

## FWDC-903/943

### WIRELESS CONFERENCE DISCUSSION SYSTEM



FWDC-903 digital wireless conference discussion system, with professional appearance design, perfect circuit composition and stable functional characteristics, can be cooperated with VTS-2000 automatic video tracking system and central control system to achieve functional diversification of modern high-tech conference. The data instruction of this wireless conference discussion system is transmitted by LoRa protocol. Audio works in UHF band. High fidelity circuit design can produce high quality sound effect. The system has anti-interference protection, which can effectively block the influence of computers, mobile phones and Bluetooth wireless devices in the environment. It is fully applicable to local government departments, business conference rooms, business venues and international conference centers.

### Key Features

#### Practical Function

- Adopt LoRa 433MHz wireless control signal and UHF audio transmission technology.
- The system automatically searches interference-free channels and replaces them.
- Control up to 255 Wireless Discussion units, up to 5 wireless units can speak at the same time.
- With Dante interface, it can communicate with any device with Dante to transmit audio.
- Bright OLED operation screen, with Chinese and English language menu selection, perfect function, easy operation.
- Super anti-interference function can effectively block the impact of computer devices, mobile phones and Bluetooth devices in the environment.
- The conference unit can automatically select or manually start the power supply. When it chooses to turn on automatically, the central controller will send the instruction to the conference unit at the same time, which automatically turns on the power supply and works in the mode after receiving the instruction.

#### Expansibility

- With antenna interface, it can be used in conjunction with the antenna system of Relacart, and the transmission signal is very strong.
- Any number of wireless conference systems can be installed in the same building.
- With VTS-2000 automatic video tracking system, can achieve conference video tracking function.
- Equipped with RS-232 interface, it can connect various central control devices.

#### Flexible Speech

- Four conference modes:
  1. Time-limited Mode
  2. First in First out Mode
  3. Application Mode
  4. Voice-activated Mode

#### Easy Installation

- The unique advantages of simple installation, easy and fast, and no impact on the installation site, especially for the installation or layout of historical museums, ancient buildings and other historical and cultural buildings, users need not worry about damage to ancient buildings, because they do not need wiring, nor drilling holes, providing a professional perfect solution for harsh and complex application occasions.

### Product Specification



**FWDC-903**

Digital and Wireless Conference Discussion Systems

- Bright OLED operation screen, with Chinese and English language menu selection, perfect function, easy operation.
- With Dante interface, it can communicate with any device with Dante to transmit audio.
- With VTS-2000 automatic video tracking system, can achieve conference video tracking function.

Main Frame Size:	EIA Standard Rack 1U
Receiving Channel:	Six Channels
Frequency Reliability:	±0.005%
Carrier Frequency Range:	UHF 521.25MHz-936.85MHz
Sampling Rate:	48KHz / 24bit
Modulation:	FM
Operating Distance:	80M (in open space)
Oscillation:	PLL synthesized
Bandwidth:	32MHz
Max. Deviation:	±45KHz
S/N:	>100dB
THD:	<0.5%@1KHz
Frequency Response:	50Hz-18KHz
Output:	Balanced XLR-M, 2 RCA
Power Supply:	AC110-240V 50/60Hz
Dimension(mm):	480(W)x350(D)x43(H)
Weight:	Approximately 3.2 kg



**FWDC-903C** (Wireless Chairman Unit) & **FWDC-903D** (Wireless Delegate Unit)

- It is powered by detachable lithium battery, charged by FWDC-903 special charging box, or charged directly by USB interface of conference unit.
- It can work continuously for 16 hours and stand by for up to 24 hours at full power.
- Bright OLED display can display battery capacity, speech mode, time limit and other working conditions at the same time.
- Super anti-interference ability of mobile phone.
- With a halo-type work indicator.
- Use high-quality capacitive condenser microphone head to achieve high-quality sound pickup.
- Wireless conference technology can easily build a temporary system, beautiful and neat, without any impact on the installation site.

Carrier Frequency Range:	521.25MHz-936.85MHz
Oscillation	PLL synthesized
Harmonic Radiation:	<45dBm
Bandwidth:	134MHz
Max. Deviation:	±45KHz
Input Jack:	3-pin XLR jack
RF Output Power:	15mW
Power Supply:	Li-ion polymer rechargeable battery 3.7V/2900mA
Current Consumption:	120mA (Typical)
	60mA (Standby)
Working Time:	23 Hour(Classical)
	48 Hour(Standby)
Weight:	910g
Dimension (mm):	162(L)x125(W)x54(H)



**FWDC-943C**

Wireless Array Chairman Unit



**FWDC-943D**

Wireless Array Delegate Unit

- The wireless array microphone adopts a metal streamlined desktop design with OLED display. The array microphone has an ultra-long pickup distance of 80CM and a deeper pickup range, and its directional characteristics are significantly improved compared to ordinary cardioid microphones.

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation Mode:	PLL synthesized
Bandwidth:	134MHz
Max. Deviation:	±45KHz
RF Output Power:	30mW
Power Supply:	Lithium-ion polymer rechargeable battery



**DC-903**

Data Communication Converter

- DC-903 is a data communication converter for the WDC serie wireless conference system
- With mature and stable wireless communication protocol, LoRa it has the advantages of high stability, high performance, high security, low latency and low power consumption

Working Frequency Range:	400~450MHz
Gain:	16dBm
RF Input Port:	N female
Data Communication Port:	RJ45 connector
Power Supply:	Powered by the controller through the CAT5 cable
Material:	Black anodized aluminum
Dimension(mm):	42(W)x42(D)x105(H)
Weight:	150g

## FDCS-303

### WIRED DIGITAL CONFERENCE DISCUSSION SYSTEM



Relacart FDCS-303 Wired Digital Conference Discussion System is a new-generation conference solution that integrates high-quality audio, strong expandability, and versatile functionality. Equipped with a built-in DSP chip and howling suppression, it effectively ensures speech clarity. A single central controller unit can connect up to 50 discussion units, with support for up to 6 central controller units and 300 discussion units operating simultaneously. The system uses standard network cables for signal transmission and supports PoE power supply, delivering uncompressed 24-bit/48kHz audio signals with low latency. It can be expanded with a simultaneous interpretation central controller, supporting one primary language and up to seven foreign languages for simultaneous interpretation. An optional voting function is also available to meet the needs of various types of conferences. The discussion units feature a 5-inch touchscreen for voting and independent sensitivity adjustment, along with a 7-band parametric equalizer (PEQ) for fine-tuning and AGC for automatic volume gain control. System parameters can also be configured via the WEB software developed by Relacart. Whether for large-scale conferences, government agencies, enterprises, hospitals, schools, or other scenarios, the DCS-303 delivers an exceptional speaking experience tailored to diverse meeting requirements.

### Product Specification



**FDCS-303**  
Central Controller

- A single central controller unit can connect up to 50 discussion units, with support for up to 6 central controller units and 300 discussion units operating simultaneously.
- The system uses standard network cables for signal transmission and supports PoE power supply, delivering uncompressed 24-bit/48kHz audio signals with low latency.

