

Digital Audio Conference Solution



Let's dive into a new era of audio conferencing with new technologies and new concepts. This solution has been designed to deliver superior audio quality and seamless communication in the environment.

Key Features

- Crucial for modern business
- Crystal clear audio
- Uninterrupted controller power supply
- Central conference system control



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1. Fully Digital Networked DSP Conference Processor (IMPACT ADCS – CCU)

Parameter	Technical Specifications / Features
System Architecture	Full digital networked DSP conference controller based on proprietary digital ring network technology
Transmission Technology	Single CAT5e cable carries up to 64 digital audio channels and bidirectional control data
Standards Compliance	IEC 60914, GBT 15381-94 international conference standards
Frequency Response	20 Hz to 20,000 Hz
Audio Sampling Rate	48 kHz / 24-bit lossless digital transmission
Signal-to-Noise Ratio (S/N)	> 96 dBA
Dynamic Range	> 94 dB
Total Harmonic Distortion (THD)	< 0.05%
Channel Crosstalk	> 85 dB
Acoustic DSP Suite	Integrated AGC (Auto Gain Control), AFC (Adaptive Feedback Suppression), ANC (Noise Control), and Auto-Mix
Equalization (EQ)	8-band parametric EQ independently adjustable per microphone; 16-band parametric EQ for master output room tuning
Echo Cancellation & Calling	Acoustic Echo Cancellation (AEC) supporting real-time two-way calls with remote video conferencing codecs/terminals
Multi-Room Management	Independent control, merging, and splitting of up to 4 conference rooms; controller cascading support
Zoning Function	Multi-zone audio output automatically adjusting gain relative to microphone position
Audio Inputs	1× Balanced XLR, 1× RCA; Max level: +10 dBu (Line In 1 & Line In 2)
Audio Outputs	1× Balanced XLR, 1× RCA, 6× Phoenix connectors; Max level: +12 dBu Balanced (Line Out 1–4); Output impedance: > 1 kΩ
Dante Network Audio	Optional Dante AoIP expansion module support
Unit Expansion Capacity	Supports up to 5,200 discussion units via full-digital extension units
Simultaneous Open Units	Selectable 1 / 2 / 4 / 6 active microphones; up to 32 wired units in full-open mode
Discussion Operating Modes	Open, Voice (Sound-activated), Override (FIFO), Apply (Request-to-speak), PTT (Optional), All (Optional)
Camera Auto-Tracking	Automatic PTZ tracking via RS-232/RS-485 supporting PELCO-P, PELCO-D, and VISCA protocols
Network & Control Ports	2× RJ45 AUDIO-LINK, 2× RJ45 Conference line ports (optional 4th port), 1× RJ45 AP port, 1× RJ45 PC Ethernet (TCP/IP), 1× DB9 Female (RS-232 camera), 1× DB9 Male (RS-232 control), 1× 3-pin Phoenix (keyboard)
Recording & Local Monitoring	Front-panel USB 2.0 port (recording up to 32 GB), 1-touch record button, 3.5 mm monitoring jack with rotary volume knob

On-Board Display	LCD display screen with 4-way navigation buttons for PC-free system setup
Amplification Support	Capable of driving 2× 120W POE speakers directly; up to 16 POE speakers via extension unit
Power Supply	100V–240V AC, 50/60 Hz; Static draw: 12 W; Max draw: 150 W
Physical Dimensions & Weight	481 mm (W) × 265 mm (D) × 46 mm (H); Standard 19" 1U rack-mountable; 3.0 kg; Industrial black finish
Environmental Parameters	Operating: 0°C to 45°C; Storage: -20°C to 50°C

2. Digital Discussion Chairman & Delegate Units (Impact ADCS-CU / Impact ADCS-DU)

Parameter	Chairman Unit	Delegate Unit
Microphone Transducer	Cardioid electret condenser capsule ("heart-type" capacitance)	Cardioid electret condenser capsule ("heart-type" capacitance)
Directivity	0° / 180° > 20 dB (1 kHz) front-to-back ambient rejection	0° / 180° > 20 dB (1 kHz) front-to-back ambient rejection
Frequency Response	20 Hz to 20,000 Hz	20 Hz to 20,000 Hz
Sensitivity	-46 dBV/Pa	-46 dBV/Pa
Max Sound Pressure Level	125 dB SPL (THD < 3%)	125 dB SPL (THD < 3%)
Signal-to-Noise Ratio (SNR)	70 dB	70 dB
Equivalent Noise	20 dBA (SPL)	20 dBA (SPL)
Status Indication	Two-color stem LED ring (Red: Active speaking / Green: Request to speak)	Two-color stem LED ring (Red: Active speaking / Green: Request to speak)
Built-in Display	2.23-inch OLED display (128 × 32 resolution) displaying battery level, RF signal, time/date, speaking countdown timer	2.23-inch OLED display (128 × 32 resolution) displaying battery level, RF signal, time/date, speaking countdown timer
User Interface & Controls	Capacitive touch interface: Mic ON/OFF, Priority override button, and Delegate Speak Approval/Consent button	Capacitive touch interface: Mic ON/OFF button
Role Flexibility	Configurable as Chairman or Delegate unit via software settings	Dedicated Delegate unit
Internal Loudspeaker	Integrated high-fidelity loudspeaker (mutes automatically upon microphone activation to eliminate howling)	Integrated high-fidelity loudspeaker (mutes automatically upon microphone activation to eliminate howling)
Audio Monitoring & I/O	2× 3.5 mm stereo headphone jacks (16 Ω, 10 mW) with volume adjustments; 1× 3.5 mm line-in input for mobile/laptop pass-through	2× 3.5 mm stereo headphone jacks (16 Ω, 10 mW) with volume adjustments; 1× 3.5 mm line-in input for mobile/laptop pass-through
Input Impedance	2 kΩ (Line-In)	2 kΩ (Line-In)
Power	≤ 2.0 W	≤ 2.0 W

Consumption		
Firmware Maintenance	Over-The-Air (OTA) firmware upgrades supported via onboard MCU	Over-The-Air (OTA) firmware upgrades supported via onboard MCU
Housing & Dimensions	High-grade ABS, Matte Black; 195 mm (L) × 120 mm (W) × 60 mm (H) (excluding gooseneck); 1.1 kg (with microphone)	High-grade ABS, Matte Black; 195 mm (L) × 120 mm (W) × 60 mm (H) (excluding gooseneck); 1.1 kg (with microphone)
Operating Temperature	0°C to +55°C	0°C to +55°C



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