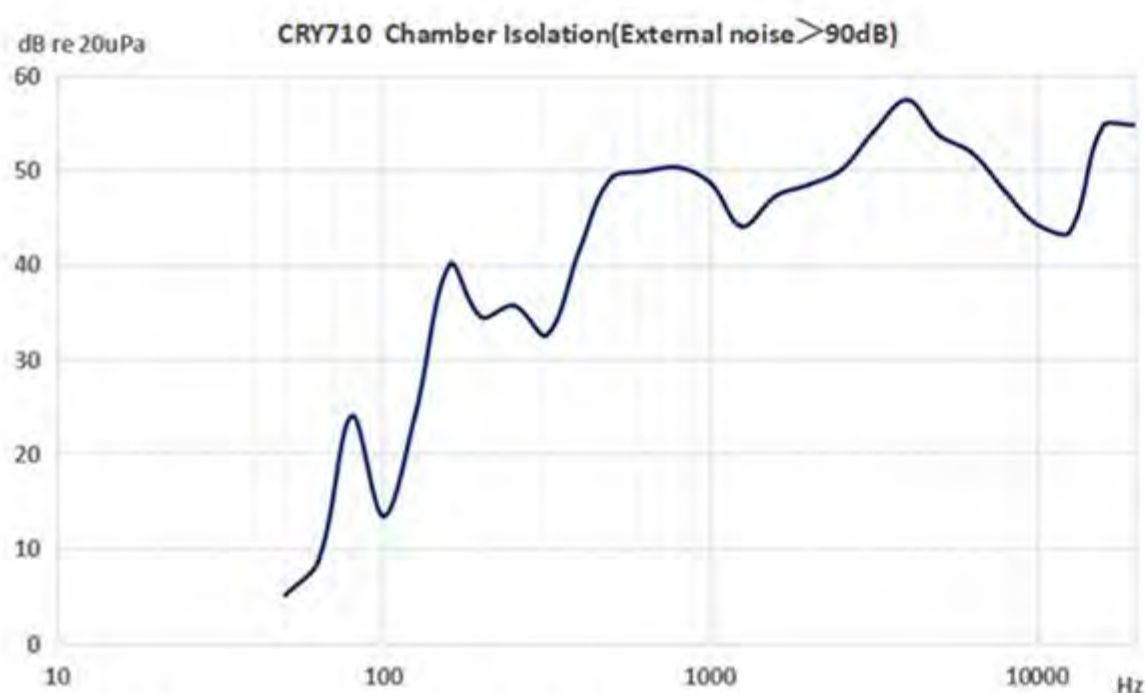
Electroacoustic Test



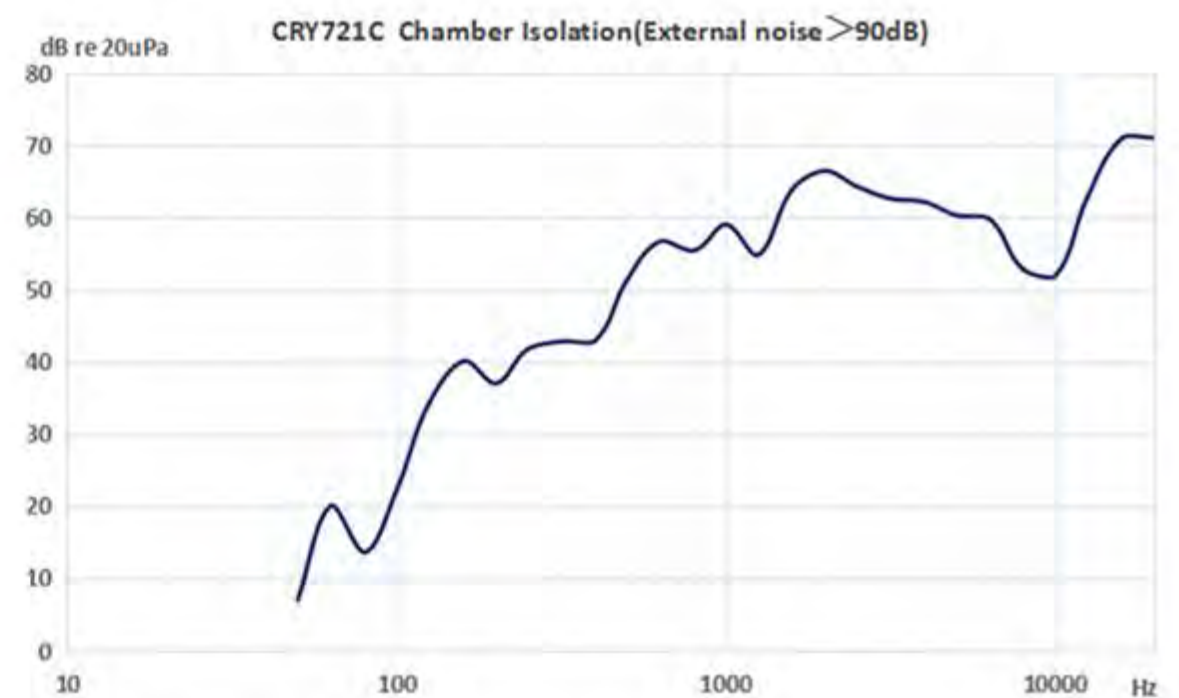
▲ CRY723 Chamber Isolation



▲ CRY723D Chamber Isolation



▲ CRY710 Chamber Isolation



▲ CRY721C Chamber Isolation

Drawer-Type Pneumatic Acoustic Test Chamber



CRY725 Pneumatic Acoustic Test Chamber

CRY725 is a pneumatic, drawer-type shielded acoustic chamber that strikes a good balance among performance, footprint, and cost, providing both sound insulation and RF shielding. It is suitable for building test-solution platforms for smartphones and wireless wearable devices. In typical applications, pairing CRY725 with CRY6151B enables integrated testing of TWS earphones, covering standard audio, ENC, and ANC. Its dimensions fit most production-line layouts and can be integrated with automation for testing.



CRY725D Pneumatic Acoustic Test Chamber

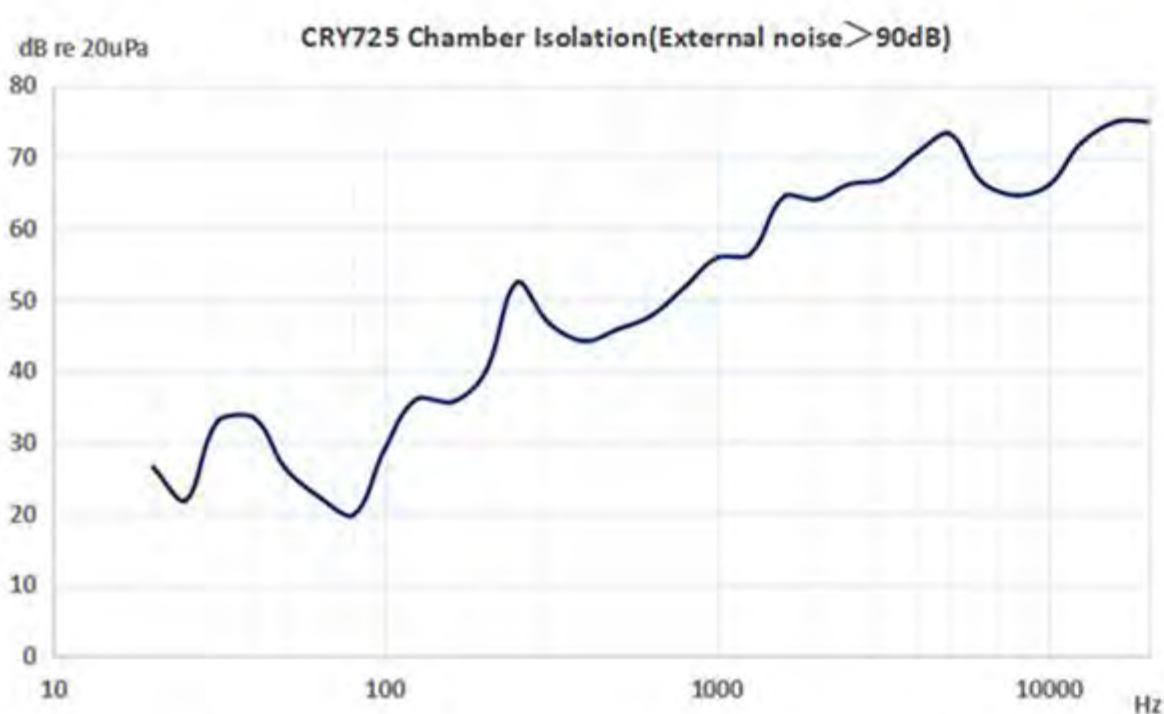
CRY725D is a pneumatic, drawer-type shielded acoustic chamber. Compared with CRY725, CRY725D offers superior low-frequency sound insulation and is suitable for building low-noise test solution platforms. In typical applications, the combination of CRY725D, CRY6151B, and CRY algorithms effectively intercepts products with excessive background noise, providing stable and reliable assurance for production lines.

