Introduction

Dear customer,

Thank you for choosing the C-MOR video server. The quality product you have purchased is state-of-the-art and complies with European and national directives. The declaration of compliance has been confirmed and all necessary documents are deposited with the manufacturer.

To ensure the best results and long-term satisfaction and to ensure safe operation, the instructions in this manual must be followed. In case of questions, please contact your specialist dealer.

The video server C-MOR is used for the surveillance of objects. The video signals recorded during surveillance are digitally transferred over the connected network from your camera to C-MOR. The software installed on the hardware enables simultaneous recordings of max. 15 connected video signals. Data saving underlies country-specific guidelines. You are able to access installed cameras and servers (secured by password and encryption) over your web browser from all over the world.

In case of technical problems or questions on installation and setup of C-MOR, please contact our hotline. Please find more information on www.c-mor.us (or please see contact data in the appendix of this manual).

Before putting into operation

The use of surveillance systems may be prohibited or regulated by law in certain countries. C-MOR has not only been developed for high performance use over the internet, but can also be part of a flexible surveillance facility.

Before putting the system into operation the user has to make sure that surveillance is carried out within regulatory framework. Before installation, please make sure that the package content is complete. In order to avoid damage by incorrect connection or wrong configuration, please read the manual carefully before using this device, follow the instructions and keep the manual for future use. Following the instructions ensures that the device will be correctly put into operation. Please visit our forum for solutions on www.c-mor.com for FAQ on configuration errors. In case you encounter problems during the setup of your system, please visit the forum as a first step for finding a solution.
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1 Installation

This user manual is a general documentation for all C-MOR models. Those models are all hardware versions as well as all virtual machine versions. For each version exists an extra installation guide which is online available on the C-MOR home page http://www.c-mor.com. Download the installation guide from the C-MOR web to learn more how to do the initial set up of C-MOR. The installation process is described in this manual.

Following C-MOR models are available

- Compact server case for 3 to 9 cameras in the basic configuration
- Rack mount Server for computer centers or 19 inch rack mount shelves for 9 to 15 cameras
- Low power consuming and fan less mini case for 3 cameras in the basic configuration
- Tower Server for 15 Cameras
- Software server for the installation on a virtual server or in a cloud.

1.1 Support

In case of unexpected problems during the C-MOR installation please contact our support by the help of the online support form under http://www.c-mor.com. Please contact your dealer where you bought C-MOR first if you have any questions.

Please also check out the support forum on our homepage where you can find many cases that might answer your questions.
1.2 IP Camera Quick Installation

If C-MOR is installed and you have access to the network, the following steps will show you how to take an IP-camera without special settings via C-MOR in operation.

C-MOR video surveillance is configured by web interface only. All settings are made through the web management surface.

Log in to your C-MOR video surveillance system. Simply enter the IP address of the C-MOR in your web browser window. The default IP address is 192.168.1.2. Please enter http://192.168.1.2 if you have not changed the IP address. The default login is “admin” and the default password is also “admin”.

Please select the “System Administration” menu on top of the C-MOR web page to setup your IP camera.

Scroll down to the section where you can configure IP cameras and select for example the first IP camera, cam1:
Alternatively, you can access the camera configuration directly via the camera side "Camera 1".

Once you are in the IP camera configuration menu of camera one, you simply enter the IP address of the camera, the access data, username and password, as well as the TCP/IP Port. This is mostly port number 80:

**Camera Network Data**

<table>
<thead>
<tr>
<th>IP Address/DNS Name</th>
<th>172.20.1.76</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP/IP-Port</td>
<td>80</td>
</tr>
<tr>
<td>User Name</td>
<td>Viewer</td>
</tr>
<tr>
<td>Password</td>
<td>***********</td>
</tr>
</tbody>
</table>
You can also directly adjust the setting, how long the recordings should be stored:

Now select your IP camera model from the “Camera Type Configuration” menu and press “Save Configuration”. In this example an Allnet camera with the default cam size was selected. At this point all required parameters for the basic motion and time-lapse recordings are made already:

On the next page, the saved configuration page, you have to activate your camera.
The status shows now, that recording for the IP camera has been activated:

Now it's time to do some testing. Click on the cam1 menu on top and verify when (motion) recordings are generated. From this menu you simply click on "Cam Configuration" to optimize the parameters for motion-detection, alarm emails, with or without attached videos, the length of single recordings and so on. Details on the settings can be found in this manual in the chapter "Administration".
## 2 The Web Interface

The main tool for the operation and administration of C-MOR is the web interface. Enter the IP address which you have set for example 172.20.1.234. If you don't have changed your IP address insert the default IP address such as 192.168.1.2 into the address bar of your web browser as described under step 2. A window will pop up asking for your user name and password.