Chassis Specifications:	EIA Standard 1U
Sampling Rate:	24-bit/48kHz
Signal Latency:	<3ms
Frequency Response:	20Hz~20kHz (1kHz, +4dBu output)
Dynamic Range:	>100dB (A-weighted)
Signal-to-Noise Ratio:	>95dB (A-weighted)
Total Harmonic Distortion:	<0.1% (f=1kHz)
Equivalent Input Noise:	Mic/Line 1-2, <-126dBu, R <sub>s</sub> =150Ω
Residual Noise:	<-86dBu, A-weighted
Total Harmonic Distortion + Noise:	<0.1% (overall)
Crosstalk (1kHz):	>-80dB
Connection Cable:	Cat5e Type B network cable
Maximum Number of Conference Units:	300
Display Type:	LCD
Phantom Power:	DC +48V
Standby Power Consumption:	6W
Rated Power:	250W/48V
Maximum Power:	300W/48V
Power Supply:	AC 100-240V, 50/60Hz
Operating Temperature:	0°C to 60°C
Control Type:	Mechanical + Capacitive Touch
Dimensions (mm):	410 (W) × 43 (H) × 206 (D)
Weight:	3.4 kg

### Key Features

#### Ring Network Technology

- Features an innovative ring network design that enables fully digital signal transmission and processing. A single CAT5e cable is sufficient to transmit 1 primary + 7 interpretation audio channels along with various data.

#### Flexible Expansion

- Supports cascading multiple conference central controllers for larger venue merging/separating (including conference management). A single central controller connects 50 units, with up to 6 central controllers supporting 300 units total - perfectly scaling from small meetings to very large conferences.

#### WEB Software

- System parameters can be configured via dedicated WEB-based software. Users can access and adjust settings directly through any smart device's browser without installing additional software. Supports independent adjustment of microphone sensitivity and 7-band PEQ per unit, along with AGC for automatic volume gain control.

#### Voting Function

- The system offers an optional professional voting module. Participants can cast votes directly via the unit's touchscreen, significantly enhancing meeting decision-making efficiency and transparency.

#### High-Fidelity Audio

- Utilizes lossless audio transmission technology with 24-bit/48kHz sampling and 20Hz-20kHz frequency response. Supports zoned audio output with automatic volume adjustment based on active microphone locations. Enables longer pickup distances without feedback. central controller supports 9-band

#### Simultaneous Interpretation

- The system can be expanded with an interpretation central controller to provide simultaneous interpretation, supporting up to 1 original language interpreted into 7 foreign languages. This meets international conference requirements and ensures clear cross-language communication.

#### DSP Chip

- Incorporates a high-speed DSP chip, 24-bit high-performance ADC/DAC, and proprietary digital audio extension algorithms to reduce noise during transmission.

#### Touchscreen

- Units feature 5-inch color touchscreens with intuitive interfaces. Participants can easily view operational status, voting information, and perform menu operations directly on screen for a smooth, modern user experience.

#### USB Interface

- Supports USB recording to flash drives with central controller monitoring and advanced noise cancellation for clearer recordings. Features TYPE-C USB output for bidirectional real-time communication with video conference endpoints or meeting transcription.



**FDCS-303C** (Chairman Unit)  
& **FDCS-303D** (Delegate Unit)

- The FDCS-303C/D wired digital conference discussion unit is engineered with a compact yet robust metal housing. It utilizes standard network cables for both data transmission and power supply, while its XLR 3-pin interface ensures secure connectivity with Relacart GF-series or other brand gooseneck microphones. The unit captures voice with exceptional clarity and delivers high-quality 24-bit/48kHz digital audio output.
- Equipped with a 5-inch LCD touchscreen, the unit enables on-screen operation for parameter adjustments and voting functions. Designed for versatility, it is fully adaptable to a wide range of meeting environments.

Sampling Rate:	24-bit/48kHz
Frequency Response:	20Hz~20kHz (1kHz, +4dBu output)
Dynamic Range:	>105 dB (A-weighted)
Signal-to-Noise Ratio:	98 dB (A-weighted)
Equivalent Input Noise:	<-90 dBuV
Total Harmonic Distortion + Noise:	<0.1% (overall)
Phantom Power:	48V
Power Supply:	DC +48V
Power Consumption:	>5W
Operating Temperature:	0°C to 60°C
Dimensions(mm):	135 (W) × 148.3 (H) × 84.2 (D)
Weight:	670 g

## FCS-102

### WIRED AUDIO CONFERENCE DISCUSSION SYSTEM



The FCS-102 is a simple, affordable discussion audio conferencing system. FCS-102M is the control center of the whole system, including conference mode selection, external output sound reinforcement level, line input function, etc. The system can accommodate 256 microphone units, with voice input automatic gain, howling suppression, FIFO and voice-activated functions. Apply to boardrooms, business meetings, educational institutions, hotels, conference rental, system reconstruction, etc.

#### Product Specification



**FCS-102M**  
Central Controller

- EIA Standard Rack 1U metal chassis.
- The speech number could be chosen in the central controller, and has first-in first-out function.
- Equipped with handle, which is easy for lift.

Main Voltage:	AC100-240V 50/60Hz
Maximum Power:	60W
Frequency Response:	65Hz-15KHz
S/N:	>85dB
(T.H.D.):	<0.7%
Input:	LINE IN: 0dBV (f=1KHz, THD <0.3%)
Output:	XLR: 10dBV 6.3mm -15dBV RCA: 0dBV
Unit interface:	Anti-drop 9P aviation plug
RS-232 interface:	It can be connected to central control system or video tracking system.
Size(mm):	410(W)×206 (D)×43(H)
Weight(g):	Approximately 2.3Kg



**FCS-102C** (Chairman unit) &  
**FCS-102D** (Delegate Unit)

- Refined and elegant design, ergonomic and very modern.
- Comply with IEC60914 international standard.
- the chairman unit equipped with PRIORITY button and can override all the delegate units.
- Super cardioid condenser microphone to achieve high-quality sound pickup.
- Fixed microphone pole.

Main Voltage:	DC24 V
Power Consumption:	0.5 W
Polar Pattern:	Super cardioid
Frequency Response:	80Hz -18KHz
Unit Interface:	Anti-drop 9P aviation plug
Microphone Type:	Super cardioid condenser microphone
Distortion(T.H.D.):	<0.7%
Sensitivity:	-30dBv at 1V at 1Pa
Tabletop Size(mm):	105(W)×150 (D)×43(H) (without microphone)
Weight(g):	Approximately 785g

#### Key Features

##### Practical Function

- With automatic gain audio processing circuit, it can effectively prevent the feedback and improve the clarity of the entire system.
- Gooseneck conference microphone design, the direction can be adjusted flexibly.
- The indicator on the conference unit shows the speaking status.