CRY7865B Pneumatic Acoustic Test Chamber

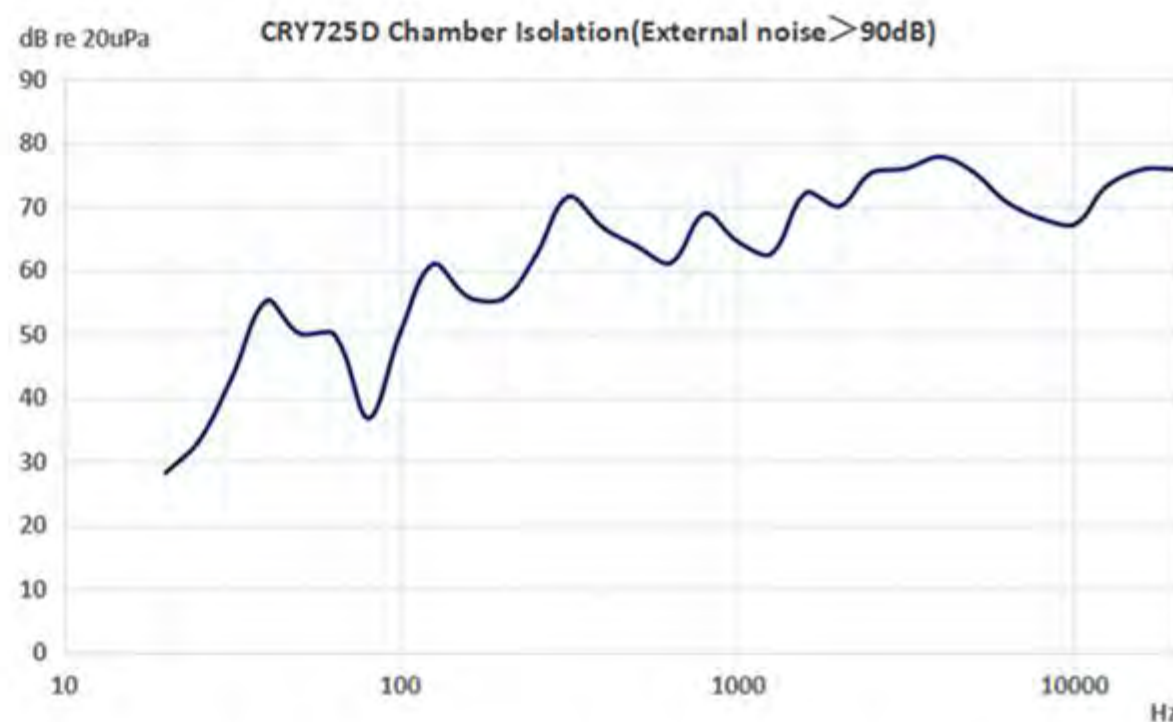
CRY7865B is a drawer-type shielded acoustic chamber featuring high isolation and superior RF shielding, providing a clean test environment with low noise and minimal RF interference. It is suitable for audio testing, communications performance testing, and noise testing of wireless electronic devices and products on production lines and in laboratories. CRY7865B integrates with electroacoustic analyzers, RF comprehensive testers, and test fixtures to build complete audio and RF test systems for products such as Bluetooth earphones, Bluetooth speakers, and laptops. Its drawer-type design can be paired with robotic arms to enable fully automated loading and unloading, forming a fully automated test line.

Technical Specifications

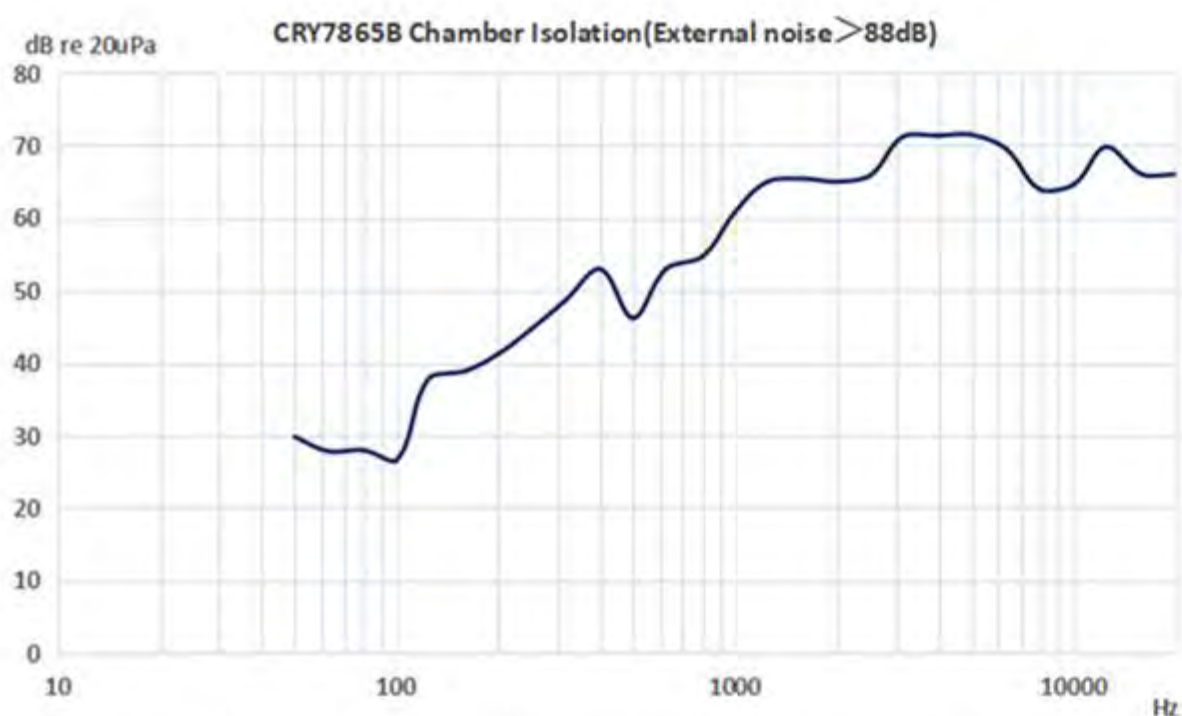
Type	CRY725	CRY725D	CRY7865B
Color	Beige	Beige	White
Material	Sheet metal/stainless steel	Sheet metal/stainless steel	Aluminium/stainless steel
Weight (with cabinet)	About 307 kg	About 840 kg	About 953 kg
Overall Dimension	800(L)×1245(W)×1798(H) mm	860(L)×1368(W)×1833(H) mm	1220(L)×1760(W)×1850(H) mm
Working Dimension	480(L)× 480(W) ×450(H) mm	380(L)×530(W)×460(H) mm	500(L)×650(W)×780(H) mm
Shielding Performance	0.8 GHz ~ 6 GHz, ≥ 70 dB	0.8 GHz ~ 6 GHz, ≥ 70 dB	0.8 GHz ~ 6 GHz, ≥ 70 dB
Sound Insulation Performance	Exterior noise ≤ 80 dBA, ≤ 30 dBA	Exterior noise ≤ 80 dBA, ≤ 20 dBA	Exterior noise ≤ 80 dBA, ≤ 25 dBA
Operating Voltage	AC 100 ~ 240 V, 50/60 Hz		
Rated Power	< 15 W		
Pneumatic Pressure	> 5 kg/cm ²		



▲ CRY725 Chamber Isolation - Frequency Graph

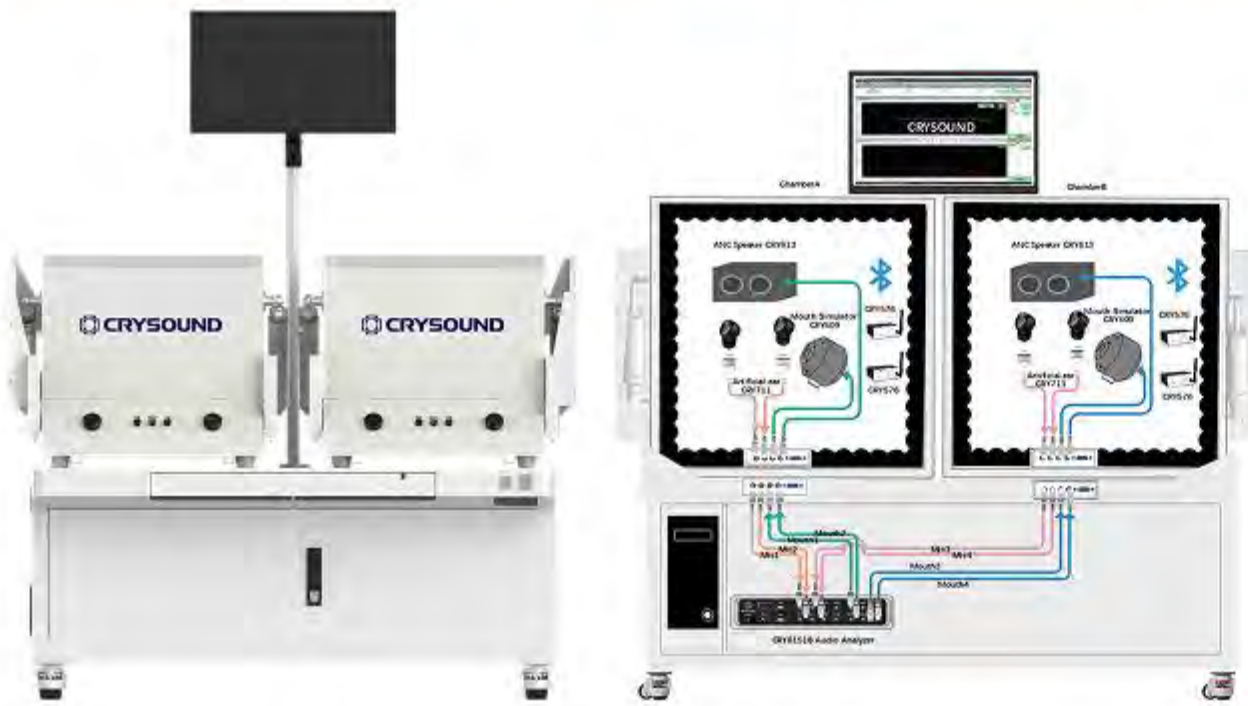


▲ CRY725D Chamber Isolation - Frequency Graph



▲ CRY7865B Chamber Isolation - Frequency Graph

Headphone ANC&ENC Test System



Quadruplex Test in Dual Shell-Shaped Acoustic Test Chamber – ANC&ENC Test System Solution

As ANC (Active Noise Cancellation) and ENC (Environmental Noise Cancellation) technologies continue to evolve, production requirements are increasing, driving the demand for comprehensive testing solutions. CRY SOUND provides a quadruplex test solution in a dual shell-shaped acoustic test chamber for ANC and ENC evaluation. This system offers an efficient, one-stop solution, enabling manufacturers to ensure the effectiveness of their ANC and ENC technologies while meeting customer standards and expectations.