The unit is supplied with one pre-configured Administrator user name and password, set to operate and administrate, respectively.

**User name:** admin, **standard password:** admin

![Authentication Required](image)

C-MOR is being controlled by your individual settings over your web browser:

- Time-controlled recordings
- View of live stream by camera
- Sensitivity of motion detection
- User administration: distribution of rights, creation of new user etc.
- Call, search and display old recordings either as video files or single frames
- Archiving of recordings
- FTP transfer of recordings to a server
- Deletion of recordings for the release of free disk space
- Integration of own/existing cameras (when supported by the system)
- And many more

More information can be found in chapter "Administration".

Besides HTTP connections that are transferred over the Internet without encryption C-MOR also offers encrypted access over HTTPS. In order to use this so-called SSL connection, enter https instead of http in the URL, such as https://c-mor.your-domain.com or https://IP-address (e.g. 192.168.1.2).

Apart from the standard ports 80 for HTTP and port 443 for HTTPS, C-MOR can also be used over the alternative port 9000 (for HTTP) and port 9443 (for HTTPS). These alternative ports are used when C-MOR is accessed over a firewall and the respective ports on the firewall are already in use by other applications.

The web surface is divided into 6 main web pages that are built on each other and individual pages for the corresponding camera:
2.1 Start Page

The start page consists of the menu in the upper section of the page, 6 camera live views and the reference to the camera functions.

On the start page you will find an overview of all functions for the operation and administration of C-MOR. As soon as a camera within the net is activated and starts recording, an up-to-date snapshot by the camera will be displayed.

If you are logged in as admin (administrator) on C-MOR and if you have C-MOR Version 4.01 or newer you will see on the right top two buttons to activate or deactivate the motion detection or email alarm with a single click.

These buttons are also available on mobile devices.
2.2 Camera Page

In example by clicking the button “Cam 1” you will get to the “Camera Page” of camera 1. Here you will be able to see a live image of your camera - provided there is an active connection to it. Furthermore on this page you have the possibility to play the recordings of the respective camera, to save, to get to the page where the camera can be configured and to view a live stream in a separate window. Also you can see a preview of each recording. You only have to move your mouse pointer over the preferred video. By clicking on the pictures, you can play the recordings or save them on your local workstation computer.
2.3 Quick Start Page

On the quick start page you are able to choose the size of the stream by clicking on the play button of the camera in question. Then the live stream will be opened and start playing in the requested size in a separate window.

The Quick Start Page has a great advantage! It starts up quickly even it is accessed through a slow Internet connection. The small thumbnail camera pictures are updated in a high refresh rate only. This means that this page is not usable for live monitoring.

Another advantage of this page is the independent view of single camera streams. Users have the capability to open camera stream by camera stream and place the single views where ever they want to have it on their screen. Also, this single camera live streams are enabling users to use ActiveX cameras in combination with Apple's Safari or other non-Internet Explorer web browsers!

The following site will show you an example of the different sizes of the livestream view.
Livestream in full camera resolution, 768x576 pixels in this example

Half camera resolution, 384x288 pixels

Fourth camera resolution, 192x144 pixels
2.4 Recordings

Under the menu item “Recordings” your recordings can be administrated. Settings like start/stop, type, deletion, save via FTP and select individual recordings for delete can be carried out on this page if the user have the necessary rights.

In the lower part you find the functions for deleting your recordings.
Once you have selected the time frame, camera and the recording types the next page shows you all found recordings as pictures. Use the mouse-over a picture to see in a little preview video the scene which was recorded in the selection.
2.5 Show Recordings

By clicking on the button “Display Recordings” on the “Recordings” site you have the choice to select separate cameras, a desired period to display and the type of your desired recordings.

After your selection of camera, desired period and type of your recordings (motion detection or permanent recordings) you will be redirected on following site.

On this page you see pictures of your recordings and you have the opportunity to look first to the preview videos. This preview videos show you a few seconds of the complete recording. Just move the cursor over the image.
2.6 Save Recordings

You can play recordings or save them. First you need to select the number of scenes, which is to be stored or played

After clicking on the picture there will be another picture with following text: "Video starts. Please wait! ". After that it appears another window which asks you if you want to save or to open the file. For saving you confirm your selection by clicking on the button “Save”.