##### Flexible Speech

- Three operating modes: FIFO mode: 1/3/6 in a time, AUTO SPEAKING mode or voice-activated mode.
- CS-102C equipped with PRIORITY button and can override all the delegate units.

##### Anti-Interference

- It adopts the hand-in-hand connection method of anti-dropping aviation cable, which is simple, reliable and stable.

##### Flexible Expandability

- With RS-232 interface, it can be connected to central control system or video tracking system.
- The front panel is equipped with a USB interface, which can be connected to a USB flash disk to record the meeting process.
- It can be connected to the conference system expander EXP-124 for further unit expansion.



**FCS-102BC:** Flush-mount Chairman Unit  
**FCS-102BD:** Flush-mount Delegate Unit

- Refined and elegant design, ergonomic and very modern.
- Comply with IEC60914 international standard.
- The microphone has a bright ring to indicate working status.
- Microphone button with light indicator
- Cardioid condenser microphone to achieve high-quality sound pickup.
- Fixed microphone pole.

Main Voltage:	DC24 V
Power Consumption:	0.5 W
Polar Pattern:	Cardioid
Frequency Response:	65Hz -18KHz
Unit Interface:	Anti-drop 9P aviation plug/RJ45
Microphone Type:	Cardioid Condenser Microphone
Distortion(T.H.D.):	<0.7%
Sensitivity:	-20dBv at 1V at 1Pa
Base Size(mm):	132(W)×90(D)×52(H)
Pole Size(mm):	455(L)
Flush-mount Chairman / Delegate Base Weight:	Approximately 343g
Gooseneck Microphone Weight:	Approximately 343g



**FCS-501BC:** Flush-mount Chairman Unit  
(with RJ45 connector)  
**FCS-501BD:** Flush-mount Delegate Unit  
(with RJ45 connector)

## FMAS-D

### MICROPHONE ARRAY SYSTEM



### Product Specification



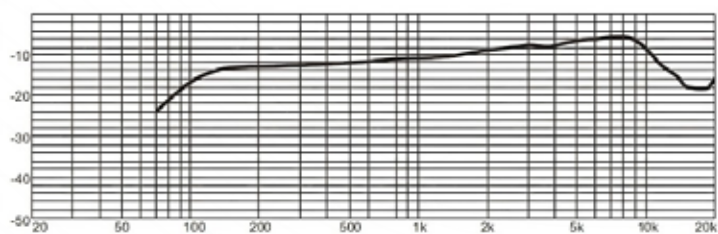
**FMAS-D**  
Microphone Array System

Frequency Response:	20-20000Hz
Input Impedance:	2.2KΩ
Sensitivity:	-11dB at 1KHz@1Pa
S/N Ratio:	65dB at 1KHz
SPL:	-14dBA at 1KHz@1Pa
Pickup Distance:	80CM
Port:	RJ45
Power Supply Mode:	PoE IEEE802.3
Power Consumption:	2.3W
Weight:	350g
Dimensions(mm):	320(W)×60(D)× 31(H)
DANTE Network:	RJ45 connector, CAT5 or CAT6 network above 100Mbps

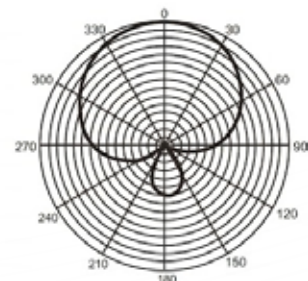
The FMAS-D array microphone adopts a metal streamlined desktop design, which is stylish and succinct. It also has a unique microphone array technology and an integrated microphone module, which improves the range and quality of the array microphone. It ensures that the spokesman does not affect the sound effect within a certain range. Dispense microphone stem and the larger pickup range gives the spokesman more space to use.

### Key Features

- The array microphone provides a silent electronic switch that controls the microphone's radio operation and work indicator. When the red light is on, the microphone is muted, and when the green light is on, the microphone is in the radio state.
- It adopts PoE power supply and Dante protocol, and professional RJ45 connection. Only one network cable is connected to the switch with POE power supply. It can be combined with other Dante devices to form the system output sound. It is easy to install and is ideal for various conferences, lectures and recordings.
- Thanks to the unique microphone module circuit design, the array microphone has a pickup distance of 80CM and a deeper pickup range, and the pointing characteristics are significantly improved compared with the general cardioid microphone.
- FMAS-D array microphones feature radio frequency interference (RF) shielding technology that provides outstanding protection against radio frequency interference and avoids interference such as mobile phones when receiving radio.

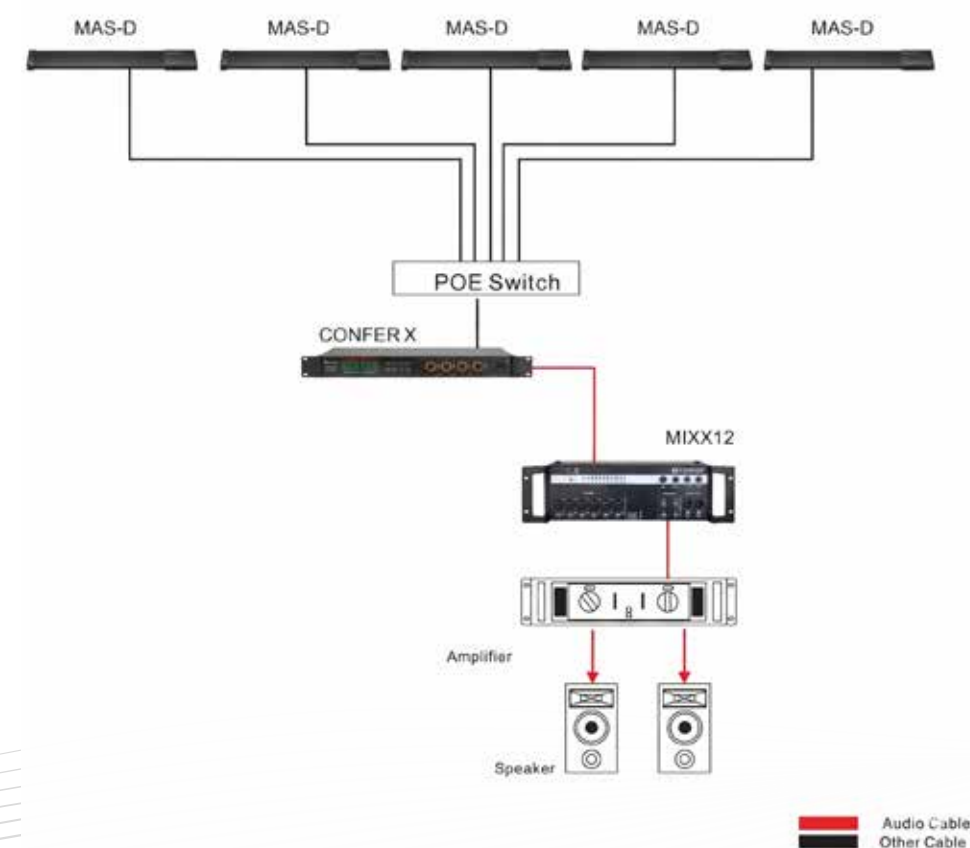


Frequency Response



Polar Pattern

### System Connection Diagram



Audio Cable  
Other Cable

## FTDN1/FTDN1-F

### MICROPHONE DESK STAND WITH DANTE NETWORKED OUTPUT



FTDN1/FTDN1-F desk stand allows Dante technology to be used with any phantom-powered condenser gooseneck microphone with a 3-pin XLRM-type output. The desk stand is designed for surface-mount applications such as high-quality sound reinforcement, conferencing, distance learning and other demanding sound pickup applications.