Key Features

- Full coverage for standard audio metrics.
- Supports extended Chirp tests to improve noise resolution.
- Measures paired or unpaired headphones with a single click by switching modes.

Test Items

ANC Test	Feedback mic calibration
	Feedforward mic calibration
	Maximum noise reduction depth
	Maximum noise reduction balance
	Average noise reduction depth
	Average noise reduction balance
	L/R noise reduction balance
	L/R discrete curve
ENC Test	Discrete curve of golden unit
	Frequency response
	Total harmonic distortion
	Differential control
Audio Test	Noise acquisition
	Frequency response
	Sensitivity
	Polarity
	Total harmonic distortion
Function Test	Rub & Buzz
	Bluetooth button test
	Bluetooth power test
	A2DP music test
	Absolute volume control

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY613 ANC Speaker	2
CRY609 Mouth Simulator	2
CRY711 Ear Simulator	4
CRY510 Preamplifier	4
CRY576 Bluetooth Dongle	4
CRY723 Acoustic Test Chamber	2
CRY723 Rack	1
PC & Monitor	1
Calibration Set	1

Headphone Audio Test System



Quadruplex Test in Dual Shell-Shaped Acoustic Test Chamber – Audio Test System Solution

As Bluetooth technology advances and the market for Bluetooth audio devices grows, users increasingly expect superior performance from their products. This drives the demand for a comprehensive test system covering all essential audio metrics.

CRYSOUND provides a quadruplex test solution in a dual shell-shaped acoustic test chamber for audio testing. Tests are conducted by connecting the CRY576 Bluetooth Dongle to TWS headphones. For cost-effectiveness and efficiency, this system serves as an optimal solution for manufacturing operations.

Key Features

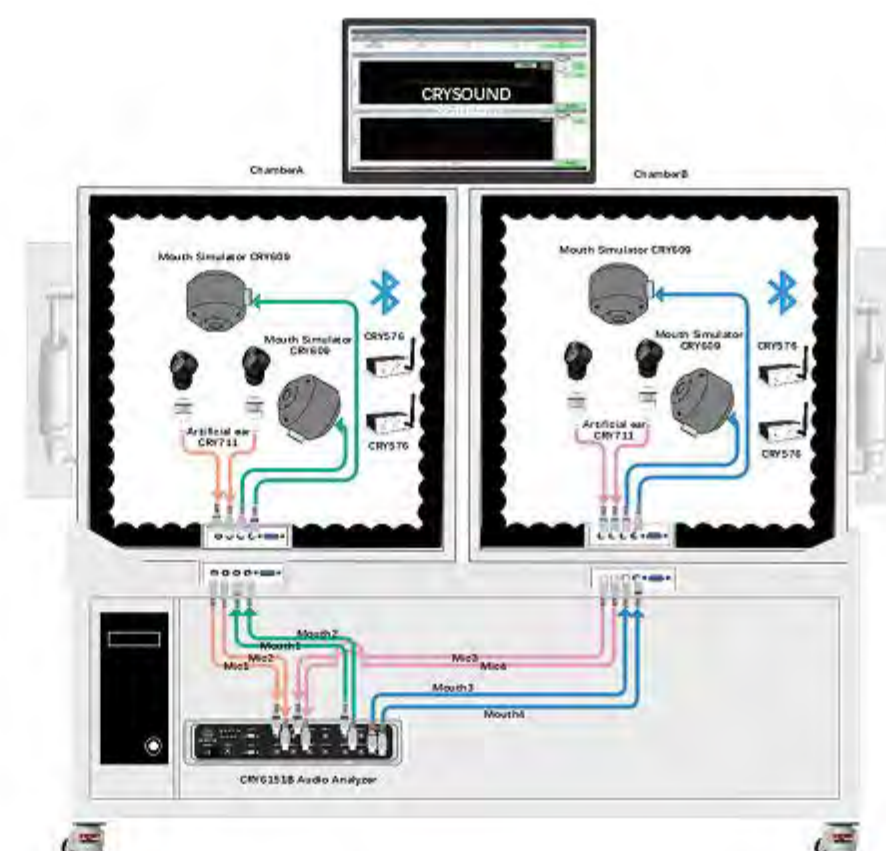
- ⚡ Achieves shorter measurement times while maintaining metric precision, enabling a production yield of up to 450 units per hour (UPH).
- ⚡ Customizable fixture for conducting air-tightness tests.
- ⚡ Full coverage of standard audio metrics.

Test Items

SPK Test	Frequency response
	Sensitivity
	Polarity
	Total harmonic distortion
	Rub & Buzz
MIC Test	Signal-to-noise ratio
	Frequency response
	Sensitivity
	Total harmonic distortion
Function Test	Signal-to-noise ratio
	Bluetooth button test
	Bluetooth power test
	A2DP music test
	Absolute volume control

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY609 Mouth Simulator	4
CRY711 Ear Simulator	4
CRY510 Preamplifier	4
CRY576 Bluetooth Dongle	4
CRY723 Acoustic Test Chamber	2
CRY723 Rack	1
PC & Monitor	1
Calibration Set	1



Headphone Noise Floor Test System



Quadruplex Test in Dual Shell-Shaped Acoustic Test Chamber – Noise Floor Test System Solution

Competition among TWS (True Wireless Stereo) headsets has intensified due to feature homogenization. Users are no longer satisfied with just battery life and ANC (Active Noise Cancellation); they now expect solutions that address low-level sound and noise floor performance, making this requirement critical for customer satisfaction. CRY SOUND provides a quadruplex test solution in a dual shell-shaped acoustic test chamber for noise floor evaluation. This integrated system is ideal for headphone quality control, effectively meeting market demands and ensuring customer satisfaction.

Key Features

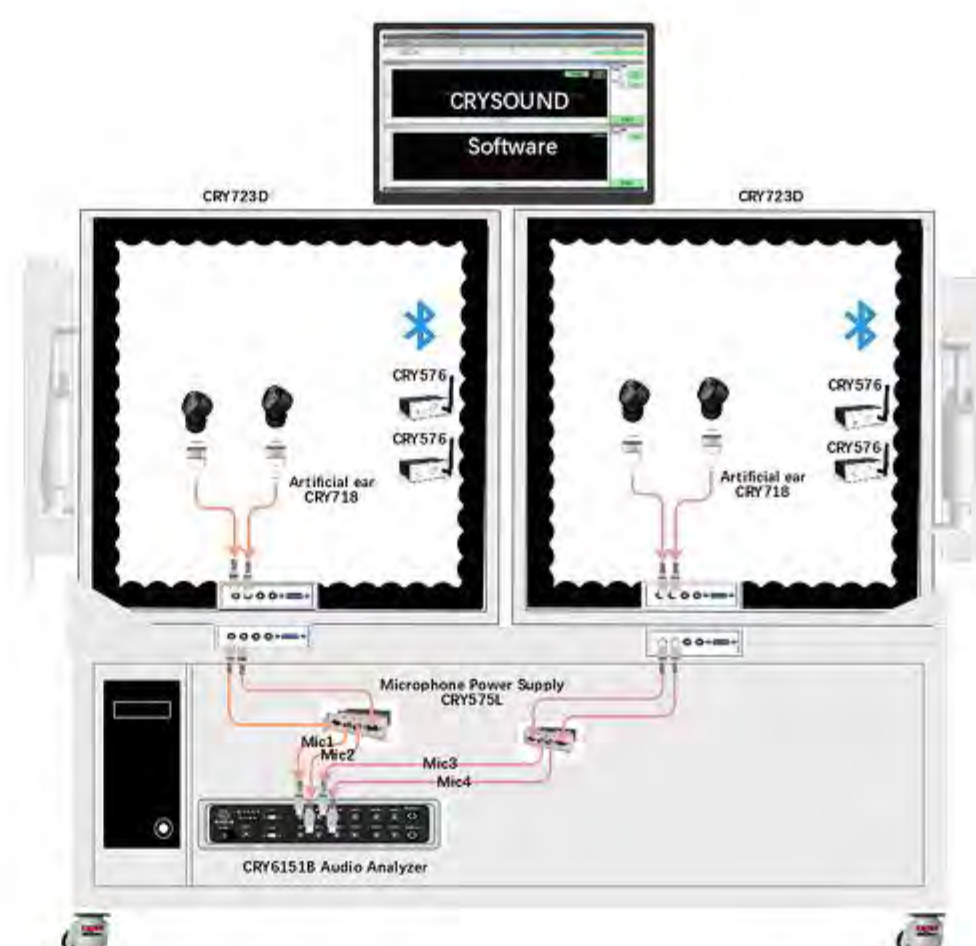
- 💡 High isolation of the acoustic test chamber.
- 💡 Upgraded ear simulator.
- 💡 Enhanced algorithm.