Now you can save space and delete the single recording on C-MOR.
Note:
C-MOR tries to control your browser in that way. That always a window appears which is asking you, if you want to save or to watch the film. But if your browser doesn’t show you that possibilities, you have to check the settings of your browser. And if you want your browser to ask you, you have to change the settings of your browser.

Every Recording, which was recorded by the reason of motion, have separate single-frame-scenes, in case of you have activated them.

By clicking on “Frames” you will be redirected on the site, where you can look at the single pictures or you can download them as ZIP-file.

Does you have a Mac from Apple and your recordings can not be played, you have to go to the menu item “System Administration”. There you have to choose:

User Camera Rights Administration and Live Stream Mode Settings

And to confirm your selection by clicking on the button “User Configuration”. There you have to check if the Mac-OS Optimization is marked.

User Rights and Settings in the Web Interface

- The user has the permission to change the own password
- The user has the permission to view the Quickstart page
- The user has the permission to view the Recordings page
- The user has the permission to view the Systemstatus page
- The link to the camera will be viewed to the user
- The user has the permission to set up the stream mode and the video playback format self
- Video recordings and web interface are optimized for MacOS
- The video recordings selection tables are displayed optimized for tablet computers
2.7 Play Recordings

The playing of your recordings is the same procedure like saving. Now you have to select “Open” the file, when your browser asks you if you want to save or to open. Your Media-Player will start and play the recordings.

2.8 Delete Recordings

There are two options to delete recordings. In addition you can select your recordings hours exactly. Cameras can be selected individually.

If you choose this option, your recordings will be deleted directly.

Under the Menu item “Delete Single Recordings” you can select a period of time of specific camera. In the next opened window you can select each record individually for deletion.

Now the next opened window shows your recordings I a list.
After marking the recordings you want to delete, you confirm your selection with clicking the “Delete Recordings” button.

Following a pop-up window appears, now you have to confirm once again your selection. This ensures that no important records are deleted accidentally.

<table>
<thead>
<tr>
<th>Delete</th>
<th>Start Time</th>
<th>Bytes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13:00:00h</td>
<td>69326</td>
</tr>
<tr>
<td></td>
<td>12:00:00h</td>
<td>10143</td>
</tr>
<tr>
<td></td>
<td>11:00:00h</td>
<td>10160</td>
</tr>
<tr>
<td></td>
<td>10:00:00h</td>
<td>10212</td>
</tr>
<tr>
<td></td>
<td>09:00:00h</td>
<td>10365</td>
</tr>
<tr>
<td></td>
<td>08:00:00h</td>
<td>10265</td>
</tr>
<tr>
<td></td>
<td>07:00:00h</td>
<td>10346</td>
</tr>
<tr>
<td></td>
<td>06:00:00h</td>
<td>10349</td>
</tr>
<tr>
<td></td>
<td>05:00:00h</td>
<td>10238</td>
</tr>
<tr>
<td></td>
<td>04:00:00h</td>
<td>10250</td>
</tr>
<tr>
<td></td>
<td>03:00:00h</td>
<td>10261</td>
</tr>
<tr>
<td></td>
<td>02:00:00h</td>
<td>10274</td>
</tr>
<tr>
<td></td>
<td>01:00:00h</td>
<td>10326</td>
</tr>
<tr>
<td></td>
<td>00:00:00h</td>
<td>10305</td>
</tr>
</tbody>
</table>
2.9 System Administration

Under “System Administration” you can define all important configuration settings in order to adjust C-MOR to your requirements and ensure a smooth operation in your network. The following sub chapters go into the details of the different configuration options.

The note "License installation" can be found only in the free version of C-MOR. As soon as a license is installed, this note doesn’t appear again.
2.10 System Status

Under “System Status” there is an overview listing status information of C-MOR. In the upper area you see your version number with the sum of your licensed cameras, your use disk space and your system utilization. In addition, under the system utilization, the operating time of your C-MOR is displayed. The operating time refers to how long your C-MOR is straight on. If a restart or system failure have happened, you recognize the fact that the operating time has started again from 0.

The CPU Load shows how much the system is used. This is important to realize if the C-MOR system is overloaded. Reasons for this are too much frames per second (fps) in motion detection mode or too big camera pictures in connection with additional cameras. It should be noted, the “Load” parameter refers to the used CPU cores or must be divided by this number. With a load of 1 and just one CPU core the system is running at 100 % on the CPU. With a Load of 1 and two CPU cores the system is running only 50%!

