Wireless Digital Audio Conference System

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Fully Digital Networked DSP Conference Processor : UE-DCCCU-01	
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
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
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

Chairman Unit : UE-WDCU-01	
Access Point Capacity	> 40 wireless units per AP; multi-AP deployment supported for expansive venues
Simultaneous Active Mics	Up to 6 active wireless units simultaneously
Microphone Transducer	Cardioid electret condenser capsule ("heart-type" capacitance)
Directivity	0° / 180° > 20 dB (1 kHz) front-to-back ambient rejection
Operating Frequency	5 GHz standard Wi-Fi (IEEE 802.11n standard across all 5 GHz channels)
Wireless Security	128-bit AES digital encryption, WPA2 enterprise connection, MAC address filtering, SSID broadcast hiding
Frequency Response	20 Hz to 20,000 Hz
Sensitivity	-46 dBV/Pa
Max Sound Pressure Level	125 dB SPL (THD < 3%)
Signal-to-Noise Ratio (SNR)	70 dB
Equivalent Noise	20 dBA (SPL)
Status Indication	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
User Interface & Controls	Capacitive touch interface: Mic ON/OFF, Priority override button, and Delegate Speak Approval/Consent button
Role Flexibility	Configurable as Chairman or Delegate unit via software settings
Internal Loudspeaker	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
Input Impedance	2 kΩ (Line-In)
Battery Specification	Detachable Li-ion rechargeable battery pack, 8.4V DC, 6,600 mAh
Battery Runtime	24 hours continuous speech, 48 hours standby; 4 hours fast full-recharge
Emergency Power Supply	2.5 mm DC power adapter interface for continuous operation without battery
Power Consumption	≤ 2.0 W
Firmware Maintenance	Wireless 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)
Operating Temperature	0°C to +55°C
Delegate Unit : UE-DCDU-01	
Operating Frequency	5 GHz standard Wi-Fi (IEEE 802.11n standard across all 5 GHz channels)
Wireless Security	128-bit AES digital encryption, WPA2 enterprise connection, MAC address filtering, SSID broadcast hiding
Access Point Capacity	> 40 wireless units per AP; multi-AP deployment supported for expansive venues
Simultaneous Active Mics	Up to 6 active wireless units simultaneously
Microphone Transducer	Cardioid electret condenser capsule ("heart-type" capacitance)
Directivity	0° / 180° > 20 dB (1 kHz) front-to-back ambient rejection
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Equivalent Noise	20 dBA (SPL)
Status Indication	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
User Interface & Controls	Capacitive touch interface: Mic ON/OFF button
Role Flexibility	Dedicated Delegate unit
Internal Loudspeaker	Integrated high-fidelity loudspeaker (mutes automatically upon microphone activation to eliminate howling)

Battery Specification	Detachable Li-ion rechargeable battery pack, 8.4V DC, 6,600 mAh
Battery Runtime	24 hours continuous speech, 48 hours standby; 4 hours fast full-recharge
Emergency Power Supply	2.5 mm DC power adapter interface for continuous operation without battery
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
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Charging Station for Wireless Conference Unit Batteries : UE-CDS-01	
Product Type	Dedicated intelligent multi-bay charging station for wireless conference unit battery packs
Charging Capacity	Simultaneous charging of up to 10 battery packs
Charging Duration	Approximately 3 hours for a complete full charge
Power Supply Input	Universal wide-range AC 100V – 240V, 50/60 Hz
Charging Contact Interface	High-reliability pop-up pin contactors
Mechanical Enclosure	Secure buckle housing mechanism to prevent loose contacts, misalignment, or battery dropping
Form Factor & Portability	Lightweight and compact design for easy mobility, deployment, and storage
Protection & Safety	Built-in overcharge, short-circuit, and thermal protection with stable contact seating
5GHz Wireless Access Point / Conference Transmitter :UE-WAP-T	
Product Type	High-performance 5GHz Wi-Fi Wireless Conference Access Point / Transmitter
Operating Frequency Band	5 GHz communication (optimized for interference-free wireless conference environments)
Coverage Range	Typical operating radius up to 30 meters
Network Security & Encryption	128-bit AES digital encryption, WPA2 secure connection, MAC address filtering, and SSID hiding
Network Interface	1× RJ45 10/100M LAN connection port
Power Supply	Power over Ethernet (PoE) via LAN port; optional external DC supply
System Scalability	Direct connection to wireless DSP conference processor, or cascading via Ethernet network switch for expanded multi-AP coverage in large auditoriums
Status Indicators	Multi-state LED indicators for Signal / RF status, Network activity, and Power
Installation / Mounting	Versatile mounting support: Ceiling mount, Wall mount, or Stand / 19" Rack installation
System Compatibility	Fully compatible with 5GHz wireless Chairman and Delegate discussion units and central DSP controllers

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