AUDIOWELL

SENSOR TECHNOLOGY

PRODUCT CATALOGUE

Intelligent Appliance

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AUDIOWELL INTRODUCTION

Audiowell Electronics(Guangdong) Co., Ltd. (AUDIOWELL) was established in 1999, stock abbreviation: Audiowell, stock code: 920491. The company is a high-tech enterprise specializing in the research, design, production and sales of intelligent sensors and actuators and related applications.

Owning four manufacturing bases, Audiowell possesses the ability of of transducer chip preparation, structural design,intelligent algorithm, precision machining and packaging and testing technology and the main products are intelligent sensors and actuators. Products are widely used in intelligent vehicle, intelligent meters, smart homes, smart security, smart terminals and other fields. Audiowell committs to becoming the main provider of the core components of the perception layer and the execution layer and their solutions.

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SENSOR TECHNOLOGY

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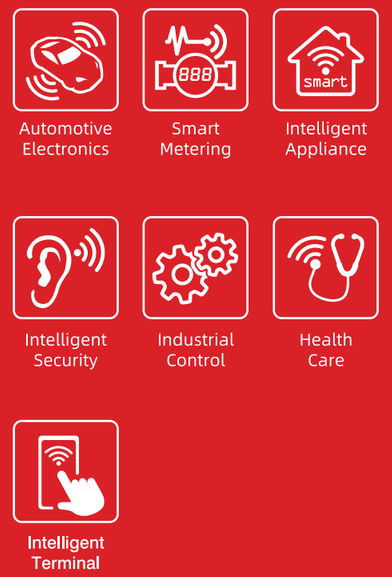

