

SENATOR™

FULLY INTEGRATED
DIGITAL CONGRESS & INTERPRETATION
DSP SYSTEM



APPLICATION GUIDE

- Easy Wiring and Quick Installation
- Superior Audio Quality
- Voice Activated Gate / Mix-minus Auto Calibration
- Microphone Capability up to 504 Microphones
- Network Redundancy



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Innovation

Precision, interaction and reliability are absolutely essential in today's world when significant information and decisions are shared and made in conferences.

The SENATOR Conference & Interpretation system is a fully digital and integrated solution, based on innovative network technology, providing crystal-clear audio, powerful DSP functions and real-time audio processing. All together, this makes the Senator system one of the most flexible and decentralized systems in the AV industry.

Xavtel's SENATOR Conference & Interpretation system offers a fully redundant high-speed network to be able to connect a large variety of delegate units to the main DSP processor. Some delegate units are portable, tabletop or even available as flush mount version. We can provide the most efficient and cost effective solution for all your conference applications so you can hear and can be heard clearly.

SENATOR™



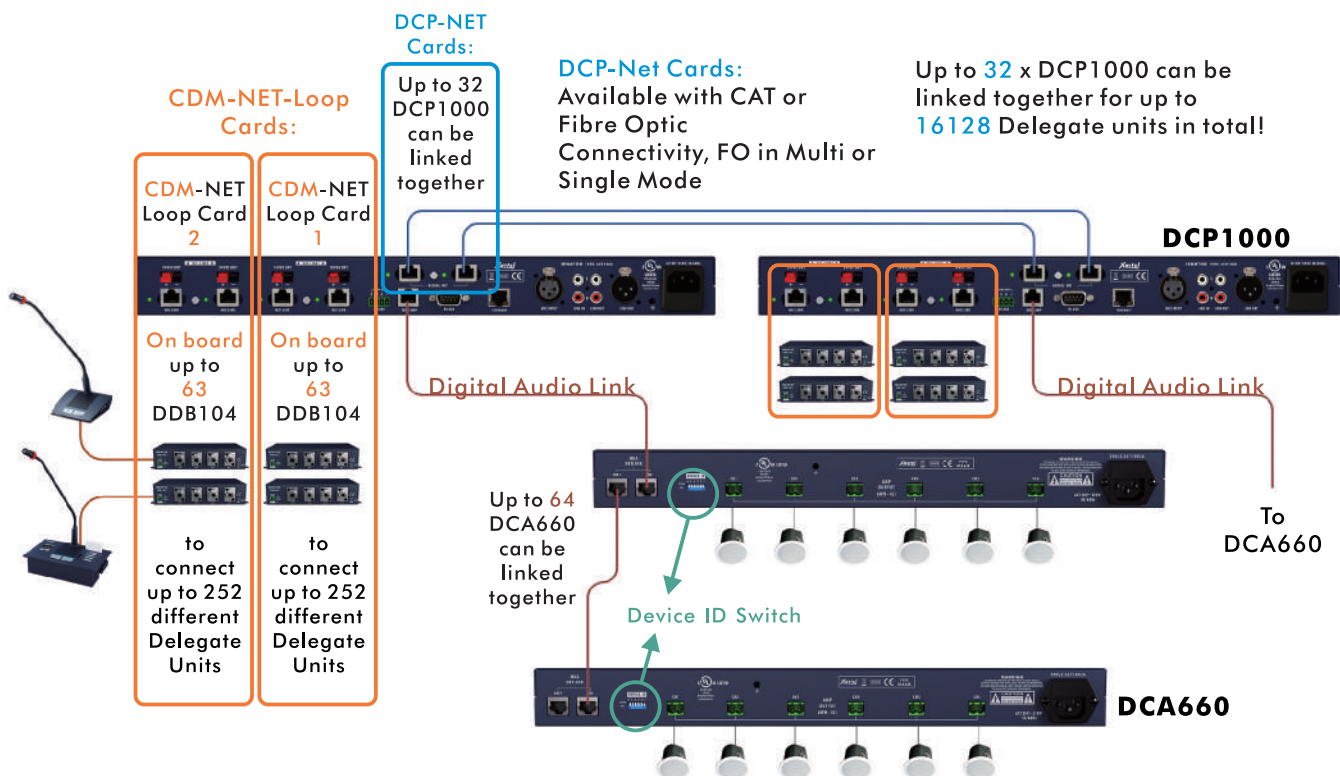
**FULLY INTEGRATED
DIGITAL CONGRESS & INTERPRETATION
DSP SYSTEM**

Network Topology

The backbone of the SENATOR System is a Redundant Loop Network topology, allowing 2 Network Loops (CDM-Net-Loop) to connect up to 63x DDB104 Microphone Junction Boxes to each CDM-Net-Loop Card.