By clicking on the CPU usage graph you call the load graphics for "Daily", "Weekly", "Monthly" and “Yearly”: 
C-MOR CPU Load

Average System Utilization (1 Minute, 5 Minutes, 15 Minutes): 0.11, 0.11, 0.09
(4 CPU cores)

"Daily" Graph (5 Minute Average)

"Weekly" Graph (10 Minute Average)

"Monthly" Graph (2 Hour Average)

"Yearly" Graph (12 Hour Average)
The middle part of this site shows you the camera availability and the Network Utilization of your C-MOR. Using these graphics utilization errors in the network can be detected. The graphics are divided in incoming network traffic (green line) and in outgoing network traffic (blue line).

**Cam Availability in the Network**

Cam 1 is available in the Network: 172.20.1.91, TCP-Port 6090.
Cam 2 is available in the Network: 172.20.1.151, TCP-Port 6090.
Cam 3 is available in the Network: 172.20.1.54, TCP-Port 6090.
Cam 4 is available in the Network: 172.20.1.60, TCP-Port 6090.
Cam 5 is available in the Network: 172.20.1.41, TCP-Port 6090.

**Camera Recordings**

Recording for Cam 1 is active.
Recording for Cam 2 is active.
Recording for Cam 3 is active.
Recording for Cam 4 is active.
Recording for Cam 5 is active.

**Network Utilization**

[Network Utilization Graphs]
In the lower part of System Status the log files are shown which can be used to get support. Just copy and paste the Log into an email, and send it to the C-MOR support team. The Log File can be very useful to solve problems or to fix them.

In support case you should “copy” the log file and “paste” it into the support-contact-form. You can find this form on [http://www.c-mor.com](http://www.c-mor.com).
2.11 Control with the iPad

You can use all functions of C-MOR with an iPad just like you can do with a desktop computer. But with the iPad you are mobile and you have your video surveillance always at your hand.

The following points characterize the iPad functions:

- Live view of many different camera models, even if the camera self has no direct iPad support
- Playback of motion, permanent or time-lapse recordings
- Watch single frames
- Just get started. There is no App installation required
- Control your PTZ cameras
- Receive alarm emails with video attachments
- And many, many more!

The Web Interface of the iPad

On the Start Page you find an overview of all functions for the operation and administration of C-MOR. If a camera is in recording mode, the Live View of the camera will appear here.

The web interface is same as the web interface of a normal web browser on your PC. Also, all features are available and the C-MOR web page is almost the same as you are used to with your PC.

In the Start Menu, you can see an overview of all installed cameras that can be accessed by C-MOR. You can touch on the camera live picture to select a single camera and watch the live view in a bigger picture or playback recordings.
The menu **Quickstart** shows the overview of all cameras, too. However, there is no Live View available in this menu. Here you just see static pictures updated every 15 seconds. If you have a small bandwidth connection of your iPad, this has the advantage, that you still have good access to the cameras. Here you can also choose the live stream, and you are able to play it with your iPad. If you are using C-MOR frequently through a low bandwidth connection it makes sense to bookmark this page as your C-MOR start page. It starts up faster than the other pages.

If you want to watch the live view of a camera, click on the button with the display size to open the live stream window.

If you click on the static picture in the “Quickstart” view, you will be forwarded to the Live View site of the respective camera. The Live View site can also be reached with the buttons etc. in the top menu.
On the camera page you have the Live View of the respective camera. The associated motion detection recordings and time-lapse are listed in the tables below the live stream.

Choose for example cam 1.

You can see a list of pictures which show you your recordings of your motion detection and your permanent recordings.
Your recordings are displayed as images. Just click on the button “preview” to watch a little preview of your recordings. Just to check first what happened during the desired recording.
If you only want to see your motion detection recordings you can choose on the left side “motion detection” and then you have to click on “view recordings”.

![Image of motion detection interface]
After your selection you see following aspect:
Here you have also the possibility to select the number of scenes you want see and you also can watch a preview of your recording.
Also you have the possibility to select only your permanent recordings and there you have the same functions like you have by choosing motion detection recordings.
Now you see your permanent recordings. At this point you also have the possibility to view a preview of your recording, or to select the number of scenes.
Naturally you have the possibility to watch the complete recording and not only a preview. Therefore you have to tab the picture of your desired recording and the film will start.
All PTZ (pan, tilt, zoom) functions are available for the iPad, too. Even if the connected IP camera does not support the iPad, it can be controlled through C-MOR since C-MOR acts as interface between the iPad and the IP camera. Further information about the PTZ Control you can find under Point 3.2.4 and 3.2.5.
2.12 Mobile Devices, Android and iPhone

C-MOR offers 2 web interfaces for the use with mobile devices like Android phones, Windows Mobile, iPhone and others. 2 web addresses lead to these mobile interfaces:

/iphone: As the name says, for Apple iPhones
/mobile: For all other devices like Android and also for iPhones with an extra web browser like Chrome.