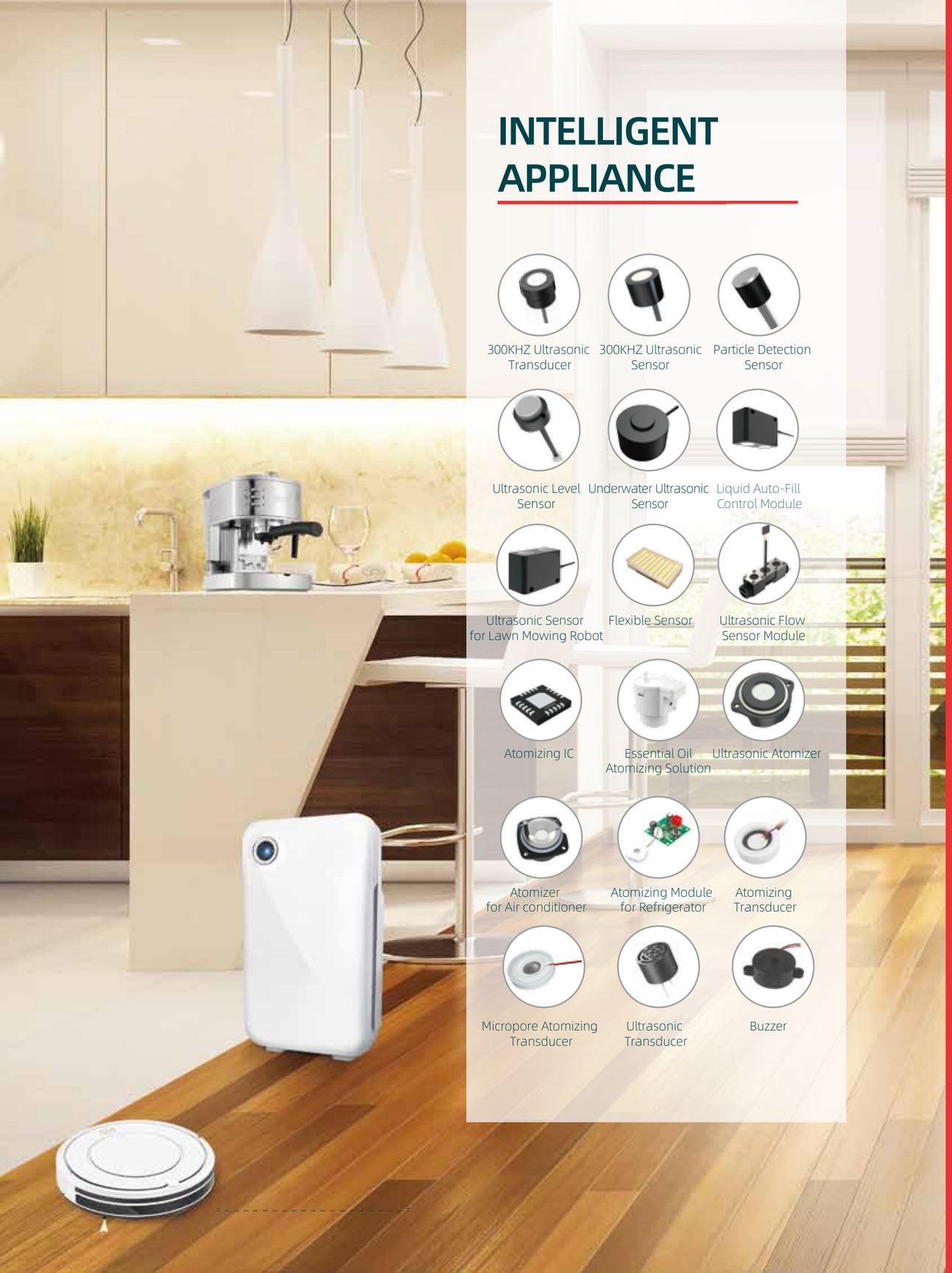

INTELLIGENT APPLIANCE

300KHZ Ultrasonic Transducer

300KHZ Ultrasonic Sensor

Particle Detection Sensor

Ultrasonic Level Sensor

Underwater Ultrasonic Sensor

Liquid Auto-Fill Control Module

Ultrasonic Sensor for Lawn Mowing Robot

Flexible Sensor

Ultrasonic Flow Sensor Module

Atomizing IC

Essential Oil Atomizing Solution

Ultrasonic Atomizer

Atomizer for Air conditioner

Atomizing Module for Refrigerator

Atomizing Transducer

Micropore Atomizing Transducer

Ultrasonic Transducer

Buzzer

INTELLIGENT APPLIANCE

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300KHZ Ultrasonic Transducer

Features
- Good directive
- Excellent consistency

Applications
- Sweeping robot

Model	HT0020
Appearance	
Frequency (KHz)	300
Beam Angle (°)	6~12
Driving voltage (Vp-p)	12
Capacitance (nF)	1.3±20%
Size (mm)	Φ16.0 x H12.0

300KHZ Ultrasonic Sensor

Features
- Small blind zone
- Digital output

Applications
- Sweeping robot

Model	MU0002
Appearance	
Frequency (KHz)	300
Detection range (mm)	25~45
Voltage (V)	5
Communication method	UART

Particle Detection Sensor

Features

- Intelligent sensing of particle size, adaptive adjustment of sweeping mode.
- Integrated and compact, easy to install.

Applications

- Sweeping Robot
- Floor washing machines
- Hoover

Model	MU0006-000
Particle detection	Large or Small /Much or Less*
Communication method	UART
Start-up time (s)	≥1
Refresh rate (Hz)	≤50
Operating voltage (V)	5±0.3±±？？
Operating temperature (℃)	0～+50
Protection class	IP67

*Large or Small : Particle size in 1~2mm is defined as small, others are defined as large.
Much or Less: with the dispersion of the density of the degree, the specific definition of the module instruction manual.
(Test conditions: T = 27 ± 3 ° C, H = 40 ~ 60% R.H)

Ultrasonic Level Sensor

Features

- Continuous measurement
- High accuracy
- External Installation

Applications

- Tank level measurement
- Industrial equipment level measurement

Model	MU0005
Frequency (MHz)	2±0.1
Detection range (mm)	15~500
Measuring error (mm)	±1
Communication method	UART
Voltage (V)	5

Underwater Ultrasonic Sensor

Features

- Detection distance up to 8 meters
- Small blind zone
- Low power consumption
- IP68 protection class

Applications

- Robotic pool cleaner

Model	UD0001
Detection range (mm)	60~8000
Voltage (V)	5
Max. working depth (m)	3
Communication method	485/Serial port
Protection class	IP68

Ultrasonic Sensor for Lawn Mowing Robot

Features

- High recognition accuracy, can identify gentle slopes, filtering weed echo interference.
- Strong environmental adaptability, not subject to light, humidity and other outdoor environmental interference.

