

## CENTRAL UNIT ARCHITECT AND ENGINEER SPECIFICATIONS

The Central Unit shall provide fully digital audio transmission while controlling the DDS 5900 Digital Discussion System. It shall feature audio transmission of the floor channel, two interpreter channels and up to eight discussion microphones at the same time. A built-in group matrix shall combine the units in four groups. The unit shall be mounted on a tabletop or in a 19 inch, one-unit rack.

The Central Unit shall operate with up to 250 discussion units and up to 32 units configured as interpreter units. The central unit shall power up to 60 units without the use of an additional power supply.

The unit shall connect to the other components using the proprietary DCS-LAN protocol in a daisy-chain topology, using shielded CAT 5e cables. The DCS-LAN protocol shall transport power, audio and control data across a chain of discussion units, including a codec algorithm to prevent unauthorized listening to the audio signal.

The Central Unit shall feature one analog audio input and four analog audio outputs. The four analog audio outputs shall distribute audio from the four unit groups, the floor channel or one of the two interpreter channels. This shall be used for recording purposes, connection to external PA systems, or connection to a language distribution system (e.g., DIS digital wireless infrared system).

The audio for the built-in loudspeakers in the discussion units shall be routed from Group A and/or from the Analog Audio In 1 XLR sockets.

The unit shall provide support for four microphone operation modes: Automatic, FIFO, Manual and VOX (voice activation). The OLED display on the front of the unit shall enable the user to setup basic system configurations for the maximum number of speakers/requests, microphone operation mode, etc.

The Central Unit Emergency Evacuation Message (EEM) connection shall use *Analog Audio In 2*, and a contact closure switch. While activated, the signal on *Analog Audio In 2* shall be available in the loudspeakers and in the headphones, and override previously routed audio signals.

The Central Unit shall provide TCP/IP Ethernet connection for external communication control. The unit shall provide a webserver that allows advanced system control from any computer connected to the network. The web interface shall allow full configuration management, microphone control, audio routing, and customized system settings.

The Central Unit shall measure 44.4 mm in height, 426 mm in width and 186 mm in depth. The unit shall weigh 2800g, with a storage temperature of -20° to 60° C, 10-80% humidity, and an optimal operating temperature of 5° to 40° C, 35-80% humidity.

The Central Unit shall have 125W/48V supply voltage for the DCS-LAN topology, and 65 Hz-16 kHz frequency response. The sound quality shall be 24-bit audio, 32 kHz sampling frequency, and a > 85 dBA signal-to-noise ratio.

The unit shall have a PS CU external power supply with 100-240 V, 50-60 Hz main voltage, 175 W maximum consumption, 150 W total supply power, <0.5 W standby consumption and 48V/3A supply voltage for CU 5905.

The Central Unit shall be a DIS model CU5905 Central Unit.