

WIRED CONFERENCE SYSTEM

Digital Networked Conference Main Unit

Technical reference for the Bronx **BR-DCU-CU1000-D** — a full-digital conference controller built on the BRONX-LINK ring network, carrying up to 64 audio channels over a single CAT5e cable and expandable to 5,200 discussion units.

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01 • CONFERENCE MAIN UNIT

Full Digital Networked Conference Main Unit

The central controller for the DIALOGUE conference chain — date, time and count-down management, USB recording and an optional Dante output module.

The BR-DCU-CU1000-D is the heart of a Bronx digital conference system. Using the unique BRONX-LINK digital ring-network technology, a single CAT5e cable carries up to 64 channels of lossless audio and system data between units, with a “Hand-in-Hand-Loop-Network” topology that keeps the system running even as units are added, changed or fail. Each unit is automatically assigned a unique ID to avoid conflicts, hot-swap is supported with controller auto-recovery, and the system expands to as many as 5,200 discussion units — suited to boardrooms, ministries, courtrooms and broadcast halls.



BR-DCU-CU1000-D — 1U rack main unit, front controls and rear I/O (audio, CU/DU, control, Ethernet, mains).

EXPANSION	AUDIO / CAT5E	SAMPLING	MAINS
5200 units	64 ch	48 kHz	100–240 V AC

HEADLINE CAPABILITIES

- BRONX-LINK full-digital ring network
- 64 channels over a single CAT5e cable
- Expandable to 5,200 discussion units
- USB recording with advanced noise cancellation
- Hot-swap with controller auto-recovery
- Optional Dante output module

02.1 Features

NETWORK · AUDIO · RECORDING

- **Intuitive function-button design** — no training required, easy to use.
- **BRONX-LINK digital ring network** for full-digital signal transmission and processing.
- A single **CAT5e cable** transmits up to 64 audio channels plus other signals.
- **High-fidelity, lossless audio** transmission — 48 kHz sampling, 20 Hz – 20 kHz response.
- **Hand-in-Hand-Loop-Network** keeps the system working even when a discussion unit is changed or fails.
- **USB recording** with advanced noise-cancellation technology for clearer capture.
- **Date, time and count-down** speech management built in.
- **Optional Dante output module** for interoperation with other Dante equipment.

02.2 Connectivity & Integration

I/O · CONTROL

- 2-channel audio input — XLR or RCA — for local sources or remote video-conferencing.
- Up to 3-channel audio output — XLR, RCA or Phoenix connector.
- Optional audio input box adds condenser or dynamic microphone support.
- TCP/IP connection between controller and PC.
- RS485 or RS232 sends PELCO / VISCA protocol for camera auto-tracking.
- Wide operating voltage from 100 – 240 V AC.

03.1 System Functions

NETWORK · RECORDING

- USB recording with advanced noise cancellation for clearer recording.
- Expands to **5,200 discussion units**.
- Hand-in-Hand-Loop-Network automatically assigns each unit an independent ID to avoid duplicate-ID conflicts.
- Hot-swap for any system unit; the controller has an auto-recovery function.
- 2-channel audio input (XLR or RCA) for local input or remote video-conferencing.
- Up to 3-channel audio output (XLR, RCA or Phoenix).
- Adding the audio input box enables condenser or dynamic microphones.
- TCP/IP link to PC; RS485 / RS232 PELCO / VISCA camera auto-tracking.

03.2 Standalone Controller Settings

NO PC SOFTWARE REQUIRED

- **Active-speaker limit** — set the number of delegate units active at once (1 / 2 / 4 / 6 units).
- **Discussion modes** — OPEN (free for all), APPLY (request then speak), VOICE (voice-activated mic) and OVERRIDE (first-in, first-out).
- RS232 control of MIC ON/OFF, priority and volume adjustment.
- **Voting** — approve / abstain / object.
- Chairman unit can close or temporarily mute all other units.
- Chairman unit can grant a delegate's request to speak.

04.1 Technical Parameters

AUDIO · ELECTRICAL

Power	100 – 240 V AC
Static power consumption	150 W
Maximum power consumption	150 W
Unit power supply	48 V DC
Recording / playback bit rate	64 / 96 / 128 / 256 Kbit/s
Dynamic range	> 94 dB
Signal-to-noise ratio (S/N)	> 96 dB
Channel crosstalk	> 96 dB
THD	< 0.05%
Frequency response	20 Hz – 20 kHz
Nominal loudspeaker output	72 dB SPL

04.2 Control & Physical

INTERFACES · MECHANICAL

RS-232 control	1 × 9-pin sub-D female socket, 1 × 9-pin sub-D male socket
Ethernet control	RJ45 — connect computer for control
Dimensions	481 (L) × 265 (W) × 46 (H) mm — 1U rack
Colour	Black
Weight	3 kg
Operating temperature	–5 °C to +50 °C
Relative humidity	5% – 98% non-condensing

Disclaimer: due to continuous product development and upgradation, the specifications and image of the product may change without prior intimation.



Engineered for Indian boardrooms, ministries, courtrooms and broadcast halls — the wired DIALOGUE conference series.

ABOUT BRONX SYSTEMS

An Indian Original Equipment Manufacturer. ISO certified · MSME · Make in India · NSIC. Bronx Systems supplies professional audio-visual, conference, control-room and signage solutions to government, defence, broadcast and enterprise customers across India.

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DOCUMENT

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