



**school**



**home**



*videostream with  
camera control between  
home and school*



## **AbleCenter® AC-03 - with home control module**

"a wireless ceiling mounted CCTV for pupils with different types of vision impairment. The equipment has an additional module which makes it possible for pupils living at home to follow lessons at school"

**AbleCenter® AC-03 with home control module** is a wireless transmitter of live closeup and distance images from a ceiling-mounted HD high-resolution camera. Live images from, for instance, a blackboard and a desk are shown from the same camera.

AbleCenter® AC-03 with home control module:

- Camera with all zoom options, which can quickly change position.
- Save 9 camera angles with level of zoom.
- Image can be inverted and changed to black/white high-contrast and artificial colour. combinations, save, rotate and split image, change contrast and light.
- Wireless control directly from PC/tablet, by keyboard/touch screen.
- Live images can be transmitted to PC/tablet with a wireless connection.

Consequently, all the equipment you need at your desk/workplace is a completely ordinary PC or tablet. AbleCenter® AC-03 can also be supplied with AbleGrabber™. This is a development module for the wireless dissemination of all information presented via a projector, for example: video, images, text, smart-board etc. AbleCenter® AC-03 and AbleGrabber™ also contain a module for OCR function with reading of text in several different languages.

AbleCon AS | PRIVACY

Product models: AbleCenter® AC-03 with home control module

Product version: 1.6 | Updated 31.03.2023

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The additional home control module enables the system to transmit the «the entire classroom» and everything that is shown on the smart board to pupils that stay at home, in a simple and secure way. The system can transmit live images from the lecture and materials shown on a projector directly in a simple way controlled through a PC or tablet.

The home based pupil can, through defined permissions from the educator/ administrator, take part in the education in a live manner through live images from a wireless ceilingmounted PTZ camera from all angles, 360° horizontally and 180° vertically. Home based pupils can convert text that is shown with the OCR function and save on their own device.

The teacher will through our software be able to open full control in the software, so that the stay-at-home student also can

control angles and all manipulation options on the equipment that is already installed in the classroom.

Home based pupils with different vision impairments can adjust the video feed regarding colours, contrast, zoom level, reading options etc.

The software offers opportunities for connecting a small and mobile high resolution document camera, so that one can use digital zoom for customised zoom.

A classroom equipped with AbleCenter® AC-03 with a home control module can be considered adapted for students who are present or home based with various forms of vision impairment.



home



## Security and Privacy

In 2020, AbleCon AS conducted a pilot project including a market study and a questionnaire among leaders and educators in primary- and secondary school, high school and university level. The pilot study gave us good understanding of which measures should be implemented in the system. Among the areas highlighted by the study, was the importance of ensuring a high level of privacy and security. We have therefore, put emphasis on safeguarding privacy and safety for educators, pupils, and parents. We have developed a separate booklet which describes in detail those areas that are safeguarded by the use of AbleCenter® AC-03 with home control module, but will briefly mention some of those measures that are built into the hardware and software for AbleCenter® AC-03 with home control module.

### **AbleCenter device indicates clearly when the system is switched on and a user is connected.**

When the system is switched on this is indicated by a red light on the AbleCenter device. When a user is logged on the AbleCenter® AC-03 with home control module a green light appears on the AbleCenter device so that everyone can see that the system is active.

### **AbleCenter® AC-03 with home control module can be switched off.**

If the use of AbleCenter® AC-03 with home control module is not required, the device can be switched off either via the software on PC/tablet, or with a button on the enclosed remote control unit. This prevents the possibility of compromising the security of the system.

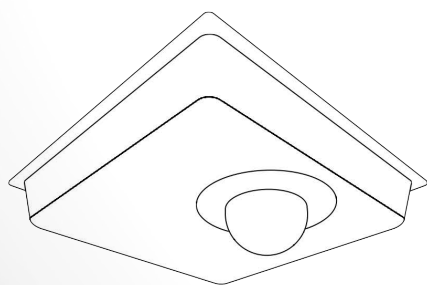
### **End-to-end-encrypted video feed**

The video feed between the AbleCenter software/app on the PC/tablet and AbleCenter® AC-03 with home control module is transmitted using end-to-end-encryption. This way we ensure that no outsiders can gain access to the video feed.