Test Items

Noise Floor Test	FFT spectral analysis
	Heterodyne analysis algorithm
SPK Test	Frequency response
	Total harmonic distortion
	Rub & Buzz
MIC Test	Frequency response
	Total harmonic distortion
	Echo test

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY515 Preamplifier	4
CRY718 Ear Simulator	4
CRY576 Bluetooth Dongle	4
CRY575L Microphone Power Supply	2
CRY723D Rack	2
CRY723D Acoustic Test Chamber	2
PC & Monitor	1
AC Isolated Power Supply	1
Calibration Set	1



Headphone RF Test System



Quadruplex Test in Dual Shell-Shaped Acoustic Test Chamber – Duplex RF Test System Solution

To address issues such as slow pairing, frequent dropped calls, choppy calls, and sound quality concerns, CRY SOUND provides a quadruplex test solution in a dual shell-shaped acoustic test chamber for duplex RF performance production.

To optimize efficiency and maximize the use of valuable RF instruments, the system is designed to allow one instrument to be shared between two stations. This enables simultaneous operation by operators, enhancing productivity and improving the cost-effectiveness of the RF equipment.

Key Features

- Supports measurement in ACL/DUT mode to meet RF requirements of different products.
- Supports Basic Rate and EDR measurement in Bluetooth test mode.
- Fast and stable testing, completed within 8–10 seconds with configuration for output power, frequency offset, and sensitivity.



Test Items

BDR Test	TX power
	Power control
	Initial carrier frequency tolerance
	Carrier frequency drift
	Sensitivity (single slot packets)
	Sensitivity - multi-slot packets
	Modulation characteristic
EDR Test	Maximum input level
	Relative TX power
	Carrier frequency stability and modulation accuracy
	Differential phase modulation
	Sensitivity
	BER floor performance
	Maximum input level
DTM BLE Test	TX power
	Power stability
	Initial carrier frequency tolerance
	Carrier frequency drift
	Modulation characteristic
	Receiver sensitivity
	PER completeness
	Maximum input level

Configuration

Device	Quantity
CRY710 Rack	1
CRY710 Acoustic Test Chamber	2
MT8852B / Agilent 4010A / R&S CMW500	1
Imported Antenna Coupler	2
GPIB	1
CRY591L Bluetooth Switch Matrix	1
PC & Monitor	1

Contents

Sensors

Data Acquisition

Acoustic Imaging

Noise Measurement

Electroacoustic Test

Wired Headphone Test System



Test in a Shell-Shaped Acoustic Test Chamber – Wired Headphone Test System Solution

Wired headphones come in various types, making it challenging to cover all models and provide compatible interfaces for each.

CRYSOUND provides a simplex test solution in a shell-shaped acoustic test chamber for wired headphones, ensuring accurate and reliable performance assessment.

Key Features

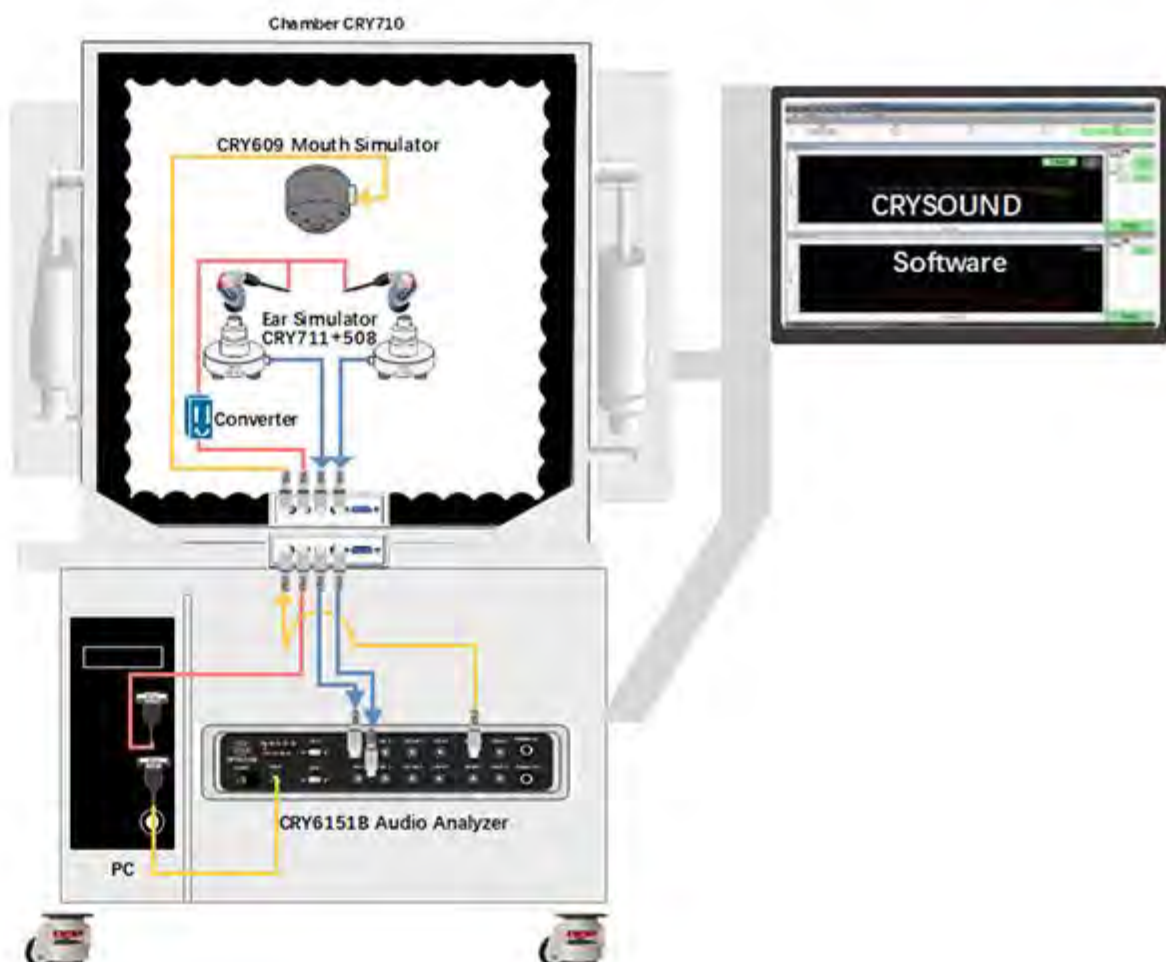
- Supports regular testing items.
- Modular fixture design allows replacement according to testing requirements.
- Self-developed software can be customized for MES system integration.

Test Items

SPK Test	Frequency response
	Total harmonic distortion
	Rub & Buzz
	Signal-to-noise ratio
	Phase
MIC Test	Balance
	Frequency response
	Total harmonic distortion
	Rub & Buzz
	Signal-to-noise ratio
	Phase

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY711 Ear Simulator	2
CRY609 Mouth Simulator	1
CRY508 Preamplifier	2
USB3.0 Male to USB-C Female Adapter	1
CRY710 Rack	Optional
CRY710 Acoustic Test Chamber	Optional
PC & Monitor	1
Customized Fixture	1



Microphone Test System (MEMS Microphone)



Microphone Test System Solution

CRYSOUND offers a microphone test system solution adaptable to various microphone types by replacing specific components within the system. The CRY6151/6151B Electroacoustic Analyzer is designed for testing raw materials, semi-finished products, and wired products, covering electret, analog, and digital microphones during the testing process. This solution ensures accuracy and repeatability while supporting high-volume testing in fast-paced production environments, improving efficiency and reducing costs.

Key Features

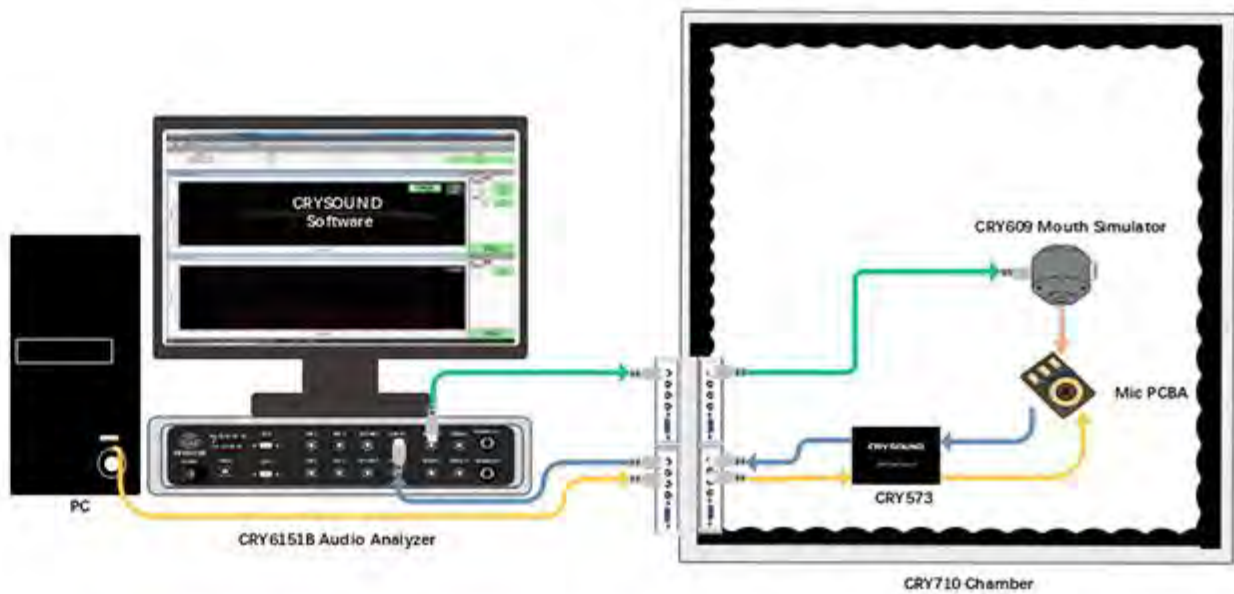
- Self-developed software can be customized for MES system integration.
- Modular fixture design allows replacement according to testing requirements.
- Supports dual encoding, multiple voltages, and multiple sampling rates, compatible with the majority of digital signal tests on the market.