Each DDB104 Microphone Junction Box is capable to connect up to 4 delegate units or voting devices. The DCP1000 DSP Processor has two CDM-Net-Loop Card slots: One card is on board, and the other can expand the system to 2 Redundant Network Loops for up to 504 delegate units to be connected to a single DCP1000 Processor. (2x Loop = 2 x 63 DDB104 Junction Boxes x 4 Delegate Units = 504 Delegate Units)

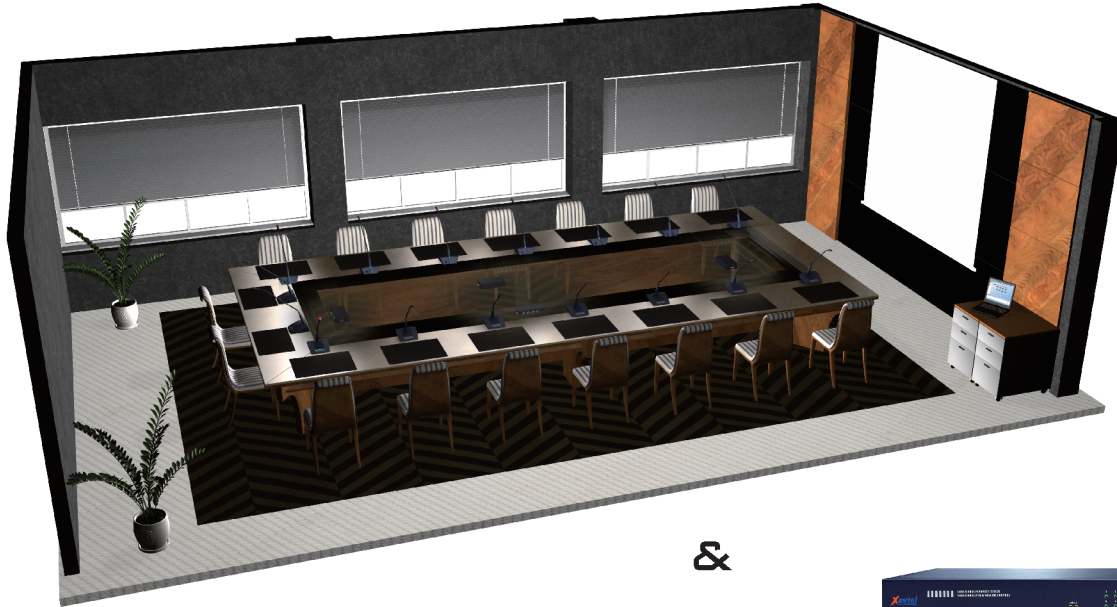
The DCP-Net-Card, inserted in DCP-Net-Card slot is capable to connect up to 32x DCP1000 Processors in total, providing either CAT5/6 or Fiber Optical connections with distances up to 20Km in between DCP1000 devices. This is a unique way to ease up any thinkable application, even if distance comes into the game. The DCA660, a 6 Channel 60W digital system amplifier, allows for an automatic calibration of a Mix-Minus setup, to provide the highest gain before feedback possible in every room. Up to 64 DCA660 amplifiers can be connected to a single DCP1000 Processor, to be capable of building large loudspeaker groups and provide a Mix-Minus setup for very large and reverberant rooms.



Application #1:

Standard Conference

(No need for sound reinforcement system, only the internal loudspeakers of the Delegate Units are in use)



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This application shows a conference application of a standard single room. 16x CDM1000 are used as delegate units to provide a conference situation for 16 participants. By using the built-in loudspeaker of each CDM1000, all participants will be able to listen to the conversation, or can connect an additional headset via the mini-jack connection, located at the side of the CDM1000. Thanks to the integrated AEC (Acoustic Echo Cancellation) algorithm, all undesired echo or howling between microphone and loudspeaker will be cancelled out with a dynamic filter in each delegate unit.

