

D-Cerno

The world is digital

It's time to evolve



Architect and Engineering Specification

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Section 1 – General Information

1. D-Cerno System Information

The D-Cerno product range is a conference discussion system that sets itself apart from similar products in the market.

A product with a story ...

In line with Televic's innovation strategy, D-Cerno is the **innovator** within its market segment.

On the sketch board it became clear from the first draw of the pen that D-Cerno wasn't going to be like any of its peers on the market.

D-Cerno even turned out to be a little vain. Looking around in the market it came to the conclusion that it could bring **style and design** to a dull market place crowded with unappealing products.

Once D-Cerno was pleased with its looks, it was still not satisfied as it realized that looks isn't everything.

So it also wanted to stand out from the crowd with its **internal beauty**. And thus analog technology was too outdated for D-Cerno: it didn't want to go for anything less than **digital**. It despised traditional buttons that made clicking noises and collected germs and dirt around them. It wanted to continue to serve the people, even if a cable would accidentally break or disconnect. And finally it wanted to go to sleep automatically when everyone had left the meeting room, hence saving on power and showing its concern for the **environment**.

In all its uniqueness, it turned out that D-Cerno was a little shy as well. While it kept a **low profile** on the meeting table, it wanted the company of its central unit. But only if it could share the looks and internal beauty that it cherishes so much.

And so the first **digital, stylish, clean** and **eco-aware** product in its category was born.

We hope that next time you're in a meeting you'll realize that **your eyes** – just like **your ears** - **deserve a treat**, and that **your speech deserves digital!**

D-Cerno is not just a name ...

The name has two meanings:

1. From the English word
Discern : To distinguish, differentiate
2. Cerno : Latin for 'Making a decision'

[D-] : Commonly recognized in today's world as abbreviation of something 'Digital'.

Putting the pieces together, you get a summary of what Televic's D-Cerno stands for!

In the next section one can find a description of the D-Cerno system. This text is the ideal base to plan your project or to prepare a tender specification text.

Section 2 – System Components

2. Control Equipment

2.1. Central unit CU

The central control unit shall configure and control the delegate and chairman units using digital signal processing technology.

The central control unit shall have an onboard digital feedback suppression circuit to prevent acoustic feedback and Larsen.

The central control unit is capable of handling 50 units.

Control for more units shall be possible by connecting several central control units in a master slave connection. A total of three central units can be interconnected to make a system of 150 units.

The unit has 4 digital bus connections that can be configured in a branch or loop configuration. Each output can drive up to 20 delegate units.

The connection towards the contribution units shall be over Cat5 cabling using RJ45 connectors.

The loop configuration guarantees a fail-safe system if a cable or unit might be defective, in this situation all units in the system will stay operational.

The system shall be an out of the box solution, so no initialization shall be required once the system is powered on.

Monitoring of the ongoing meeting can be performed via the headphone connector.

The control unit operates as a standalone system without the need of a central operator.

The large LCD display on the unit will allow easy access to all the necessary controls and configurations of the system.

The menu shall be intuitive and will give direct feedback towards the user regardless of the position within the menu.

The operation of the menu shall be done via touch sensitive buttons avoiding mechanical moving parts and thus increasing the lifespan of the units. The unit shall be easy to clean or disinfect.

The number of microphones that can be open at the same time shall be maximum 8.

The system shall have several microphone modes to moderate the meeting:

- Direct Access
Delegates can activate the microphone till the maximum of open microphone is reached.
- Request
Delegates that push the microphone button request the floor and will be added in a queue. Their microphone will be activated in order of request by the chairman with the use of its next-to-speak button.
- Push to Talk
Delegates shall be able to speak as long as they hold their finger on the microphone button.
- FIFO
In this mode the delegates shall override each other by activating their microphone. Only one microphone can be active at any given time.
- VOX
The microphone of the delegates will be activated based on the fact that they start to talk. Once they stop talking the microphone will automatically be switched off.