### Key Features

#### Flexible Configuration

- Connect directly to network via Ethernet cable -no need for expensive audio cable or soldering.
- Integrated user switch controls talk/mute in Local mode and triggers.
- Dante-enabled devices in remote mode.
- 3-pin XLRF-type with lock in for quick mounting of gooseneck microphone
- Red/green LED indicator.
- Local or remote control of mic gain, low-cut filter, LED indicator and 48V phantom power.
- Powered by network PoE
- Scalable across Dante's 512 bidirectional audio channels.

#### Easy Installation

- Filter provides a steep low-frequency attenuation to improve sound pickup without affecting voice quality.
- Heavy die-cast case and non-slip silicone foam bottom pads minimize coupling of surface vibration to the microphone.
- Optional Software: Relacart Dante conference microphone management control software RDM1.0, can set microphone input gain, low cut filter, working mode, phantom power. Make the audio gain visible.



- Dante-equipped models enable multi-channel audio networking over Ethernet.
- Standard Ethernet or Dante™ digital networked audio configurations available
- Ethernet digital audio of Multi channel, with 24-Bit depth and 48 KHz sample rate
- Plug and play networking function, with automatic device discovery function and system configuration.
- Dante upgrade card available for standard Ethernet models.
- Can use Dante virtual sound card to connect a computer to a Dante network for recording, playback and Internet calling between Dante-equipped devices (download Dante virtual sound card at [audinate.com](http://audinate.com))

### Product Specification



**FTDN1**  
Microphone Desk Stand With Dante Networked Output  
XLR Male Connector

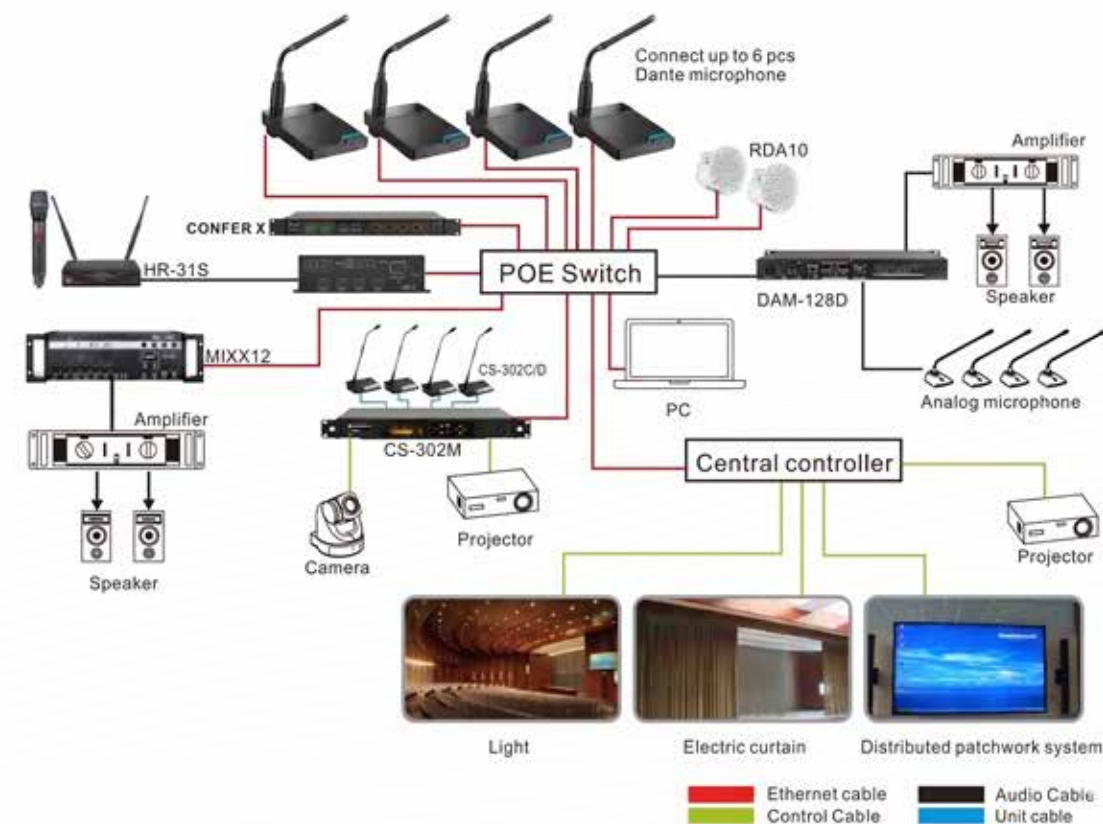


**FTDN1-F**  
Microphone Desk Stand With Dante Networked Output  
XLR Female Connector

It can be used with the other brands gooseneck microphone.

Frequency Response:	20-20,000Hz
Low Cut:	150Hz, 18 dB/octave
Gain Adjustment:	Six level of adjustable gain
Input Impedance:	2.2 KΩ
Maximum Sound:	0dBu @ +20 dB gain
Input Level:	0dBu @ +20 dB gain
S/N Ratio:	65 dB, 1KHz at 1Pa
Power Requirements:	POE IEEE802.3af standard (Power consumption 1.5W)
Power Consumption:	2.3W
Phantom Power:	48V DC
Input Connector:	3-pin XLRM-Type(TDN1) 3-pin XLRF-Type(TDN1-F)
Output Connector:	RJ45
Cable Required:	CAT5 or CAT6 recommended
Transmission Speed:	100 Mbps
Dimensions(mm):	170(L)×120.3(W)×48.5(H)
Weight:	Approximately 720g

### System Connection Diagram



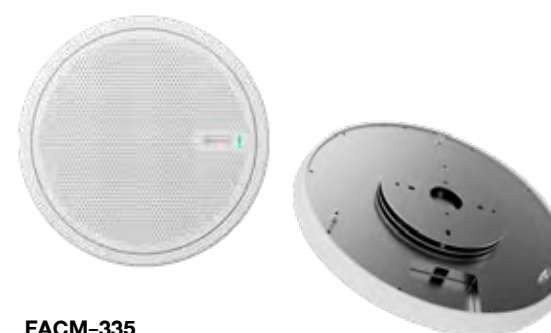
## FACM-335

### AI CEILING MICROPHONE



Relacart's latest innovation, the FACM-335 AI Ceiling Microphone, combines cutting-edge AI technology and advanced acoustic engineering to deliver unparalleled audio quality for any space. This ceiling-mounted solution is not just a technological breakthrough but a versatile tool for environments like conference rooms, classrooms, and auditoriums, ensuring every word is captured with precision and clarity.