Applications

- Lawn mowing robot

Model	AU0009
Detection distance* (cm)	2-120
FOV (°)	horizontal:20~60 vertical:45~110 (varies according to model)
Blind Zone Distance (cm)	≤2
Operating frequency (KHz)	60±1.0
Measurement accuracy (cm)	≤±1
Operating voltage (V)	5
Signal output	Serial output

*Detection mode: 20cm, 35cm, 120cm

Flexible Sensor

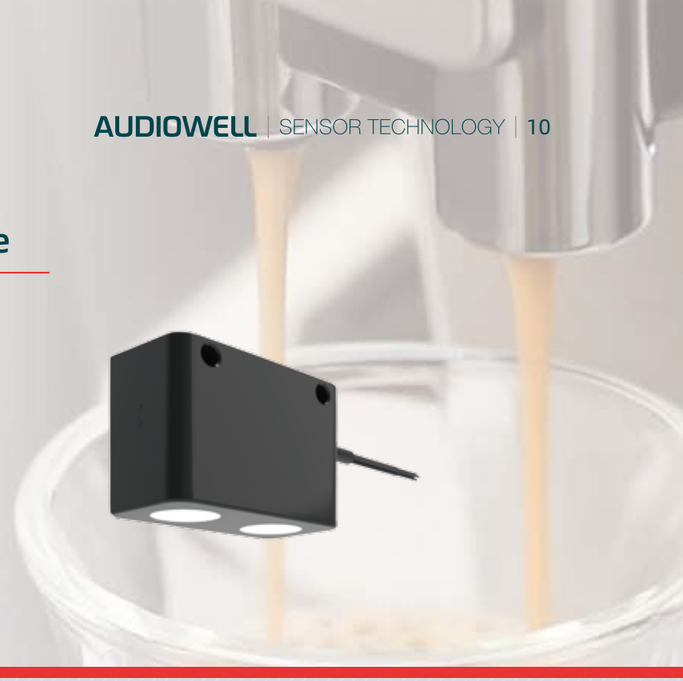
Features

- Ultra-thin thickness between 200-400 microns, thinnest can be within 100 microns
- High sensitivity, large response
- Fast response and recovery in 10ms
- Wide range, linear operating range of 0-2 MPa

Applications

- Intelligent home center control system
- Intelligent appliance

Model	AW102
Detecttion pressure range (KPa)	0~250
Working voltage (V)	5±0.3
Working current (mA)	≤0.5
Communication method	IIC/UART/IO
Working temperature (°C)	0~+40



Liquid Auto-Fill Control Module

Features

- Non-contact measurement
- Short response time
- Continuous measurement for accurate control of water

Applications

- Water dispenser
- Coffee machine

Model	AU0009
Refresh frequency (Hz)	30
Working voltage (V)	3.3~5
Working current (mA)	≤25
Communication method	URAT

Ultrasonic Flow Sensor Module

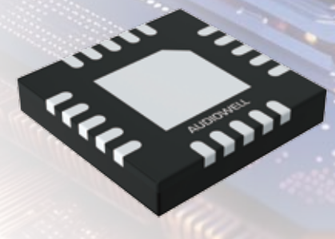
Features
- High accuracy
- Approved for drinking water
- Digital output

Applications
- Smart water management system
- Leakage detection

Model	FS0015
Appearance	
Diameter	DN10
Flow range (L/min)	0.5~30
Accuracy	±5%
Power supply (V)	5±0.5
Operating temp. (℃)	+0.1~+50
Max. Operating Pressure (Mpa)	1.5

Atomizing IC

Features:
- High precision swept frequency output
- Extra large storage space
- Built-in programming function
- Factory software setting
- Support secondary development



Model	ADW001
Package	QNF20
Operating voltage (V)	2.8-5.5
Operating temp. (℃)	-40~+85
Low power mode current (uA)	＜50
Memory	16K MPT 1KSRAM 432BYTE EEPROM
PFG	1.7/2.4/3.0/3.3MHz settable

Essential Oil Atomizing Solution

Features

- Intelligent frequency tracking, can atomize most kinds of essential oils
- No dilution, fast di usion
- Corrosion resistant
- Integrated design, easy to install

Applications

- Aromatherapy diffuser

Model	UM0129-001
Frequency (Mhz)	3.0±0.15
Atomization accuracy (mg)	1
Operating temp. (℃)	+5~+45
Product size (mm)	62 X 60 X 133
Average power (Maximum power) (W)	≤1 (8)

Ultrasonic Atomizer

Features

- Integrated transducer+circuit design and compact size
- High conversion efficiency, low power consumption and heat
- Built-in water level detection for anti-dry protection
- Digital signal control, easy extension development

Applications

- Humidifier
- Aromatherapy diffuser

Model	UM0122-006
Appearances	
Voltage (V)	24
Frequency (Mhz)	1.7±0.05
Current (mA)	900±50
Atomizing volume (mL/H)	≥300

Ultrasonic Atomizer for Air conditioner

Features

- Intelligent start-stop atomization function, intelligent adjustment of the amount of atomization
- Integrated design, safe and reliable, IP65 protection level
- Low power consumption