Flexible NOM (number of open microphones) can also be set between 1 ~ 8 to limit the amount of speakers at the same time.

※Supporting 5 types of Conference Modes:

Discussion-FIFS: All the microphones are engaged in the order they request to speak on a "first in first served" basis.

Discussion-FIFO: All the microphones are engaged by the "first in first out" basis, this allows every microphone to speak with the order they push the request button; therefore, when all the channels have been occupied, the next person who is waiting for requesting to speak will override the first person who occupied the first channel.

Meeting-Priority: For Chairman Delegate Units, this mode will allow for the microphones to turn on via their priority settings. No manual selection needed from the Chairman.

Meeting-Delegates RQ: All delegates are engaged by requesting the authorization to speak from chairman.

Meeting-Chairman: All delegates are engaged by Chairman and/or the assistant operation via Senator Designer software.

Application #2:

Standard Conference

(Sound reinforcement system with DCA660 amplifier and Ceiling Speakers)



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This application shows a standard single room conference application. 16x CDM1000 are used as delegate units to provide a conference situation for 16 participants.

The DCA660 (6 Ch. digital amplifier) is added for a separated sound reinforcement system with the connected and installed ceiling speakers.

NOM (number of open microphones) can also be set between 1 and 8 to limit the amount of delegates speaking at the same time.

※Supporting 5 types of Conference Modes:

Discussion-FIFS: All the microphones are engaged in the order they request to speak on a "first in first served" basis.

Discussion-FIFO: All the microphones are engaged by the "first in first out" basis, this allows every microphone to speak with the order they push the request button; therefore, when all the channels have been occupied, the next person who is waiting for requesting to speak will override the first person who occupied the first channel.

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Meeting-Delegates RQ: All delegates are engaged by requesting the authorization to speak from chairman.

Meeting-Chairman: All delegates are engaged by Chairman and/or the assistant operation via Senator Designer software.

Application #3:

Standard Conference

(Networked in 2 rooms, plus sound reinforcement system with DCA660 amplifier)



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This application shows a conference application in two rooms. A DCP-Net Card will be added to each DCP1000 processor, so the rooms can be networked together via a CAT5/6 Network Link for up to 100m distance between the two rooms. Both rooms can be used individually, or can be "combined".

16x CDM1000 are used as delegate units to provide conference situation for 16 participants in each room. Flexible NOM (number of open microphones) can also be set between 1 ~ 8 to limit the amount of delegates speaking at the same time.

※Supporting 5 types of Conference Modes:

Discussion-FIFS: All the microphones are engaged in the order they request to speak on a "first in first served" basis.

Discussion-FIFO: All the microphones are engaged by the "first in first out" basis, this allows every microphone to speak with the order they push the request button; therefore, when all the channels have been occupied, the next person who is waiting for requesting to speak will override the first person who occupied the first channel.