Test Items

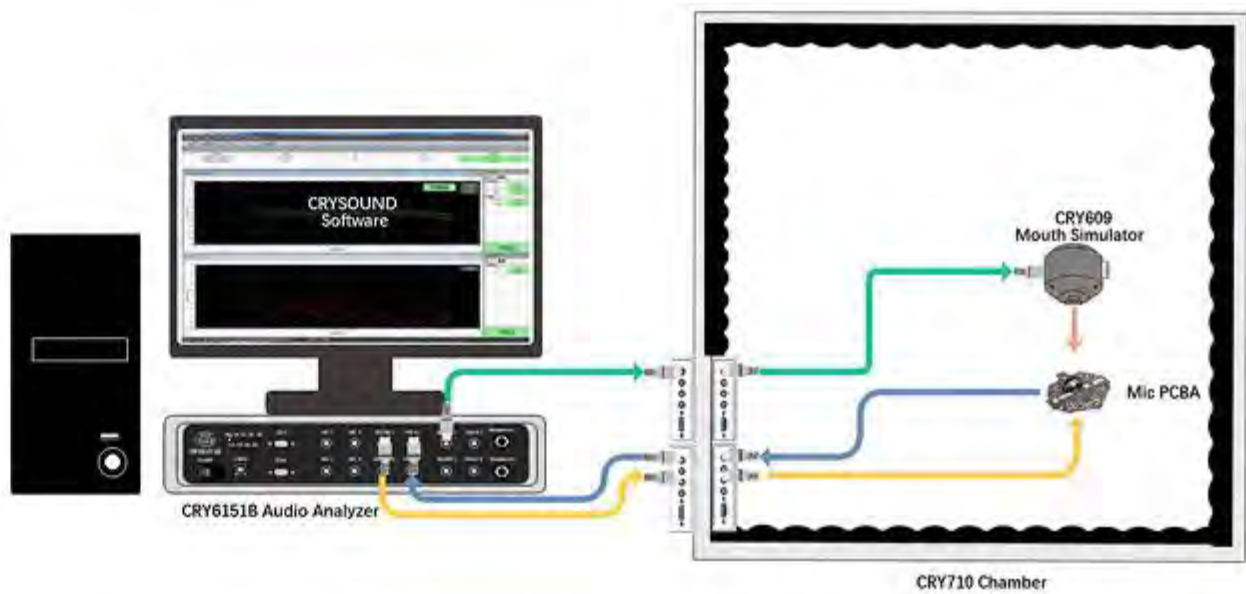
MIC Test	Frequency response
	Rub & Buzz
	Total harmonic distortion
	Signal-to-noise ratio
	Phase

Configuration

Device	Quantity
CRY6151B	1
Electroacoustic Analyzer	
CRY609 Mouth Simulator	1
CRY573	
CRY710 Rack	Optional
CRY710	
Acoustic Test Chamber	Optional
PC & Monitor	
Customized Fixture	1



▲ Digital MEMS Microphone Test System Block Diagram



▲ Analog MEMS Microphone Test System Block Diagram



Laptop Audio Test System



Laptop Audio Test System Solution

Laptops are key components of high-end consumer electronics. However, abnormal noise issues have become increasingly prominent, including no sound or low-volume from speakers, abnormal noise during music playback, low-volume or stuttering recordings, microphone failures, and fan noise. CRY SOUND provides a laptop audio test system solution designed to evaluate laptop audio characteristics, including fan noise detection. This comprehensive system addresses the multifaceted testing requirements for laptop audio performance.

Key Features

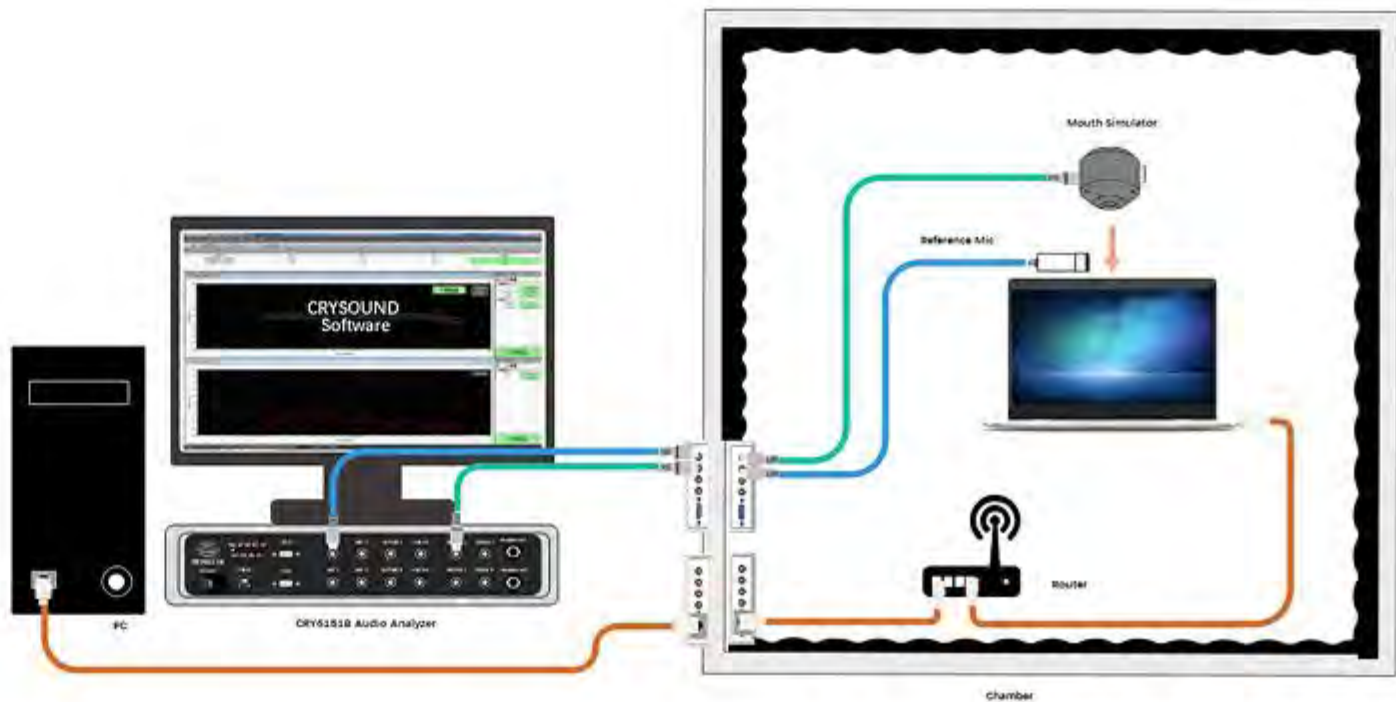
- Meets various laptop audio testing requirements.
- Highly efficient, stable, and user-friendly operation.

Test Items

SPK Test	Frequency response
	Total harmonic distortion
	High harmonic
MIC Test	Frequency response
	Total harmonic distortion
	Sensitivity
Audio Test	Frequency response
	Sensitivity
	Balance
	Position of L/R headphone
	Total harmonic distortion

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY333 Measurement Microphone	Optional
CRY506 Preamplifier	Optional
CRY609 Mouth Simulator	Optional
CRY725 Acoustic Test Chamber	1
Calibration Set	1
Fixture	1
PC & Monitor	1



Laptop Abnormal Sound Test System



Shell-Shaped Acoustic Test Chamber – Laptop Abnormal Sound Test System Solution

After years of iteration, laptop system noise has significantly improved. However, with reduced background noise masking, abnormal noises have become increasingly noticeable. Defects in product components often first appear as vibrations and noise, making abnormal sound detection crucial for quality testing of structural components.

CRYSOUND provides a test solution in a guillotine-type acoustic test chamber for laptop abnormal sound testing, ensuring accurate and reliable performance evaluation. The system employs advanced noise testing algorithms, including transient feature noise analysis, psychoacoustic loudness analysis, prominent frequency analysis, and FFT analysis, to guarantee product quality.

Key Features

- Multiple reliable noise testing algorithms ensure accurate product quality inspection.
- Supports 4-channel parallel acquisition with a sampling rate of up to 192 kHz.
- Compatible with both noise and vibration measurements.

