

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, Rs=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