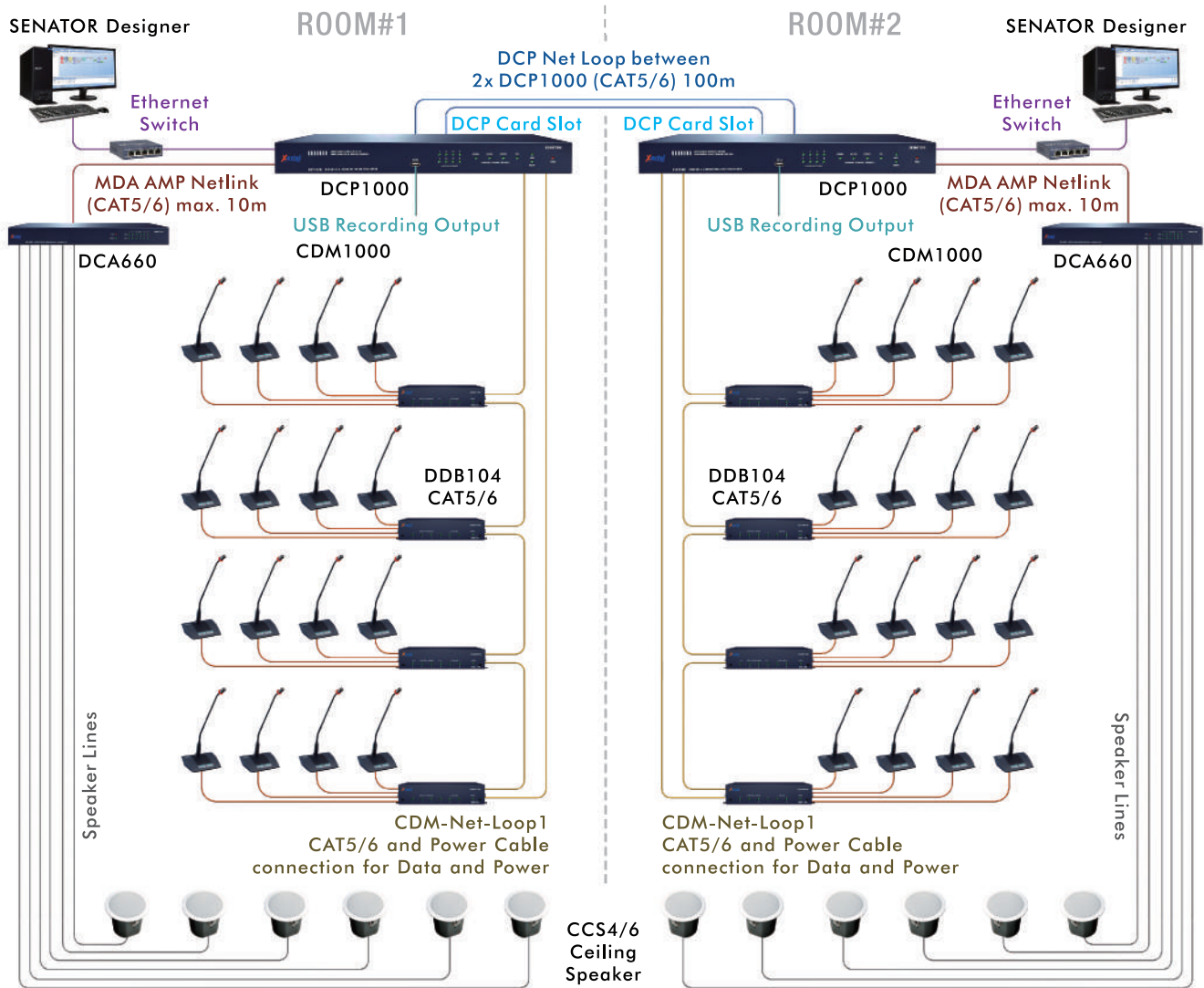
Meeting-Priority: For Chairman Delegate Units, this mode will allow for the microphones to turn on via their priority settings. No manual selection needed from the Chairman.

Meeting-Delegates RQ: All delegates are engaged by requesting the authorization to speak from chairman.

Meeting-Chairman: All delegates are engaged by Chairman and/or the assistant operation via Senator Designer software.

“CDM Net-Loop Card (CAT5/6) and DDB104 (CAT5/6) Junction Box for interconnection”

”Use 2x DCP Net Cards (CAT5/6) to network the two DCP1000 processors”



Equipment List: Room #1

- 1x DCP1000
- 1x DCP-Net Card (CAT5/6)
- 16x CDM1000 (incl. connection cable 2.5m)
- 16x Gooseneck Mic (type/length to choose)
- 4x DDB104 (CAT5/6)
- 3x CDM-Net-Loop cable 3m
- 2x CDM-Net-Loop cable 10m
- 1x DCA660
- 6x CCS4/6 Ceiling Speaker
- 1x CAT5/6 (Processor to Amplifier, max. 100m)

Equipment List: Room #2

- 1x DCP1000
- 1x DCP-Net Card (CAT5/6)
- 16x CDM1000 (incl. connection cable 2.5m)
- 16x Gooseneck Mic (type/length to choose)
- 4x DDB104 (CAT5/6)
- 3x CDM-Net-Loop cable 3m
- 2x CDM-Net-Loop cable 10m
- 1x DCA660
- 6x CCS4/6 Ceiling Speaker
- 1x CAT5/6 (Processor to Amplifier, max. 100m)

Application #4:

Standard Conference

(Sound reinforcement system with DCA660 amplifier)

VoIP & AEC



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This application shows a conference application of a standard single room.