Applications

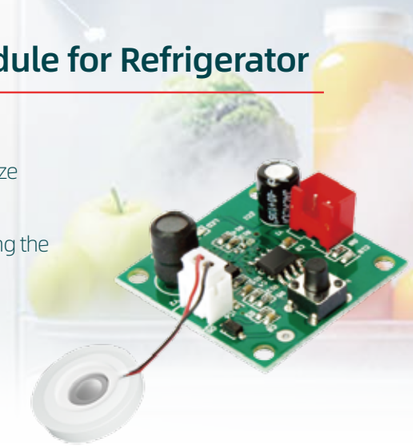
- Air conditioner

Model	UM0122
Appearances	
Voltage (V)	24±1.2
Frequency (Mhz)	1.7
Atomizing volume (mL/H)	≥280
Protection class	IP65

Ultrasonic Atomizing Module for Refrigerator

Features

- Intelligent freshness preservation, can realize automatic start and stop
- Anti-leakage and anti-condensation, solving the problem of low-temperature frosting.
- Through the food certification



Applications

- Smart refrigerator

Model	UP0204
Appearances	
Power supply	DC: 12±0.5V, ≤300mA
Transducer Frequency (KHz)	105±5
Atomizing volume (g/min)	0.2~0.5 (≤5℃)
Operating temp. (℃)	0~+45

Ultrasonic Atomizing Transducer

Features

- The stable temperature of transducer ensures stable work.
- Advanced electode protective film is suitable for all kinds of different water.

Applications

- Humidifier
- Aroma Diffuser

Model	HL0020-004	HL0001-001	HL0013-085	HL0015-000	HL0017-010
Frequency (MHz)	2.4	3	1.7	1.7	2.4
Lead length (mm)	50±5	50±5	100±5	88±5	100±5
Terminal	XH-2P	XH-2P	/	/	/
Diameter (mm)	16	16	20	25	25

Microporous Atomizing Transducer

Features

- Fine atomized particles
- High through hole rate, up to 97%
- Acid resistance, alkali resistance and cavitation corrosion resistance

Applications

- Humidifier
- Aroma Diffuser

Model	HQ0047-016	HQ0064-015
Frequency (KHz)	109±5	110±5
Capacitance (pF)	3800±20%	3200±20%
Impedance (Ω)	⩽180	≤180
Hole size (mm)	7±1	6.5±1
Diameter (mm)	20	20

Ultrasonic Sensor for Directional Speaker

Features

-Excellent directive, directional transmission
-Not affected by electromagnetic fields

Applications

- Directional speaker

Model	TO0123-001	TO0019-009	TO0139-000
Frequency (KHz)	40±1	40±1	40±1
S.P.L (dB)	≥115	≥115	≥117
Max. input voltage (Vrms)	20	20	20
Static capacitance (pF)	2500±20%	2100±20%	2200±20%
Operating temp. (℃)	-20~+70	-20~+70	-40~+85
Size (mm)	Φ16.0 x H 12.0	Φ16.0 x H 12.0	Φ8.0 x H 6.0

Buzzer

Features

-Small size, easy to install
-Stable performance

Applications

- Home appliance alarm

Model	QJ0410-007	QJ0411-010
S.P.L (dB)	70(10cm)	85(10cm)
Capacitance (pF)	14000±30%	15000±30%
Max. input voltage (Vp-p)	25	20
Operating Temp. (℃)	-20~+105	-40~+85
Size (mm)	56.0×44.5 x 33.5	Φ13.8×6.4

Lineup

Products	Appearance	Sweeping robot	Robotic Pool Cleaner	Air purifier, HVAC	Air conditioner	Refrigerator	Lawn mowing robot	Service robot	Humidifier	Aroma Diffuser	Directional speaker	Printer	Water management	Water dispenser
300KHZ Ultrasonic Sensor		■										■		
Particle Detection Sensor		■												
Liquid Level Sensor		■												■
Underwater Ultrasonic Sensor			■											
Liquid Auto-Fill Control Module						■								■
Ultrasonic Sensor for Lawn Mowing Robot														
Flexible Sensor								■						
Ultrasonic Flow Sensor Module													■	
Atomizing IC									■	■				
Essential Oil Atomizing Solution										■				
Ultrasonic Atomizer				■	■				■	■				
Ultrasonic Atomizing Module						■			■	■				
Atomizing Transducer				■	■				■	■				
Microporous Atomizing Transducer						■			■	■				
Ultrasonic Transducer		■									■			
Buzzer		■	■	■	■				■	■		■		