Both web interfaces do not require installing any App neither on the iPhone nor on Android to use it. Videos can be viewed as well as using the live view works straightforward.

If alarm videos are forwarded to an Android device and the recordings have a higher resolution, it may require using an additional video player on the Android phone. In this case we recommend the free MoboPlayer from the Android Play Store.

Notice:

For the use of the functions you need access to the internet like UMTS or GPRS.

2.12.1 Access with Mobile Devices

Please visit the following page to use your C-MOR with a mobile device like an Android smart phone:

http://<your IP address>/mobile

If you want to see the live view of your camera choose for example “cam 1”. This button will leads you to the live view of camera 1.

You have the option to activate or deactivate “Motion Detection” or “Email Alarm” with a single klick.
By clicking on the link “Motion <cam no.>” the page with all motion recordings for the selected camera will be opened. By clicking “Time-lapse” the page for all time-lapse recordings of the selected camera will be opened.

By clicking on **Overview** you will return to the main page.

![Overview](image-url)

If you have selected “motion 1” and you are touching the button “preview” it will open the quick preview of the selected recording on the same web page. The recording is identified by the time stamp in the left column of the table. The header shows the date of the recordings.

By clicking on the picture itself a window will pop up, offering either to save or to open recording. In case the data has already been connected to a specific player, the application will then open automatically and you will be able to view the recordings. Otherwise please open the video manually.
2.12.2 Display of Live Images on the iPhone

For the iPhone there is a separate interface available, to display live streams and videos on mobile Devices. If you are owner of an iPhone please use following link to show the camera overview on an iPhone:

http://<your IP address>/iphone

If you want to see the live view of your camera choose for example “cam 1”. This button will leads you to the live view of camera 1.

You have the option to activate or deactivate “Motion Detection” or “Email Alarm” with a single klick.
By clicking on the link “Motion <cam no.>” the page with all motion recordings for the selected camera will be opened. By clicking “Time-lapse” the page for all time-lapse recordings of the selected camera will be opened.

By clicking on Overview you will return to the main page.

If you have selected “motion 1” and you are touching the button “preview” it will open the quick preview of the selected recording on the same web page. The recording is identified by the time stamp in the left column of the table. The header shows the date of the recordings.

By clicking on the picture itself a window will pop up, offering either to save or to open recording. In case the data has already been connected to a specific player, the application will then open automatically and you will be able to view the recordings. Otherwise please open the video manually.
3 Administration

3.1 System Administration

Under **System Administration** the user can define all important configuration settings in order to adjust C-MOR for a smooth operation in the network.

The following settings can be carried out over the system administration:

- Setting the System Name for email notifications
- Carry out network or/and IP settings
- Proxy settings for internet access
- Configuration of email address for global system alerts
- Set time
- Configure time server
- Start/stop recordings (activate/deactivate camera)
- Define storage time for recordings per camera
- Auto delete in case of low storage space
- Setup the camera configuration of each camera
- User administration
- Configure Camera Rights and Stream Method for users
- FTP backup of recordings
- Setting standard language (German or English)
- Presentation of the Start Page, size of Stream
- Remote Access without Dynamic DNS or router configuration
- Stacking configuration (combine up to 6 C-MORs with up to 90 cams)
- System reboot and Shutdown
- Software update and camera model update
- License Upgrade
- If activated, Barionet Alarm connection

The following sub chapters will describe you the details of the different configuration options.
3.1.1 System Name

Under **System Name** you can find the current system name of this C-MOR. The default system name is “C-MOR”. Special characters should be avoided when setting up the system name.

Mainly, the system name is used for easily distinguish your C-MORs from each other if you have more than one in operation. The system name is also used in all emails all sent from C-MOR and in various places in the user interface.

3.1.2 Change IP Settings

Under **Network Configuration** the current network configuration of C-MOR is displayed. There you can change the IP address settings of C-MOR, network mask, standard gateway and DNS server. The changes are immediately active, meaning that you can only reach C-MOR over the newly defined IP address. C-MOR continues working at that point!