16x CDM1000 are used as delegate units to provide a conference situation for 16 participants.

The DCA660, 6Ch. digital amplifier is connected with the installed ceiling speakers for a separated sound reinforcement system. Additionally the AEC Board is installed into the DCP1000 DSP processor, allowing for Teleconference with a VoIP Phone system.

Flexible NOM (number of open microphones) can also be set between 1 ~ 8 to limit the amount of delegates speaking at the same time.

※Supporting 5 types of Conference Modes:

Discussion-FIFS: All the microphones are engaged in the order they request to speak on a "first in first served" basis.

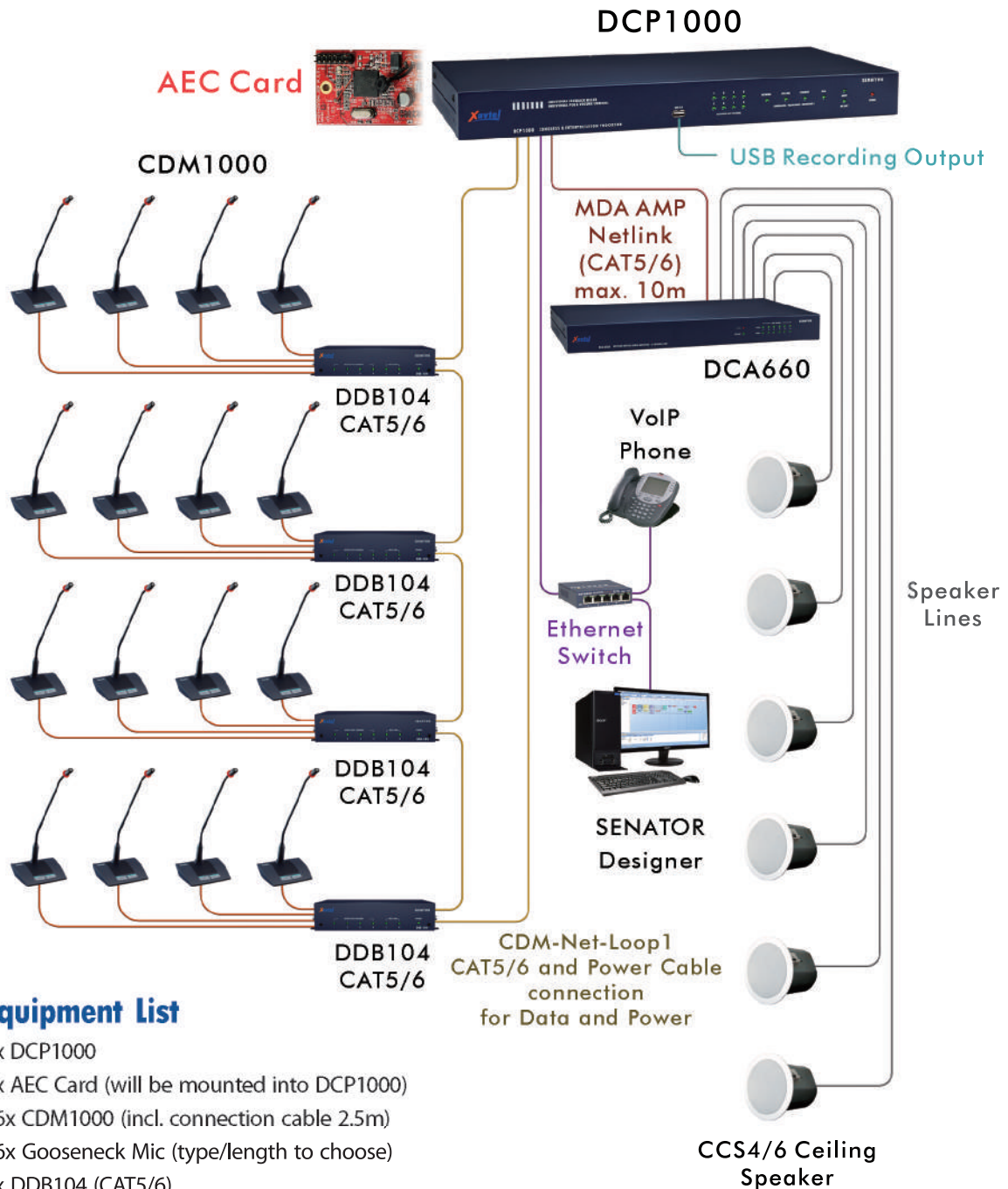
Discussion-FIFO: All the microphones are engaged by the "first in first out" basis, this allows every microphone to speak with the order they push the request button; therefore, when all the channels have been occupied, the next person who is waiting for requesting to speak will override the first person who occupied the first channel.