### Product Specification



**FACM-335**  
AI Ceiling Microphone

Coverage Area:	25x25 ft (7.6x7.6 m)
Coverage Type:	Automatic
Power Requirements:	PoE/PoE+ (IEEE 802.3af/at)
Power Consumption:	Max 3W
Control Software:	TDM
Cable Requirement:	Cat5e or higher (shielded recommended)
Connector Type:	RJ45
Plenum Rating:	UL2043 (suitable for air-handling spaces)
Dust Protection:	IEC 60529 IP5X
Operating Temperature:	-5°C (23°F) to 40°C (104°F)
Storage Temperature:	-25°C (-13°F) to 60°C (140°F)

### Key Features

#### 360° AI Noise Reduction

- Removes background noise from both uplink and downlink communications while preserving voice clarity, enabling natural conversations in any setting.

#### Intelligent De-reverberation

- Utilizes Deep Neural Networks (DNN) to eliminate echoes in reflective spaces (e.g., concert halls), enhancing Direct-to-Reverberant Ratio (DRR) for crystal-clear voice reproduction.

#### Full-Duplex Acoustic Echo Cancellation

- Eliminates echoes even during simultaneous speech, ideal for low Signal-to-Noise Ratio (SNR) environments without relying on mechanical design.

#### Dynamic Feedback Suppression

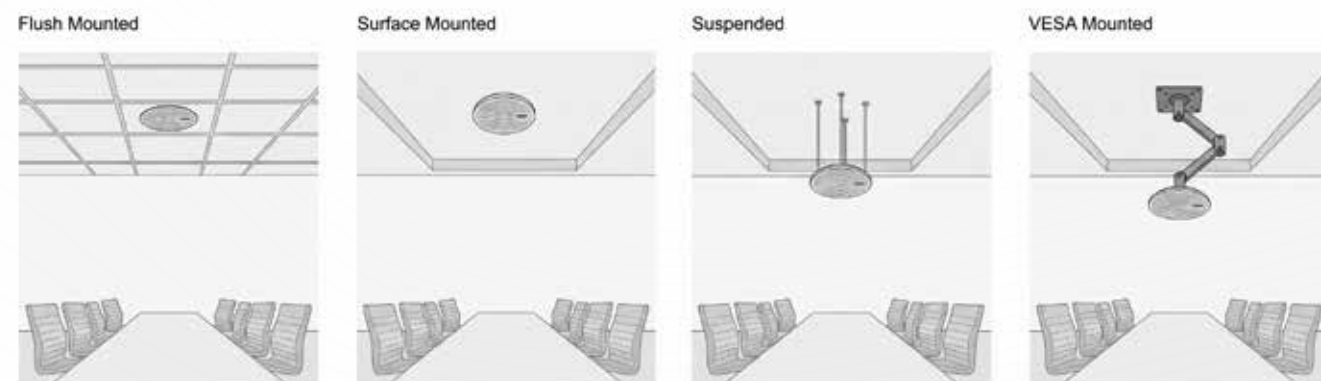
- Integrated AI processor instantly identifies and suppresses narrow band feedback between speakers and microphones, ensuring stable, distortion-free audio.

### Microphone Parameters

Microphone Element:	5 MEMS arrays
Frequency Response:	100Hz – 8kHz
AES67/Dante Output – Channels:	1 channel
AES67/Dante Output – Sample Rate:	48kHz
AES67/Dante Output – Bit Depth:	24-bit
Sensitivity (at 1kHz):	-1.5dBFS/Pa
Max SPL:	96dB SPL
SNR (ref. 94dB SPL, 1kHz):	75dB (A-weighted)
Latency (excl. Dante latency):	48ms
Self-Noise:	22dB SPL (A-weighted)
Dynamic Range:	75dB
ACM-582 Dimensions(mm):	582(W)x582(H)x52(D)
ACM-335 Dimensions(mm):	335(Φ)x33(D)

#### Digital Signal Processing

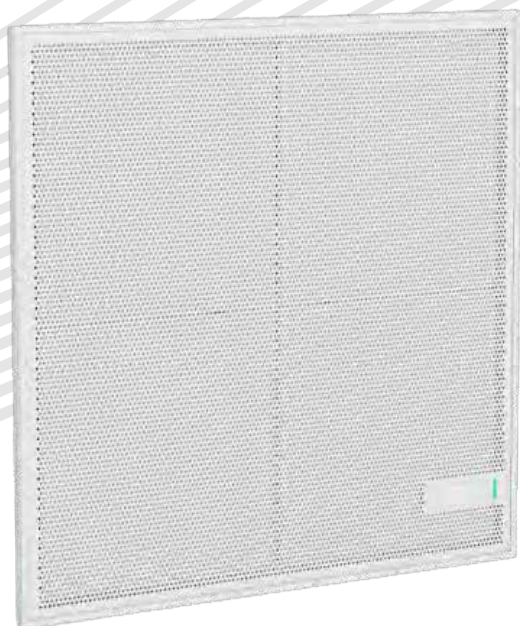
- Acoustic Echo Cancellation (AEC)
- AI Noise Reduction
- Auto Gain Control (AGC)
- Mute Function



\* Observe the mounting specifications from the manufacturer. When flush mounting, do not install the ACM-335 directly next to lights or other electrical devices in the ceiling.

## FACM-582

### AI CEILING MICROPHONE



Relacart's latest innovation, the ACM-582 AI Ceiling Microphone, combines cutting-edge AI technology and advanced acoustic engineering to deliver unparalleled audio quality for any space. This ceiling-mounted solution is not just a technological breakthrough but a versatile tool for environments like conference rooms, classrooms, and auditoriums, ensuring every word is captured with precision and clarity.

### Key Features

#### 360° AI Noise Reduction

- Removes background noise from both uplink and downlink communications while preserving voice clarity, enabling natural conversations in any setting.

#### Full-Duplex Acoustic Echo Cancellation

- Eliminates echoes even during simultaneous speech, ideal for low Signal-to-Noise Ratio (SNR) environments without relying on mechanical design.

#### Intelligent De-reverberation

- Utilizes Deep Neural Networks (DNN) to eliminate echoes in reflective spaces (e.g., concert halls), enhancing Direct-to-Reverberant Ratio (DRR) for crystal-clear voice reproduction.

#### Dynamic Feedback Suppression

- Integrated AI processor instantly identifies and suppresses narrow band feedback between speakers and microphones, ensuring stable, distortion-free audio.