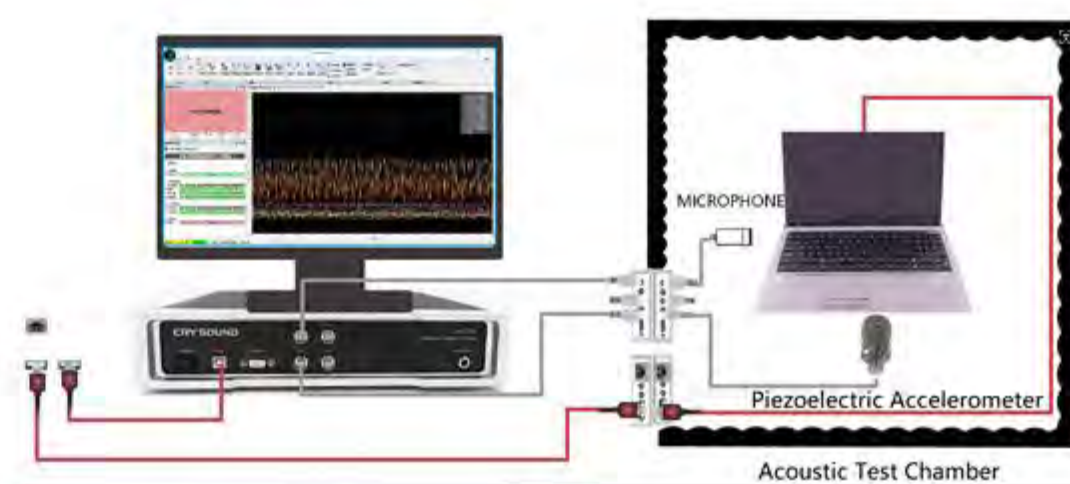


Test Items

SPK Test	Frequency response
	Total harmonic distortion
	High harmonic
MIC Test	Frequency response
	Total harmonic distortion
	Sensitivity
Fan Noise Test	Sound pressure level
	Signal-to-noise ratio
	Octave analysis
	Sound power

Configuration

Device	Quantity
CRY2304 Noise and Vibration Analyzer	1
CRY333 Measurement Microphone	1
CRY507 Preamplifier	1
CRY433 Accelerometer	1
CRY723D Rack	Optional
CRY723D Acoustic Test Chamber	Optional
PC & Monitor	1
Calibration Set	1



AR&VR Test System



Test Items

SPK Test	Frequency response
	Total harmonic distortion
MIC Test	Frequency response
	Total harmonic distortion
	Leakage test
Abnormal Sound Test	Tonal evaluation
	Loudness
	Sharpness

AR&VR Test System Solution

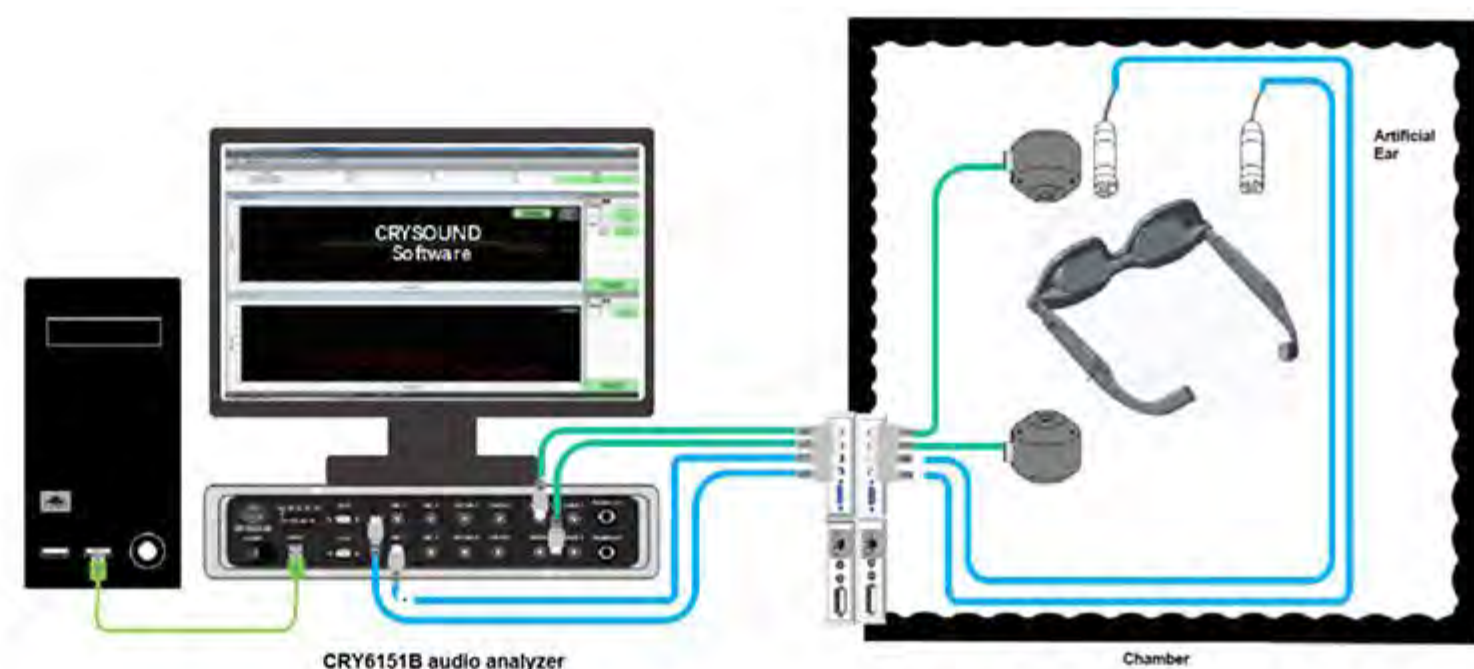
In recent years, AR/VR (Augmented Reality/Virtual Reality) technology has become increasingly popular. CRY SOUND provides an AR&VR test system solution capable of testing a wide range of audio components and interfaces, including WiFi audio, Bluetooth, USB sound cards, and more. The system ensures accurate and comprehensive testing of AR/VR devices.

Key Features

- Supports frequency calibration of Qualcomm chipsets.
- Supports unit, semi-finished, and finished product testing.
- WiFi audio testing available.

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY576 Bluetooth Dongle	1
Router	1
AC Isolated Power Supply	1
CRY609 Mouth Simulator	2
CRY729 Acoustic Test Chamber	1
PC & Monitor	1
Cable	1



Loudspeaker Test System



Test Items

SPK Test	Frequency response
	Sensitivity
	Total harmonic distortion
MIC Test	Frequency response
	Sensitivity
	Total harmonic distortion
	Air-tightness

Loudspeaker Test System Solution

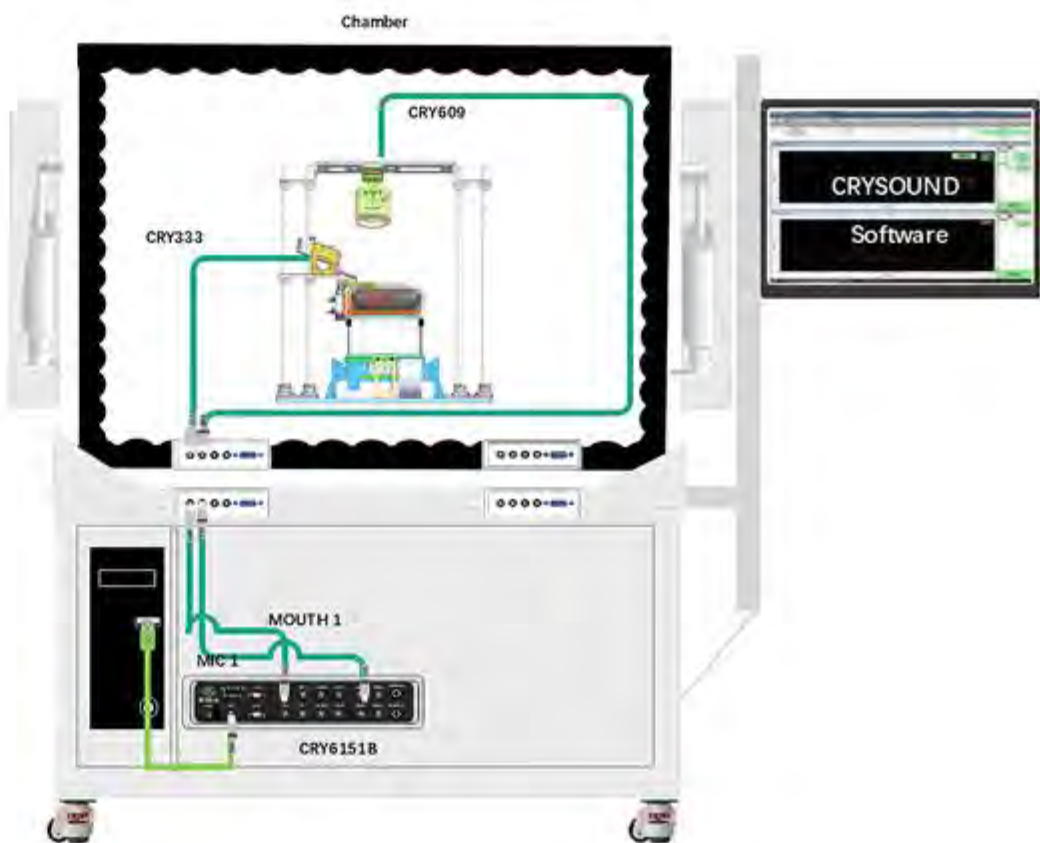
A smart loudspeaker is a voice-activated smart home device that connects to the Internet and performs functions such as playing music, providing weather updates, and answering questions. CRY SOUND provides a loudspeaker test system solution specifically designed for quality control and performance assessment. It streamlines the manufacturing process, reduces costs, and enables accurate and comprehensive testing of smart loudspeakers.

Key Features

- Effective and stable system.
- Full coverage of standard audio metrics, including frequency response, THD, phase, polarity and R&B.
- Supports integration with MES systems.