Meeting-Priority: For Chairman Delegate Units, this mode will allow for the microphones to turn on via their priority settings. No manual selection needed from the Chairman.

Meeting-Delegates RQ: All delegates are engaged by requesting the authorization to speak from chairman.

Meeting-Chairman: All delegates are engaged by Chairman and/or the assistant operation via Senator Designer software.

“Use CDM Net-Loop Card (CAT5/6) and DDB104 (CAT5/6) for interconnection”



Equipment List

- 1x DCP1000
- 1x AEC Card (will be mounted into DCP1000)
- 16x CDM1000 (incl. connection cable 2.5m)
- 16x Gooseneck Mic (type/length to choose)
- 4x DDB104 (CAT5/6)
- 3x CDM-Net-Loop cable 3m
- 2x CDM-Net-Loop cable 10m
- 1x DCA660
- 6x CCS4/6 Ceiling Speaker
- 1x CAT5/6 (Processor to Amplifier, max. 100m)

Application #5:

Standard Conference (Rental System)

(Sound reinforcement system with DCA660 amplifier, plus 6x speakers on floor stand)



This application shows a conference application used for standard RENTAL systems.

36x CDM1000 are used as delegate units to provide a conference situation for 36 participants.

A DCA660, 6 Ch. digital amplifier, is used to connect to 6 pcs. remote floor-standing loudspeakers for a separated sound reinforcement system.

Thanks to Xavtel's Mix-Minus Auto Calibration, the system setup and adjustment time is extremely easy and fast!

※Supporting 5 types of Conference Modes:

Discussion-FIFS: All the microphones are engaged in the order they request to speak on a "first in first served" basis.

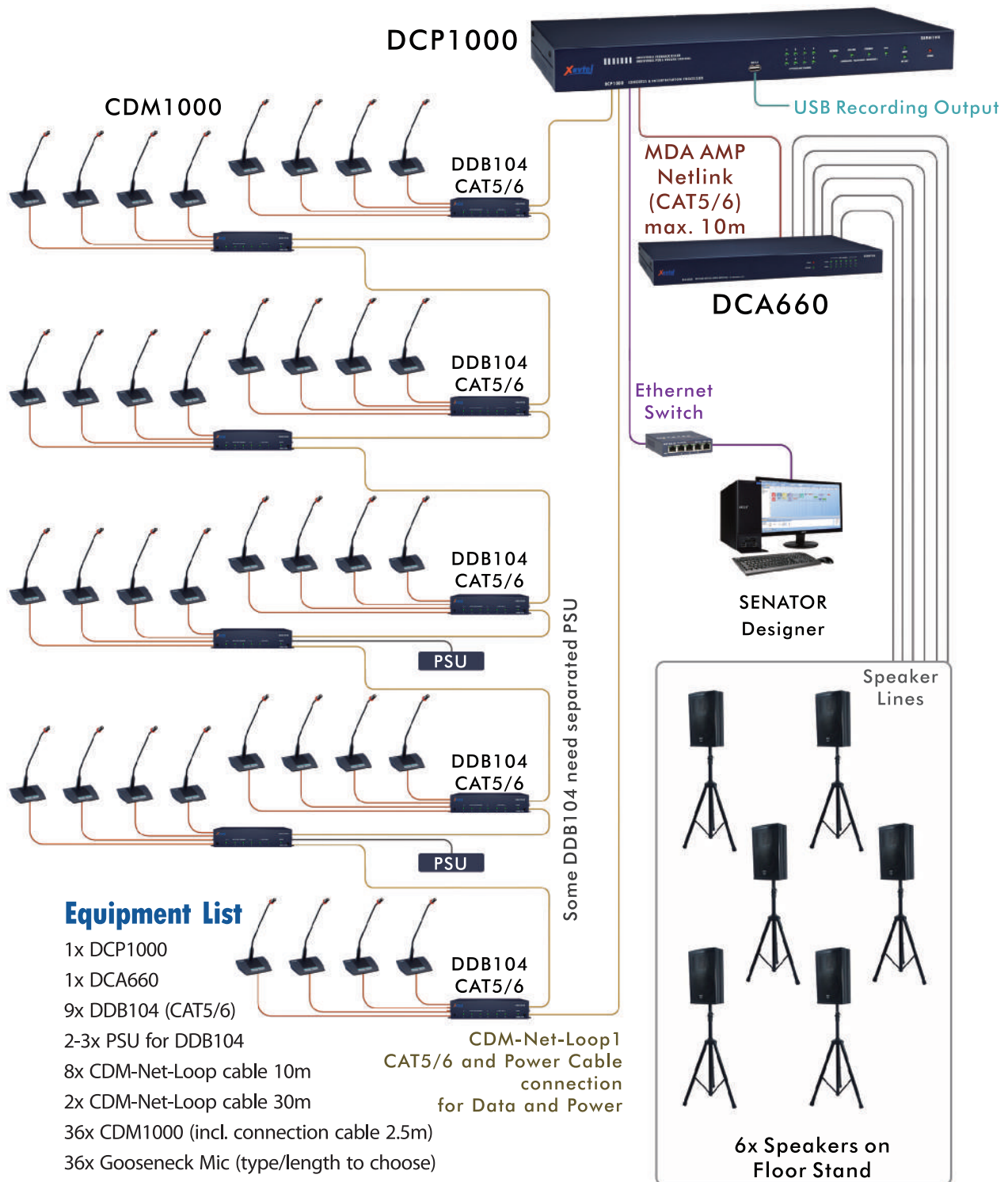
Discussion-FIFO: All the microphones are engaged by the "first in first out" basis, this allows every microphone to speak with the order they push the request button; therefore, when all the channels have been occupied, the next person who is waiting for requesting to speak will override the first person who occupied the first channel.