### Product Specification



**ACM-582**  
AI CEILING MICROPHONE



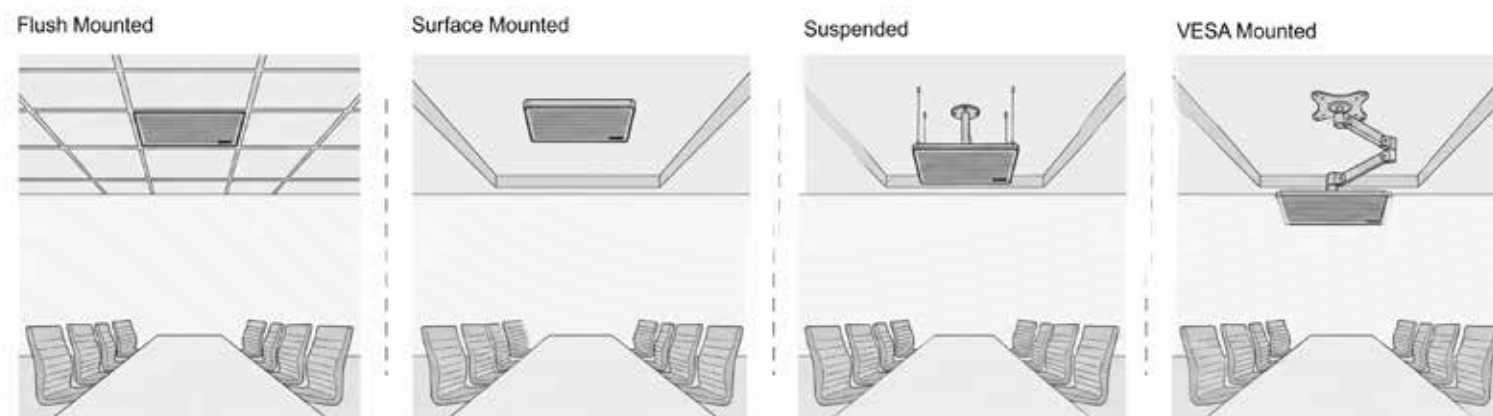
Coverage Area:	25x25 ft (7.6x7.6 m)
Coverage Type:	Automatic
Power Requirements:	PoE/PoE+ (IEEE 802.3af/at)
Power Consumption:	Max 3W
Control Software:	TDM
Cable Requirement:	Cat5e or higher
Connector Type:	RJ45
Plenum Rating:	UL2043
Dust Protection:	IEC 60529 IP5X
Operating Temperature:	-5°C (23°F) to 40°C (104°F)
Storage Temperature:	-25°C (-13°F) to 60°C (140°F)

### Microphone Parameters

Microphone Element:	5 MEMS arrays
Frequency Response:	100Hz – 8kHz
AES67/Dante Output – Channels:	1 channel
AES67/Dante Output – Sample Rate:	48kHz
AES67/Dante Output – Bit Depth:	24-bit
Sensitivity (at 1kHz):	-1.5dBFS/Pa
Max SPL:	96dB SPL
SNR (ref. 94dB SPL, 1kHz):	75dB (A-weighted)
Latency (excl. Dante latency):	48ms
Self-Noise:	22dB SPL (A-weighted)
Dynamic Range:	75dB
ACM-582 Dimensions(mm):	582(W)x582(H)x52(D)
ACM-335 Dimensions(mm):	335(Φ)x33(D)

### Digital Signal Processing

- Acoustic Echo Cancellation (AEC)
- AI Noise Reduction
- Auto Gain Control (AGC)
- Mute Function



\* Observe the mounting specifications from the manufacturer. When flush mounting, do not install the ACM-582 directly next to lights or other electrical devices in the ceiling.

## FTSG/FRG series

### PROFESSIONAL DESK MICROPHONE

#### Product Specification



**FTSG-923**  
Professional Desk Microphone



**FTSG-933**  
Professional Desk Microphone

FTSG-923/933 is a desktop conference microphone with a three-pin XLR male. It adopts a new square microphone tube and high-end customized leather material, which is elegant and generous. The V-shaped base distributes the weight of the microphone more evenly, making it more stable on the table. The condenser cardioid directivity microphone core and the adjustable pickup angle design are adopted, which can flexibly adjust the pickup direction according to personal usage habits. Placing it in a farther place gives participants more space, and at the same time, it can also reduce the interference of environmental noise by using the principle of lower sensitivity of the end.

Capsule Type:	Condenser
Polar Pattern:	Cardioid
Frequency Response:	100Hz-15KHz
Sensitivity:	-38dB at 1V at 1Pa
Output Impedance:	420Ω
Maximum Sound Pressure:	125dB, 1KHz at 1% T.H.D
Dynamic Range (Typical):	100dB, 1KHz at maximum sound pressure
S/N Ratio:	>65dB, 1KHz at 1Pa
Power Supply:	DC24-52V phantom
Power Switch:	On/Mute
Output Connector:	Male 3-pin XLR
Weight:	About 800g
Overall Size(mm):	225(W) x 135(D)X95/220(H)
Colour:	TSG-923: Black TSG-933: Champagne gold



**FTSG-300**  
Professional Desk Microphone

Capsule Type:	Fixed-charge back plate, permanently polarized condensers
Polar Pattern:	Cardioid
Frequency Response:	30Hz~18KHz
Sensitivity:	-35 dB (17.7mV) 1Pa at 1V
Impedance:	250Ω
Maximum Sound Pressure:	125 dB SPL, 1KHz at 1% T.H.D
Dynamic Range(Typical):	105 dB, 1 kHz at Max SPL
S/N Ratio:	>65dB, 1kHz at 1Pa
Switch:	(on circuit board) Mute/Toggle/Talk
Power Supply:	3V(AAx2) or 11-52V DC, 5 mA typical
Weight:	100g
Microphone Length(mm):	340, 420(default), 480
Output Connector:	Male 3-pin XLR
Accessories Furnished:	Windscreen
Color:	Black



**FTSG-600**  
Professional Desk Microphone

Capsule Type:	Condensers
Polar Pattern:	Cardioid
Frequency Response:	80Hz~18KHz
Sensitivity:	-35 dB (17.7mV) 1Pa at 1V
Impedance:	250Ω
Maximum Sound Pressure:	125 dB SPL, 1KHz at 1% T.H.D
Dynamic Range(Typical):	105 dB, 1 kHz at Max SPL
S/N Ratio:	>65dB, 1kHz at 1Pa
Switch:	Mute
Power Supply:	11-52V DC, 4 mA typical
Weight:	996g
Microphone Length(mm):	340, 420(default), 480
Output Connector:	Male 3-pin XLR
Accessories Furnished:	Windscreen
Color:	Black



**FTSG-902**  
Professional Desk Microphone

FTSG-902 is a wide frequency response condenser super directional microphone, with high quality sound pickup function. It is designed to the sound reinforcement, professional recording, television, broadcast, conference and other demanding high quality sound pickup applications.