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY333 Measurement Microphone	1
CRY507 Preamplifier	1
CRY609 Mouth Simulator	1
CRY576 Bluetooth Dongle	1
CRY7865B Acoustic Test Chamber	1
AC Isolated Power Supply	1
PC & Monitor	1
Fixture	1



Smart Watch Audio Test System

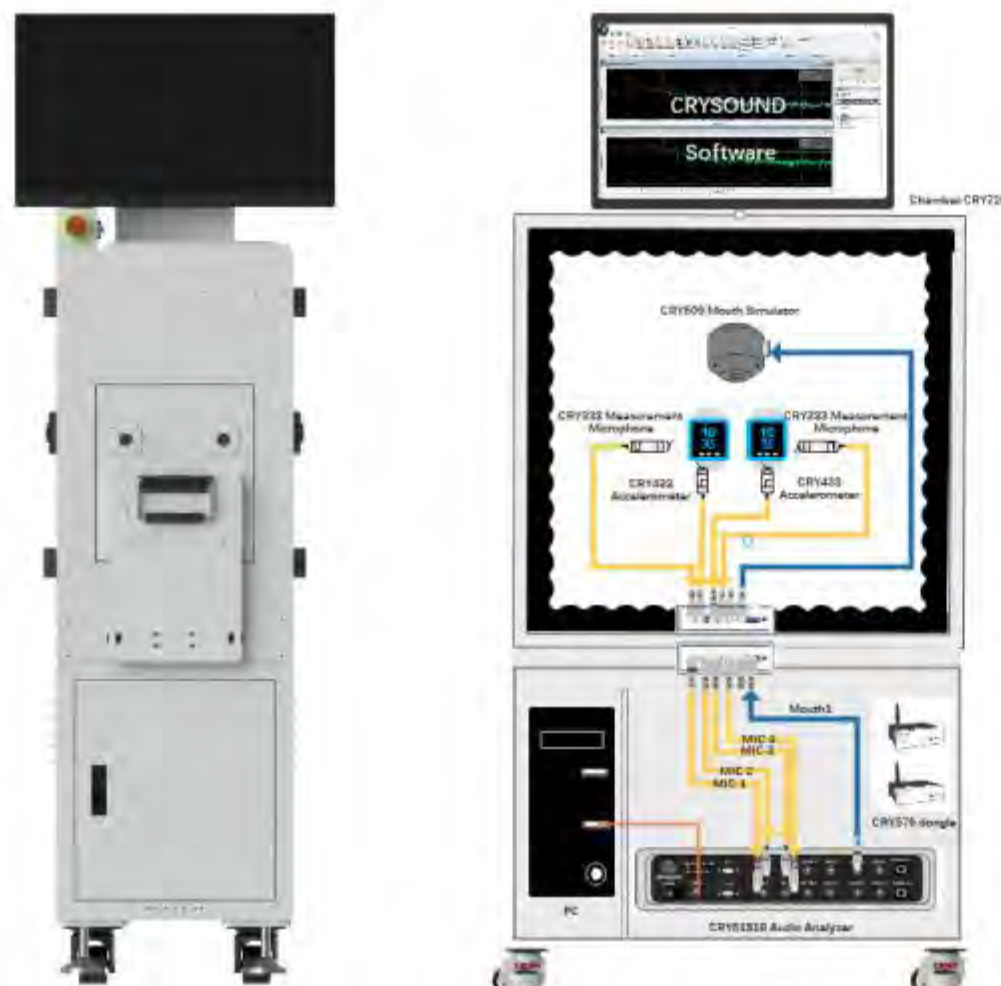


Smart Watch Audio Test System Solution

The audible characteristics of the speaker and microphone play a crucial role in the performance of smart watches. CRY SOUND provides a smart watch audio test system solution specifically designed to measure the speaker and microphone of smart watches. This solution ensures accurate and comprehensive testing, enabling the evaluation of smart watch audio performance.

Key Features

- Functional testing and quality control for audio units.
- Vibration testing supported.
- Self-developed software can be customized for integration with MES systems.



Test Items

SPK Test	Frequency response
	Total harmonic distortion
	Bub & Buzz
	Signal-to-noise ratio
	Phase
MIC Test	Balance
	Frequency response
	Total harmonic distortion
	Bub & Buzz
	Signal-to-noise ratio
MOTOR Test	Phase
	Tightness
	Core frequency
	Vibration

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY609 Mouth Simulator	1
CRY333 Measurement Microphone	2
CRY507 Preamplifier	2
CRY433 Accelerometer	Optional
CRY576 Bluetooth Dongle	2
CRY726 Rack	1
CRY726 Acoustic Test Chamber	1
AC Isolated Power Supply	1
PC & Monitor	1
Calibration Set	1

Hearing Aid Test System



Hearing Aid Test System Solution

CRYSOUND provides a hearing aid test system solution. The sound source and instruments used in hearing aid testing comply with IEC 60118-0 (2015), IEC 60118-7 (2005), and ANSI S3.22 (2009). The test items include OSPL90, HFA, FOG, RTG, and EIN, enabling comprehensive evaluation of hearing aid performance. The system offers an ideal environment for accurate and reliable hearing aid testing.

Key Features

- Supports all types of hearing aids, including BTE, ITE and RITE.
- Stable system with high effectiveness and accuracy for assessing the performance of medical and OTC hearing aids.
- Built-in modules for medical hearing aid testing, OTC hearing aid testing, and traditional acoustic testing, providing comprehensive testing support.

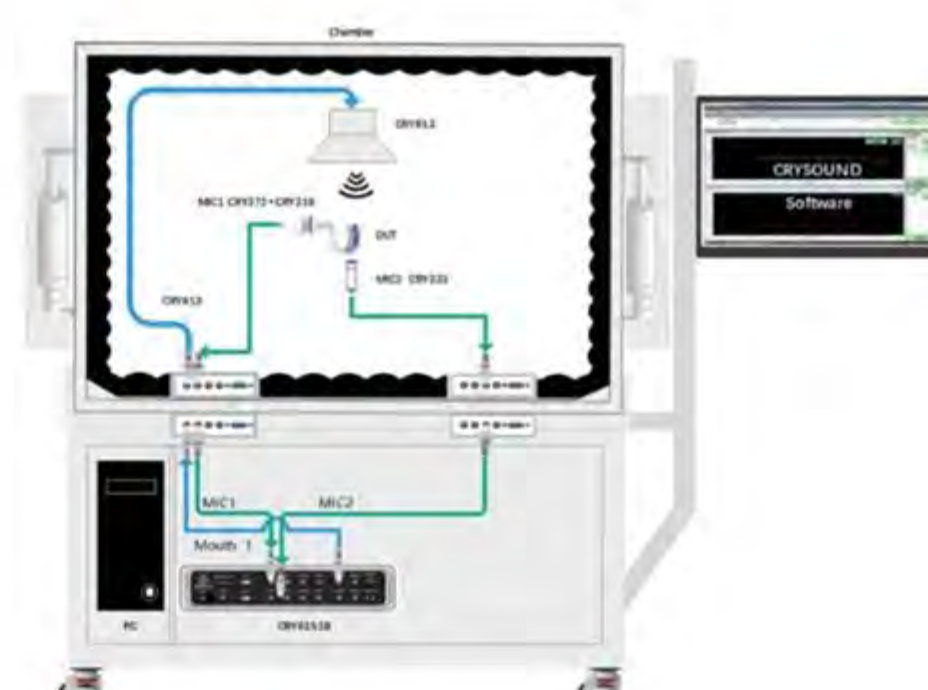


Test Items

Hearing Aid Test	Saturated sound pressure level (SPL), OSPL90
	Gain FOG50
	Frequency response width
	Equivalent input noise
	Total harmonic distortion
	Input/output characteristics
	Restoration time
	Battery current

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
AC Isolated Power Supply	1
CRY372 Measurement Microphone	1
CRY510 Preamplifier	1
CRY319 (2CC) Coupler	1
CRY333 Measurement Microphone	1
CRY507 Preamplifier	1
CRY613 ANC Loudspeaker	1
CRY576 Bluetooth Dongle	1
CRY5611 Sound Level Calibrator	1
PC & Monitor	1
CRY723D Acoustic Test Chamber	1
CRY723D Rack	1
CRY Hearing Aid Fixture	1
Cables	1