Meeting-Priority: For Chairman Delegate Units, this mode will allow for the microphones to turn on via their priority settings. No manual selection needed from the Chairman.

Meeting-Delegates RQ: All delegates are engaged by requesting the authorization to speak from chairman.

Meeting-Chairman: All delegates are engaged by Chairman and/or the assistant operation via Senator Designer software.

“Use CDM Net-Loop Card CAT5/6 and DDB104 CAT5/6 for interconnection”



Application #6:

Standard Conference (Rental System)

(Real-time tracking of speakers with dome camera integration)



This application shows a conference application for video dome camera integration with micro-phones. When a Microphone is "turned on", the dome video camera automatically rotates and locates the "Live Microphone" with software control. Providing additional visibility for delegates in a large scale of configuration, where video and audio from the main room shall be "seen" and "heard" even in a long distance.

※Supporting 5 types of Conference Modes:

Discussion-FIFS: All the microphones are engaged in the order they request to speak on a "first in first served" basis.

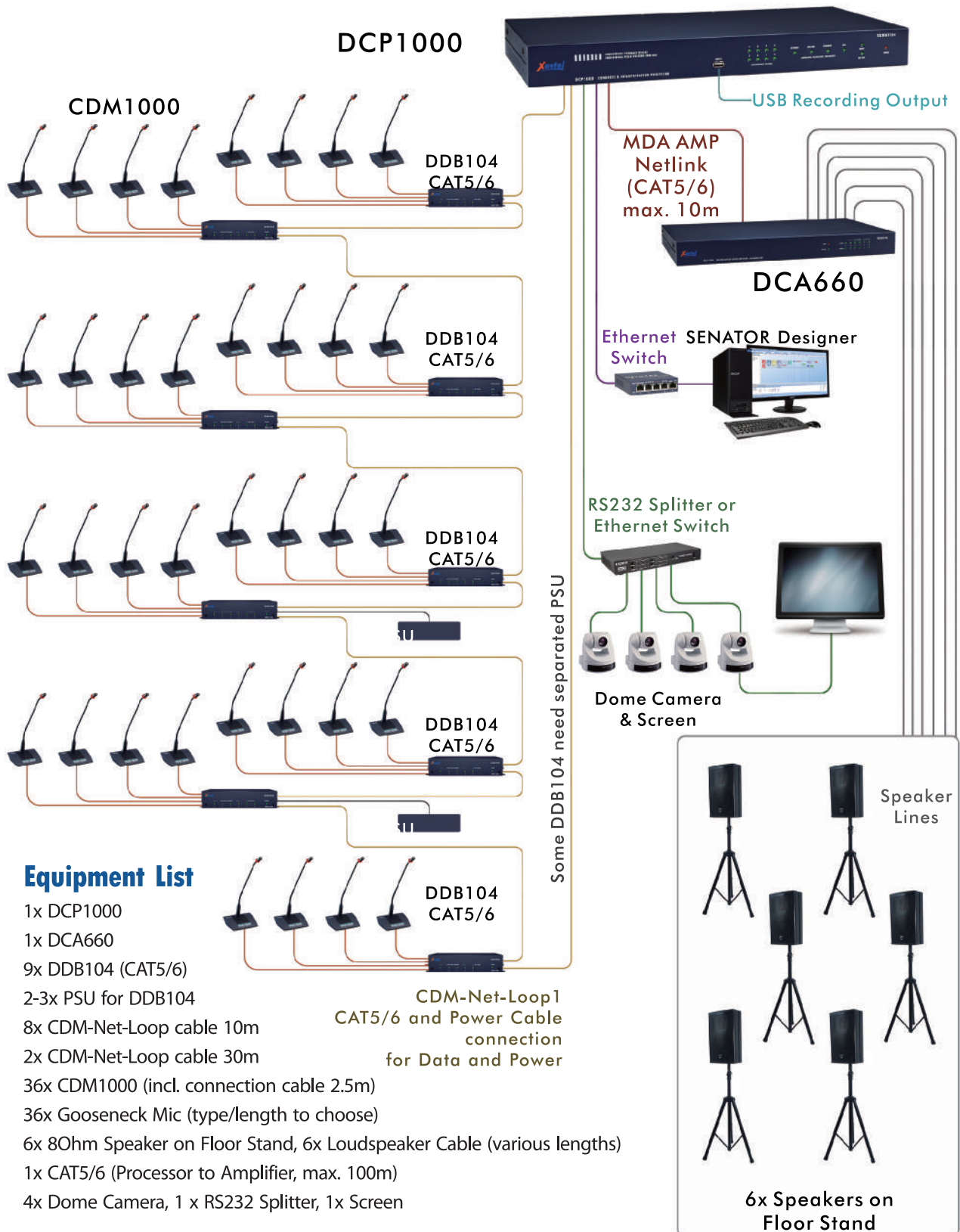
Discussion-FIFO: All the microphones are engaged by the "first in first out" basis, this allows every microphone to speak with the order they push the request button; therefore, when all the channels have been occupied, the next person who is waiting for requesting to speak will override the first person who occupied the first channel.