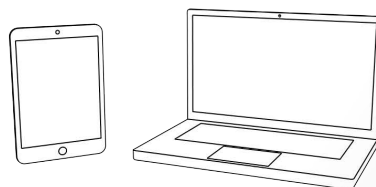
## **EMBEDDED PRIVACY**

**In order to safeguard the privacy of users and others, and to ensure that the video feed is as secure as possible, we have implemented a number of security measures.**

- The system can be switched off and on through the software on the PC or tablet.
- End-to-end encryption of video feed.
- Possible to save up to 9 fixed positions/camera angles and zoom levels.
- Possible to lock the camera to 9 fixed positions (educational objectives).
- Possible with wire connected communication and control via the electrical grid.
- The system can be limited to only one active user at a time.
- The administrator/educator can open and limit functions for home based users.
- Password protected login for AbleCenter software.
- Password protected login for wireless network.
- Possibility to record video feed is deactivated as standard (can be activated when needed).
- «Take picture» function active as standard. Can be deactivated by the educator/administrator..



All data is encrypted





**Possibility to save up to 9 fixed positions.**

AbleCenter® AC-03 with home control module can save up to 9 fixed positions/camera angles and zoom level using the numbered buttons 1-9. By selecting the number of desired setting, the camera moves automatically to the saved position and saved zoom level. This happens so fast that it is practically impossible to interpret the image from one position to another. By using fixed positions it is of course not possible to receive other information than that which is located within the saved position.

**Possibility to lock the system to 9 fixed positions.**

AbleCenter® AC-03 with home control module can be locked to fixed positions/camera angles that are saved and approved by the educator/administrator beforehand. This prevents user at home from receiving images outside the preset fixed areas.

**Possibility for wire-connected communication and control through the electrical grid.**

If you do not wish to use the local wireless network to control the system and direct the video feed, this can be managed through a simple component that is plugged into a wall socket which communicates with a small unit plugged into the network port of the PC. This makes it impossible for intruders to gain access to this line, and the need for more internal networks is eliminated.

**One user.**

The device can only be connected with one user at a time through a fixed IP-address, but it is possible to open up for more if required. Be aware, that this reduces the security level of the system by some degree.

**The educator/administrator can open and limit functions for home based users.** The educator/administrator can, through the AbleCenter software/app, control which permissions are granted to home based users. This includes everything from video feed, to sound feed and control options for the system.

**Password protected login for Ablecenter software.**

In order to use the software/app for AbleCenter® AC-03 with home control module the software must be activated with a code from Ablecon AS.

**Password protected login for wireless network.**

In order to manage the system through the wireless network, one must log into an end-to-end encrypted network med SSID and password.

**Nothing is saved.**

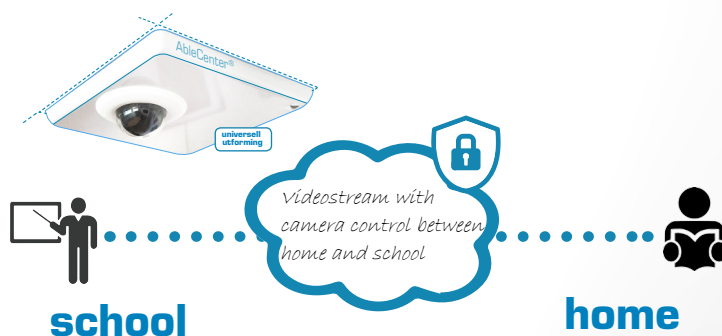
AbleCenter® AC-03 with home control module is used in real time. The possibility to save the video feed is deactivated as standard, but can be activated by contacting AbleCon AS.

AbleCenter® AC-03 with remote education module can be compared to a pair of binoculars that offer the chance for a home based person with vision impairment to see required positions in the classroom to take part in the education process on equal terms with other pupils and, to a certain extent, participate in the social life in class.

«Take a photo» feature is active as standard but can be deactivated by the educator/administrator.

**Network overview**

AbleCenter® AC-03:



### Server choice and security

The hardware and software for AbleCenter® AC03 with home control module, have an interface that operates in combination with the remote platforms Teams and Zoom and their servers.



### Information sheet.

Limited understanding of the system can cause reservations for pupils, parents, and teachers. We have therefore, developed editable information sheets to pupils, parents and teachers, in case posting an information sheet in the classroom or hand out information sheets is desirable. Suggested documents can be downloaded from our web page: [www.ablecenter.no/privacy](http://www.ablecenter.no/privacy)