Capsule Type:	Condenser
Polar Pattern:	Super Cardioid
Frequency Response:	80Hz-18KHz
Sensitivity:	-30dB at 1V at 1Pa
Impedance:	250Ω
Maximum Sound Pressure:	125dB, 1KHz at 1% T.H.D.
Dynamic Range:	100dB, 1KHz at maximum sound pressure
S/N Ratio:	110dB, 1KHz at 1% T.H.D.
Power Supply:	DC24-52V phantom
Switch:	On/Mute
Output Connector:	phoenix terminal connector / euroblock
Dimensions(mm):	170(W) x 270 (D)X120(H)
Weight(g):	About 825g



**FRG-10**  
Professional Desk Microphone

Capsule Type:	Condensers
Polar Pattern:	Super Cardioid
Frequency Response:	50Hz~18KHz
Sensitivity:	-47dB, f=1KHz @ 1V / Pa
Impedance:	2900Ω
Maximum Sound Pressure:	120 dB SPL, 1KHz at 1% T.H.D
Dynamic Range(Typical):	115 dB, 1 kHz at Max SPL
S/N Ratio:	>65dB, 1kHz at 1Pa
Switch:	(on circuit board) Mute/Toggle/Talk
Power Supply:	48V DC , 8 mA typical
Weight:	715g
Microphone Length(mm):	148(L) x 115(W) x 233(H)
Output Connector:	Male 3-pin XLR

## FFM series

### FLUSH-MOUNT MICROPHONE SOCKET



#### Product Specification



**FFM-200**  
Flush-mount Microphone Socket

FFM-200 is a recessed, conference microphone socket designed for desktop installation. It has a touch switch control and is also equipped with a ring-shaped LED status indicator, which displays green when the microphone is in the radio state and red when it is muted. The input end is a 3-pin XLR female socket, and the output end is a 3-pin XLR male header.

Frequency Response:	50~20,000Hz
Mute Attenuation:	<50dB at 1kHz/Pa
LED Indicator:	Radio status is green / mute status is red
Phantom Power Supply:	DC 20-52V, power consumption 4.5mA typical
Switch:	Touch mode, mute state by default when power on
Weight:	310g
Dimensions(mm):	59.2x59x156.5(L)
Input Interface:	3-pin XLR female
Output Interface:	3-pin XLR male
Random Accessories:	anti-vibration rubber*1, metal fixing ring*1

#### Key Features

##### Practical Function

- Flush-mounted microphone socket, suitable for use with gooseneck microphones with 3-pin XLR male output.
- For unobtrusive installation on desktop.
- Connect the microphone with 3-pin XLR female, 3-pin XLR male output (XLRM).
- Equipped with anti-vibration rubber and metal fixing ring (used with gooseneck microphone) to reduce vibration noise on the installation surface.
- The working range of socket power supply is DC 20-52V.

##### Touch-Sensitive Control

- Design with momentary Touch-sensitive button, can control microphone mute.

##### LED Ring Indicator Light

- The indicator shows green when the microphone is on. It will show red when the microphone is in mute status.

##### Logic Out Capacity

- Features with logic out capacity, users can connect an external device for further control(e.g., a camera or light).



**FFM-300**  
Flush-mount Microphone Socket with Logic I/O

The FFM-300 is an embedded conference microphone base designed for desktop installation. The socket's logic out capability permits control of remote devices from a programmable capacitance switch, so users can easily trigger an external device (e.g., a camera or light) with the touch of a button – an extremely useful feature in conference and boardroom installations.

Frequency Response:	50~20,000Hz
Switch Logic Control:	High potential (DC +5V) when pressed; Low potential (DC 0V) when not pressed
LED Indicator:	Red: high level (DC +5V) Green: low level (DC 0V)
Phantom Power Supply:	DC 20-52V, power consumption 4.5mA typical
Switch:	Touch mode, mute state by default when power on
Weight:	310g
Dimensions(mm):	59.2x59x156.5(L)
Input Interface:	3-pin XLR female
Output Interface:	3-pin XLR male
Random Accessories:	anti-vibration rubber*1, metal fixing ring*1

## FUV510A Series

Full HD PTZ Camera



### Key Features

- 1080P Full HD
- Multiple Interfaces
- Full HD Resolution
- Multiple Optical Zoom Lens
- POE Support Options
- Perfect Compatibility
- Optical Zoom Lens (30X+ ZOOM)
- Autofocus
- Multiple Video Output Interfaces
- Multiple Control Protocols
- Low Noise and High SNR
- Flexible Mounting Options



### Technical Parameter

Model	FUV510-05	FUV510-10	FUV510-12	FUV510-20	FUV510-30
Optical Zoom:	5X	10X	12X	20X	30X
View Angle:	20°(T) ~ 83.7°(W)	6.43°(T) ~ 60.9°(W)	6.3°(T) ~ 72.5°(W)	3.3°(T) ~ 54.7°(W)	2.34°(T) ~ 65.1°(W)
Focal Length:	f=3.1 ~ 15.5mm	f=4.7 ~ 47mm	f=3.9 ~ 46.8mm	f=5.5 ~ 110mm	f=4.3 ~ 129mm
Aperture Value:	F1.8 ~ F2.8	F1.6 ~ F3.0	F1.8 ~ F2.4	F1.6 ~ F3.5	F1.6 ~ F4.7

- Image Sensor: 1/2.8 inch high quality HD CMOS sensor

- Video Format:

HDMI/SDI/HDBaseT: 1080P60/50/30/25/59.94/29.97; 1080I60/50/59.94; 720P60/50/30/25/59.94/29.97

U3: YUY2/NV12: 1080P60/50/30/25, 720P60/50/30/25, 540P30, 360P30, 480P30, 288P30, 600P30

### Interface

- Video Interfaces:

UV510A-05/10/12/20/30-ST Model: HDMI, 3G-SDI, LAN, Audio-in

UV510A-05/10/12/20/30-U2 Model: USB2.0(power supply available) LAN, Audio-in

UV510A-05/10/12/20/30-U3 Model: USB3.0(power supply available)LAN, Audio-in

UV510A-05/10/12/20/30-HD Model: HDBaseT(POE), LAN, Audio-in

UV510A-05/10/12/20/30-ND Model: HDMI, LAN, RS232(in)

UV510A-05/10/12/20/30-U2U3 Model: USB2.0, USB3.0, HDMI, LAN, RS232(input)

UV510E0-12 Model: HDMI, SDI, USB2.0, LAN

UV510E2-20 Model: HDMI, SDI, USB2.0, LAN

UV510E3-12 Model: HDMI, SDI, USB2.0, LAN

UV510E4-20 Model: HDMI, SDI, USB2.0, LAN

UV510F0-12 Model: HDMI, USB3.0, USB2.0, LAN

UV510F1-20 Model: HDMI, USB3.0, USB2.0, LAN

- Video Compression Format: LAN: H.264, H.265; USB 3.0: MJPG, H264, YUY2, NV12
- Control Interface: RS-232 Ring through RS232 output, RS-485
- Audio Input Interface: Double track 3.5mm linear input

- PTZ Parameter

Pan Rotation: -170° ~ +170°

Tilt Rotation: -30° ~ +90°

Preset Speed: Pan: 60°/s, Tilt: 30°/s

Preset Number: 255 presets(10 presets via remote control)