Meeting-Priority: For Chairman Delegate Units, this mode will allow for the microphones to turn on via their priority settings. No manual selection needed from the Chairman.

Meeting-Delegates RQ: All delegates are engaged by requesting the authorization to speak from chairman.

Meeting-Chairman: All delegates are engaged by Chairman and/or the assistant operation via Senator Designer software.

“Use CDM Net-Loop Card CAT5/6 and DDB104 CAT5/6 for interconnection”



Equipment List

- 1x DCP1000
- 1x DCA660
- 9x DDB104 (CAT5/6)
- 2-3x PSU for DDB104
- 8x CDM-Net-Loop cable 10m
- 2x CDM-Net-Loop cable 30m
- 36x CDM1000 (incl. connection cable 2.5m)
- 36x Gooseneck Mic (type/length to choose)
- 6x 8Ohm Speaker on Floor Stand, 6x Loudspeaker Cable (various lengths)
- 1x CAT5/6 (Processor to Amplifier, max. 100m)
- 4x Dome Camera, 1 x RS232 Splitter, 1x Screen

CDM-Net-Loop1
CAT5/6 and Power Cable
connection
for Data and Power

SENATOR™

SIMPLE DISCUSSION & LARGE SCALE SYSTEM

Rentals
Office Environment
Local / Regional Councils
Universities or Education Institution

FULLY INTEGRATED CONFERENCING SYSTEM

Hotels / Churches / Arenas
National Parliament
International Convention & Congress



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