The visual appearance of the central control unit shall match the design of the delegate units.

It will have no fan and thus be absolutely silent. It will hence not distract the meeting if the central unit(s) is/are placed on the conference table.

The system shall have an ECO function going into low power mode after the system has not been for a certain period.

It shall be possible to connect the system to other A/V equipment:

- External PA (room audio system)
- External wireless/wired microphones
- Tape recorder or other recording devices
- Audio equipment (e.g. background music)
- Video / audio conferencing equipment
- External equalizer / Mixing board

Following connections shall be available to couple these systems:

- 1 Balanced XLR input
- 1 Unbalanced RCA input
- 2 Unbalanced RCA outputs

Next to these external connections the system has the following specific connections:

- 4 Bus connections (4 branches or 2 loops)
- Master / Slave bus connection
- Lockable power connection

The central unit shall have the following controls and indicators:

- Mains on / off switch
- Power on indication
- System Volume control
- 4 menu buttons and LCD display

2.2. Central unit with recording and webserver CUR

Identical to [Central unit CU](#) but with the addition of the following features:

There will be an integrated recording function that provides audio recording in .wav or .mp3 format. The recordings will be stored on a mass storage device via the USB connections at the front of the unit.

There will be an indication whenever the storage becomes critical. If a second USB memory device is inserted in the additional USB slot, automatically the recording will be started on the second USB device.

The control of the recording function shall be possible on the unit itself via direct controls or via the integrated web server.

The unit shall have an integrated web server for control and configuration. The connection between the central unit and a PC will be established via a LAN connection.

No software will need to be installed on a PC to connect to the central unit. Via a standard web browser it will be possible to access the web server within the central unit.

Additional connections:

- LAN connector
- 2 USB connections/slots

3. Contribution Equipment

3.1. Delegate unit

The delegate unit enables delegates to speak and listen to the meeting via a headphone.

The unit shall have digital signal processing to be able to provide crystal clear sound reproduction and excellent intelligibility.

The gooseneck microphone shall be fixed with a length of 30 cm. The red indication ring on the microphone will illuminate whenever the microphone becomes active. If the unit is in request mode the indication ring will blink.

The microphone shall be immune for mobile phone interferences.

To prevent acoustic feedback the loudspeaker shall be muted when the microphone is active.

To listen to the proceedings the unit will have a 3,5 mm stereo headphone socket. Volume can be adjusted via a control on top of the unit.

The unit is controlled via touch sensitive buttons that are flush with no gaps in the housing.

The unit shall be easy to clean and disinfect. There will be no gaps around the buttons where dirt and bacteria can accumulate.

The unit shall have two interchangeable RJ45 connectors to connect to the central unit or the next delegate unit. These connections will be hidden in the bottom housing of the unit.

The connections will have no specific in and out port, as the units will detect the flow of the signal automatically.

The unit shall have the following connections, controls and indicators:

- Microphone with led ring indicator
- Microphone on/off button
- Microphone on led bar indicator
- Request led bar indicator
- Volume control buttons
- 3.5 mm headphone socket
- 2 concealed RJ45 connections

3.2. Chairman unit

The chairman shall have the possibility to participate and guide the conference or meeting. The unit shall have the same design and functions as the delegate unit and also have two additional buttons:

- PRIOR button
Short press : Deactivate all active microphones
Press and hold : Temporary mute all active microphones and auxiliary input.
There shall be a possibility to activate a chime when the prior button is pressed.
- Next-in-line button
Grant the floor to the next microphone in the queue. Only available in certain microphone modes.

The chairman unit will have the following connections, controls and indicators:

- Microphone with led ring indicator
- Microphone on/off button
- PRIOR button
- Next-in-line button
- Microphone on led bar indicator
- Request led bar indicator
- Volume control buttons
- 3.5 mm headphone socket
- 2 concealed RJ45 connections