By clicking “Change IP Settings” the following entry mask appears for adjustment of IP settings:
After executing “Save IP Settings” C-MOR cannot be reached any more. 
By entering the new IP address in the address field of your browser, C-MOR can immediately be 
reached again. 
If you want to reset your IP Settings to default configuration you can choose the Button “Reset IP 
settings”.

**Network Configuration**
The network configuration has been saved:

<table>
<thead>
<tr>
<th align="right">Network Adapter: 1:</th>
<th>172.20.1.234</th>
</tr>
</thead>
<tbody>
<tr>
<td align="right">IP Address</td>
<td>172.20.1.234</td>
</tr>
<tr>
<td align="right">Network Mask</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td align="right">Gateway</td>
<td>172.20.1.1</td>
</tr>
<tr>
<td align="right">DNS Server 1</td>
<td>172.20.1.1</td>
</tr>
<tr>
<td align="right">DNS Server 2</td>
<td>8.8.8.8</td>
</tr>
<tr>
<td align="right">DNS Domain</td>
<td>c-mor-video.com</td>
</tr>
</tbody>
</table>

**Note:**

Please take your time when changing the IP address!
C-MOR will **immediately** continue working under the new IP address!
Uncontrolled activation/deactivation can lead to data loss and other failures!
3.1.3 Email Alarm Configuration

In the next field it is possible to enter your email address. All emails generated by C-MOR will be sent to the address defined. After having entered and saved an email address and relay host it is possible to send a test mail to check if the configuration is correct.

Since C-MOR Version 4.11 PL10, it is possible to enter more email addresses. You have just to separate them with a comma.

Besides this function there is the possibility to enter settings for the SMTP authentication. SMTP authentication covers the incoming mail server, user name and password that allow the sending of emails over the mail server of your provider. Many email providers use this technology in order to ensure that the sender of an email is authentic. Another setting which may be required by your provider is SSL encryption. Simply enable this feature by clicking on the checkbox. Make sure the select TCP-Port is set correctly. The standard port for not encrypted emails is 25 (SMTP). The standard port for SSL emails is 465.

3.1.4 Set Time

Here it is possible to adjust time and date. In order to make sure that the recordings of C-MOR have the correct time stamp it is necessary to set the exact time and date.
3.1.5 Configuration of Time Zone

Here the user is able to set the relevant time zone.

3.1.6 Time Server Configuration

Over this menu item the automated configuration of the time for C-MOR can be carried out. The supported time protocol is Network Time Protocol (NTP).

Please note:
When setting this option please make sure that the internet connection to the time server is always active. In case the time server cannot be reached or delivers wrong data, the time on C-MOR will not be correct.

Examples for time servers:

- ntp-1.vt.edu
- ntp-2.vt.edu
3.1.7 Activation and Deactivation of Recordings

Under this menu item recordings for the individual cameras can be activated and deactivated. This is the same function as on the respective camera configuration page.

3.1.8 Storage Time of Recordings

By setting the storage time it is defined after how many days C-MOR recordings will be automatically deleted. Deletions by C-MOR are carried out at night-time. The deletion includes all types of recordings, motion detection recordings, single frames and fast motion recordings. This settings can also be found on respective camera page.
3.1.9 Automated Deletion of Oldest Recordings

Irrespective of storage time settings, recordings can be automatically deleted. This enables C-MOR to continue recording instead of stopping when storage space is running low. Please be aware that automated deletion can lead to recordings being deleted too early and important video material getting lost.

![Automatic Deletion of oldest Recordings](image)

3.1.10 Change Camera Configuration

For each individual camera an own configuration page is available where parameters can be set. First you can visit the page “System Administration” where you will find “Camera Configuration”. Or you can click on the button the requested camera and then the link “Cam Configuration”.

![Camera Configuration](image)

Please find more information on camera configuration in chapter 3.2.
3.1.11 User Administration

Under this section it is possible to create and delete different users and create and change passwords. By clicking the respective button you will be forwarded to the user administration page where it is possible to enter the password.

![User Administration]

Please note:

Only administrators are able to delete recordings or change the settings of the C-MOR configuration.

3.1.12 Setup User Settings and Permissions

For every created user you can setup different configurations. As desired by the administrator, users can change the configuration of the System Administration or not.