- Other Parameter

Dimension: 150(L)mm\*150mm(W)\*167.5mm(H)

Weight: 1.4kg

Supply Adapter: AC110V-AC220V to DC12V/2A

Power Consumption: 12W(Max)

## FUV401 Series

4K UHD PTZ Camera



### Key Features

- 4K Ultra HD
- Optical Zoom Lens (12X+ ZOOM)
- Multiple Interfaces
- Autofocus
- 4K UHD Resolution
- Built-in Gravity Sensor
- With Brushless Motor
- Multiple Video Output Interfaces
- Multiple Control Protocols
- Low Noise and High SNR



### Technical Parameter

#### • Camera Parameter

Image Sensor: 1/2.5 inch high quality HD CMOS sensor

Optical Zoom: 12X

View Angle: 7.59°(T) ~ 80.4°(W)

Focal Length: f=3.85 ~ 43.06mm

Aperture Value: F1.8 ~ F3.56

#### • Video Format:

HDMI: 4KP60/50/30/25, 1080P60/50/30/25, 1080i60/50, 720P60/50

USB3.0: YUY2/NV12: 1080P30, 720P30, 576P30, 540P30, 448P30, 360P30, 480P30, 176P30

MJPEG/H.264: 4KP30, 1080P30, 720P30, 576P30, 540P30, 448P30, 360P30, 480P30, 176P30

#### • Interface

Video Interfaces: HDMI, LAN(POE), USB3.0(Type B, compatible with USB2.0), A-IN, RS232-in & out, RS422(Compatible with RS485)

Video Compression Format: LAN: H.264, H.265; USB 3.0: MJPG, H264, YUY2, NV12

Control Interface: RS232-IN, RS232-OUT, RS422(Compatible with RS485)

Audio Input Interface: Double track 3.5mm linear input0

#### • PTZ Parameter

Pan Rotation: -170° ~ +170°

Tilt Rotation: -30° ~ +90°

Preset Speed: Pan: 120°/s, Tilt: 80°/s

Preset Number: 255 presets(10 presets via remote control)

#### • Other Parameter

Dimension: 157.5(L)mm\*189mm(W)\*201mm(H)

Weight: 2.60kg

Supply Adapter: AC110V-AC220V to DC12V/2.5A

Power Consumption: 12W(Max)

## FVA400 Series

4K Video Bar



### Key Features

- 4K Ultra HD
- Auto - framing
- 120° Wide FOV
- USB Plug and Play
- 4K UHD Resolution
- Audio and Video Integrated
- Wide FOV with Low Distortion
- Auto-framing
- Voice Auto-tracking
- USB Plug and Play

### Technical Parameter

- Camera Parameter

Digital Zoom: 5X

View Angle: 120°(D) / 107.2°(H) / 74.1°(V)

Focal Length: f=1.89mm

AI Intelligent Framing: Face Detection & Sound Source Localization & Voice Tracking

Video Format: Maximum output 4K image

- Interface

USB Interface: 1\*USB3.0, Type B

Audio Interface: 1\*3.5mm linear input

Power Interface: HEC3800 outlet(DC12V)

- Other Parameter

Dimension: 598(L)mm\*86mm(W)\*62mm(H)

Weight: 1.88kg

Microphone Type: 6 digital array microphones

Pickup Distance: 6m

Audio Processing: AEC & AGC & ANS & sound source localization

Speaker: 2\*7W

## FVC460 Series

4K Video Bar



### Key Features

- 4K Ultra HD
- Auto Privacy Cover
- AI Algorithm
- USB Plug and Play
- 4K UHD Resolution
- Audio and Video Integrated
- Wide FOV with Low Distortion
- Auto-framing
- Voice Auto-tracking
- USB Plug and Play

### Technical Parameter

- Camera Parameter

Digital Zoom: 10X

View Angle: 120°(D) / 110°(H) / 80°(V)

Focal Length: 1.89mm

Aperture Value: F2.0

Video Format: 4K P30/25; 1080 P30/59.94/29.97; 1080 I60/50/59.94; 720 P30/59.94

AI Intelligent Framing: Face Detection & Sound Source Localization & Voice Tracking

- Interface

Video Interfaces: HDMI, USB3.0

Video Compression Format: MJPEG, YUY2, H264, NV12.

Audio Interface: 3.5mm linear In/Out interface (If connect with external pickup, audio in will automatically switch into external pickup)

Extension Mic Interface: RJ45 extension Mic interface, able to connect with VC231, maximum 8 cascading VC231

- Other Parameter

Microphone Quantity: 6

Pick up distance: 6m pickup distance

Frequency response: 120 Hz-16 kHz Frequency response

Bluetooth: In Bluetooth pairing mode, this device can be found by other Bluetooth device

Speaker: 2\*10W

Indicator bar: Partial indicator turns green to point where the sound source comes from

Dimension: 727(L)mm\*107mm(W)\*125mm(H)

Supply Adapter: AC110V-AC220V to DC12V/2.5A

## FBD1616

### 16x16 Digital Audio Processor



### Features

- Analog input channels: 16
- Analog output channels: 16
- Processor: ADI SHARC 21489@450 MHz SIMD;
- DSP processing capability: 400 MIPS, 1.6 GFLOPS;
- Sampling rate: 48 kHz,  $\pm 100$  ppm;
- THD+N: 0.002% @+4dBu
- Input dynamic range: 110dB
- Output dynamic range: 110dB
- 1 channel RS232
- Built-in USB sound card, supports music playback, recording and soft video conferencing (such as ZOOM, Tencent Conference, DingTalk Conference, etc.)
- Bus-type AEC, tail time: 512ms, convergence rate: 60dB/S, echo cancellation amplitude: 60dB;
- Independent channel AFC (Feedback Suppression), using notch algorithm, sound transmission gain improvement: 10dB;
- Noise suppression (ANS), signal-to-noise ratio increased by 18dB
- 8-band British parametric equalizer, providing 5 filter options: Parametric, Lowshelf, Highshelf, Lowpass, Highpass;
- Provide end-user customized operation interface, supporting up to 30 devices managed by the same interface;
- It has a central control function, which can control the power supply, signal switching, environment control, audio, etc. in the system as a whole, and realize the functions required to start the system with one click.

### Specifications

Processor	ADI SHARC 21489
Input dynamic range	110dB
Sampling rate/quantization bits	48K/24bit
Output dynamic range	110dB
Number of analog input and output channels	16x16
Channel isolation @1kHz	108dB
Input gain	0/6/12/18/24/30/36/42/48dB
Input impedance (balanced connection)	5.4K $\Omega$
Phantom power	+48V/10mA max
Output impedance (balanced connection)	600 $\Omega$
Frequency response	$\pm 0.5$ dB(20~20kHz)
System delay	<3ms
Maximum level	+18dBu
Working power supply	AC 220V, 50Hz
THD+N	0.002% @+4dBu
Dimensions (width x depth x height)	482 x 200 x 45mm
Shipping weight	3KG