Contents

Sensors

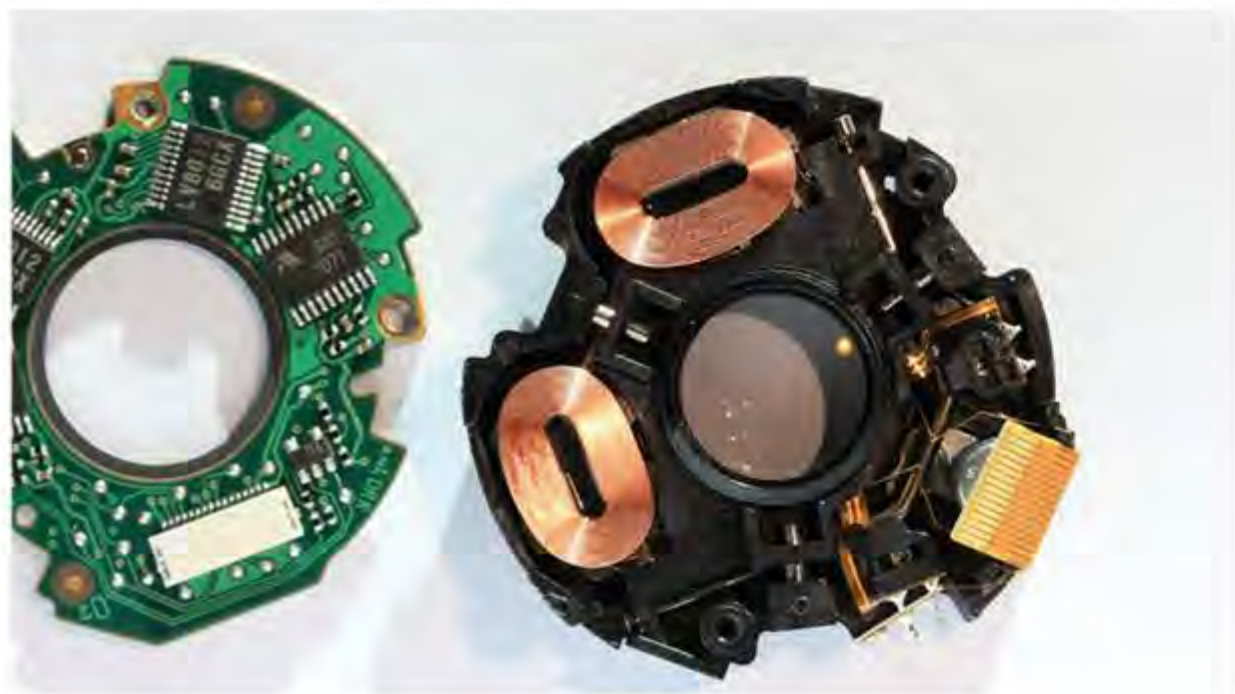
Data Acquisition

Acoustic Imaging

Noise Measurement

Electroacoustic Test

PCBA – Audio Test System



PCBA Dual-Chamber Dual-Test Audio Test System Solution

Consistency of microphone units is crucial for the effectiveness of ENC and ANC. Audio testing during the SMT process is essential, as the microphone defect rate ranges from 1.5% to 3%. CRY SOUND provides a duplex test solution with a dual shell-shaped acoustic test chamber and an audio test system. The solution is characterized by stability and automation, ensuring that PCBA quality is maintained at a high standard.

Key Features

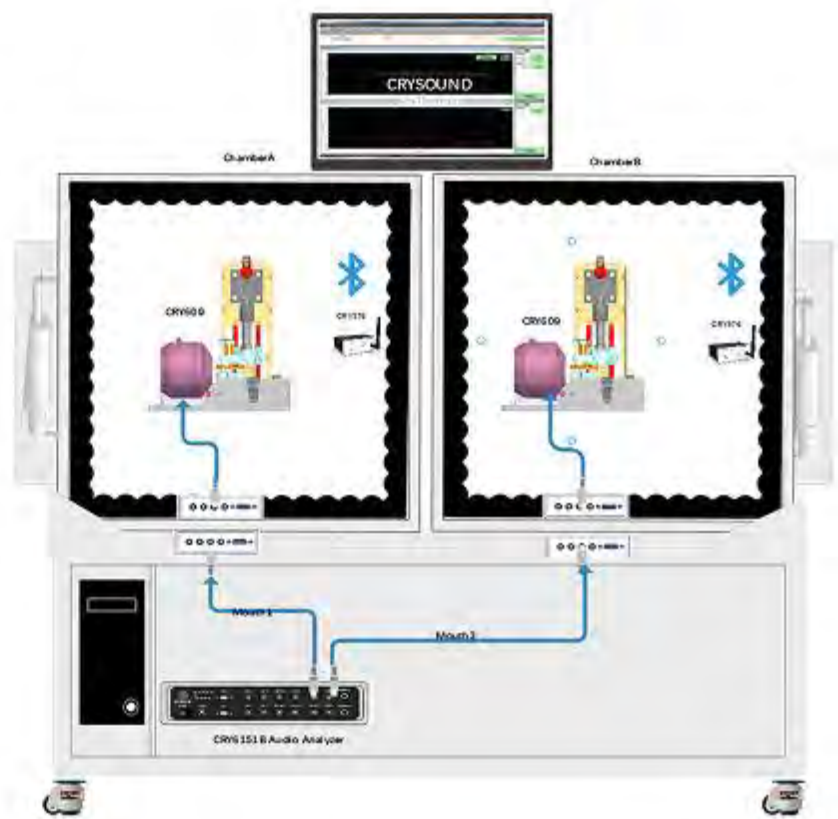
- Duplex test system supported.
- Dual acoustic test chambers per station.
- Flexible fixture module assignment.

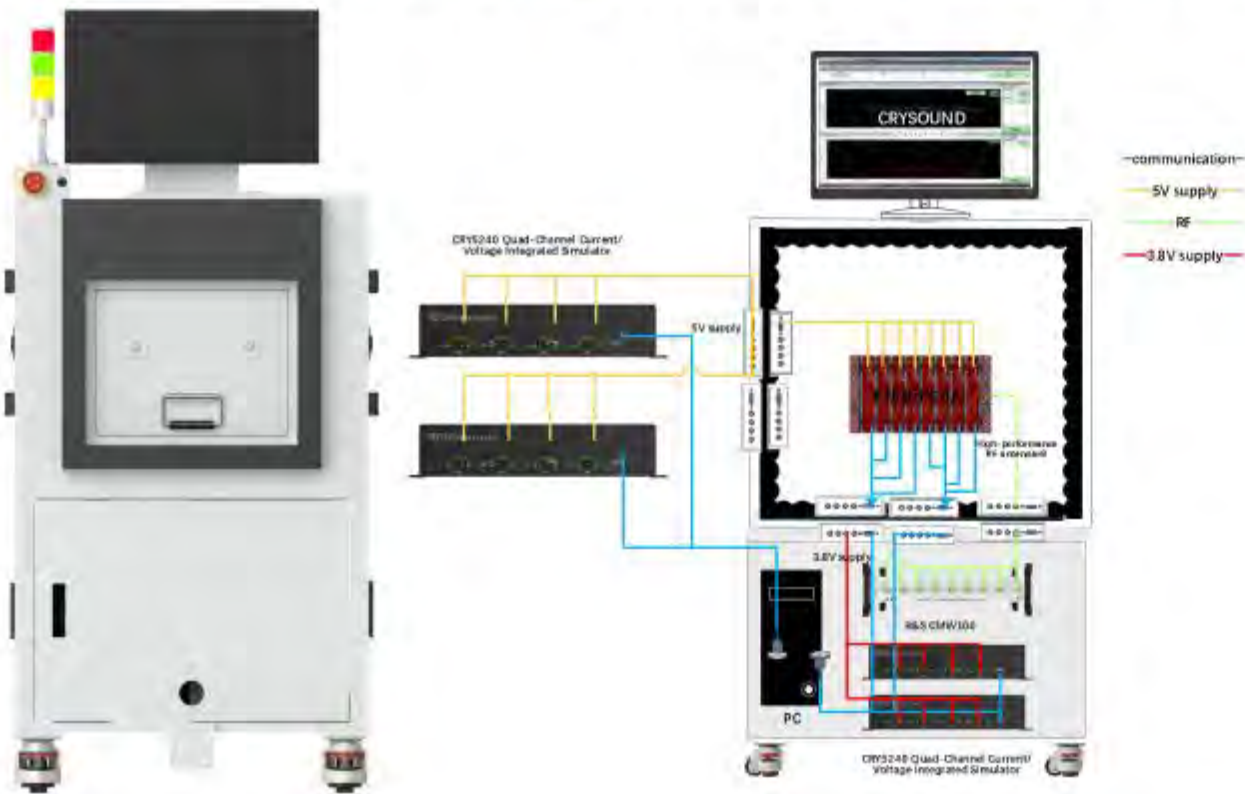
Test Items

SPK Test	Frequency response
	Distortion
	Total harmonic distortion
	Noise floor
	Noise level
	Signal-to-noise ratio
	Gain and level
MIC Test	SPK delay time
	Frequency response
	Distortion
	Total harmonic distortion
	Noise floor
	Noise level
	Mic delay time

Configuration

Device	Quantity
CRY6151B Electroacoustic Analyzer	1
CRY609 Mouth Simulator	2
CRY711-S03 Ear Simulator Set	2
CRY576 Bluetooth Dongle	2
CRY710 Rack	1
CRY710 Acoustic Test Chamber	2
AC Isolated Power Supply	1
PC & Monitor	1
PCBA Fixture	2





One-to-Eight RF Test System Solution for PCBA

CRY SOUND offers a comprehensive RF analysis solution for PCBA, designed to meet diverse production requirements. Featuring stability and automation, this highly accurate and repeatable system ensures PCBA quality while reducing costs. In one-to-eight RF testing, the system achieves a throughput of 400 units per hour (UPH). The solution includes a test in drawer-type acoustic test chambers, providing reliable and automated testing for production environments.

Key Features

- Supports measurement in ACL/DUT mode for RF testing of various products.
- Software compatible with R&S CMW100 Bluetooth communication tester.
- Supports BES, Qualcomm, Vimicro, Bluetrm, Broadcom, Realtek, JL, etc..

Test Items

BDR Test	TX power
	Power control
	Initial carrier frequency tolerance
	Carrier frequency drift
	Sensitivity (single slot packets)
	Sensitivity-multi-slot packets
	Modulation characteristic
EDR Test	Maximum input level
	Relative TX power
	Carrier frequency stability and modulation accuracy
	Differential phase modulation
	Sensitivity
	BER floor performance
	Maximum input level
Power Consumption Test	leakage current
	Charging current
	Fully charged current
	Power-on current
	Shipping current
Burn	Firmware burn-in
Calibration	Frequency bias calibration

Configuration

Device	Quantity
CRY7272	
Acoustic Test Chamber	1
PC & Monitor	1
R&S CMW100	1
CRY5240 Quad-Channel Current/Voltage Integrated Simulator	4
AC Isolated Power Supply	1
Industrial Barcode Scanner	1
High-Performance RF Cable	16
PCBA RF Fixture	1



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