The following parameters can be changed by the user, if a user is selected to configure the own profile:

- The user is able to change the own password
- The user is able to view the Quickstart page
- The user is able to view the Recordings page
- The user is able to view the System Status page
- The user is able to view the link to the camera
- The user is able to setup the stream mode
- The user is able to setup the speed of the Script-Stream Mode
- Video recordings and web interface are optimized for MacOS
- The video recordings tables are displayed with an extra preview button for tablet computers

Access to the single camera views and to the recordings can be restricted to single users. Different user can have access to different cameras and/or camera recordings. The live stream type, Java stream, MJPEG stream or script stream, can be set by the user self if permitted by the administrator.
In the **System Administration** menu under **User Camera Rights Administration and Live Stream Mode Settings** the administrator can setup the camera and stream permissions. Select the user to modify and click **User Configuration**.

![User Configuration](image)

**Manage User Settings**

Selected User: admin

- [ ] admin

**User Rights and Settings in the Web Interface**

- [ ] The user has the permission to change the own password
- [ ] The user has the permission to view the Quickstart page
- [ ] The user has the permission to view the Recordings page
- [ ] The user has the permission to view the Systemstatus page
- [ ] The link to the camera will be viewed to the user
- [ ] The user has the permission to set up the stream mode and the video playback format self
- [ ] Video recordings and web interface are optimized for MacOS
- [ ] The video recordings selection tables are displayed optimized for tablet computers

**Live Stream Speed in Script-Stream Mode**

Delay in seconds in Script-Stream live view: [ ] Seconds
The lower part of the User Configuration page:

Further you can set up the live stream Speed, the camera rights and the stream type for the chosen user.

Select the cameras that can be accessed by the user. If a camera is completely locked for the user, the access to the recordings is locked, too.

If the user should have access to the live view of the camera but not to the recordings, disable the mark in Permit Recording Access at the relevant camera.
3.1.13 FTP Server Configuration

By the use of the so-called File Transfer Protocol (FTP) recordings can be automatically copied to a FTP server. A FTP server can be a desktop PC with Windows operating system and FTP server software. By the help of FTP long-term storage or tape backup can be carried out.

Besides easy FTP server storage, C-MOR can also delete recordings after the copy process.

Use the “Recordings” menu to manually upload recordings to the FTP Server.
3.1.14 Language

The C-MOR application is available in German and English. By using this menu item the standard language can be set, which will then be used automatically as soon as you log into C-MOR. Alternatively it is possible to choose the language by clicking on the country flags on the top right edge in the menu.

If you want to temporarily change the language you can go to the upper right side of the Start Page. Here you will find the flags of the supported languages. Choose one of the flags to choose the language you prefer.

3.1.15 Start Page Configuration

Here you have the option between different stream sizes to choose.
3.1.16 Remote Access

With the C-MOR remote access it is possible to access C-MOR without dynamic DNS. This function is required if dynamic DNS can’t be used or if it’s not possible to configure port forwarding on the Internet router where the C-MOR is connected. There may be many reasons that the remote access from C-MOR is required and this is just another, easy option to access C-MOR over Internet.

The remote access is implemented through a server in C-MORs (za-internets) data center. The access requires a monthly fee. Please find more info in the C-MOR web, www.c-mor.com.

The configuration for the remote access can be found in the “System Administration” configuration page of C-MOR video surveillance.

The following data are required to set up remote access:

Server: The server name which connects to your C-MOR
Username: The username for the remote access, cmorremote<XXXXX>
Password: The password for the remote access

The data above, as well as the TCP-IP port are assigned by C-MOR and can’t be changed. The TCP-IP port will be assigned automatically and read over Internet. Customers receive the data above by email. The remote access address is a combination of the server name and the port. If the server name e.g. is “remote.c-mor.com” and the port “10001”, the web address is http://remote.c-mor.com:10001.

Additional it is possible to select whether the remote access is done via SSL (HTTPS) encryption. If SSL is enabled, the web address is https://remote.c-mor.com:10001 instead http://remote.c-mor.com:10001.
Enter the data for the remote access and click “Save Configuration”. Alternatively SSL (HTTPS) encryption can be selected:

The saved configuration is displayed after clicking “Save Configuration”:
Please notice that the remote access is not enabled yet. Please click on “Activate Remote Access” to enable it:

If the data was entered correctly, the remote access is now active and the function can be tested by calling the address http://remote.c-mor.com:10001. The password prompt from your C-MOR will appear.

Notice!

If you can’t log in as expected, it might be possible the wrong port is specified in web address. In this case you try to log into the wrong C-MOR and the password will not work. If no port number is displayed in the configuration the server, username or password has an error. Please verify the data in this case.

Please notice also, that the remote access data can be used on one C-MOR only and does not work on more than one device at the same time.

Please call the remote access configuration again to verify the data:

To get remote access via the Internet to your C-MOR, you must first register a paid subscription. This registration is available at www.c-mor.com.
Click on “Deactivate Remote Access” if you want to disable the remote access:

The Remote Access has been deactivated!

<table>
<thead>
<tr>
<th>Activate Remote Access</th>
<th>Configure Remote Access</th>
</tr>
</thead>
</table>

Start Page

3.1.16.1 Remote Access Limitations

C-MOR remote access only enables users to access the C-MOR self. The direct access to connected IP cameras is not possible since the remote access is limited to one TCP-IP port. Each direct camera access (the camera web interface) requires an extra TCP-IP port. C-MOR offers extended remote access configurations to access also the cameras. Please contact C-MOR directly if this is required.
3.1.17 Stacking function - interconnecting several C-MOR units

By "stacking" in the technical area, the interconnection of individual, standalone units is understood to be a common, central management unit. The C-MOR Stacking is an interconnection of the configuration level. A separate, physical separate network connection is necessary only for large stacking configurations.

The stacking function of C-MOR allows the interconnection of up to 6 C-MOR units over one single management interface. This stacking works with virtually installed C-MOR video surveillance systems, too.

3.1.17.1 Stacking configuration of the C-MOR Master

First install the stacking master software update prior configuring C-MOR stacking. The master functionality is available as a separate update. After the successful installation the C-MOR Stacking configuration shows up in the “System Administration” menu:

Additional C-MOR units are entered and activated in this configuration menu. Up to 5 other devices are configurable. In the fields for the IP addresses or DNS names, enter the additional C-MOR devices and set the hook for "Active". Optionally set if the individual units are opened in new tabs or windows in a web browser.

Important:

The C-MOR units must be available over network or Internet.
After clicking "Save configuration" all active units are availability on top of the existing menu bar.

<table>
<thead>
<tr>
<th>Stack Unit</th>
<th>IP address/DNS name</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 2</td>
<td>172.20.1.88</td>
<td>[x]</td>
</tr>
<tr>
<td>Unit 3</td>
<td>172.20.1.77</td>
<td>[x]</td>
</tr>
<tr>
<td>Unit 4</td>
<td>172.20.1.77</td>
<td>[x]</td>
</tr>
<tr>
<td>Unit 5</td>
<td>192.168.6.56</td>
<td>[x]</td>
</tr>
<tr>
<td>Unit 6</td>
<td>17.20.1.211</td>
<td>[x]</td>
</tr>
</tbody>
</table>

If individual units should be removed from the stacking, so only mark the unit not "Active" and the respective unit is removed after saving the new configuration.

### 3.1.17.2 Stacking configuration of the C-MOR Slaves

Condition for the stacking feature is that on all the slaves the master C-MOR with login and password are the same. This must be applied to the respective slave unit. The settings are made in the "System Administration". The slave configuration is available in any C-MOR without additional module installation.
3.1.17.3 Stacking Live View function

After the stacking feature is configured and enabled in the user interface, the additional buttons appear at the top. With these buttons, "Unit 1-6", the connected C-MOR is reached. The currently active unit is color coded and the live view is displayed in the active window. Up to 90 cameras are easily accessible with this function over this central administration.

View of the central administration with the buttons to the other units:

View of the "Unit 4" after switching from the "Master Unit":

All units can be accessed via an IP address or domain name. The credentials must be entered only once. This allows users to manage individual C-MORs comfortable and convenient.
The stacking master function is not part of the standard delivery of C-MOR. Separate software modules need to be installed for all master devices separately and must be licensed and appointed.

Please note the following limitations of the stacking capability:

User must be created on each C-MOR unit with the same name and password. The user IDs are not synchronized between master and slave. After a single configuration no other changes for the operation must be observed. Users, for example, will have access only for "Unit 1", but not for "Unit 2".

3.1.18 System Restart

In case of unexpected problems, using this menu item you can restart C-MOR.

3.1.19 System Shutdown

In case you have to switch off C-MOR due to administrative work, please proceed under System Shutdown.
3.1.20 Software- and Camera Updates

The software of C-MOR is constantly being expanded and improved. Known issues have been fixed and the update will be provided to customers via the internet.

About updating functions can C-MOR simply be brought up to date via internet. Here are two functions: Software Update and the Camera Update.

3.1.20.1 Software Updates

This menu offers you the opportunity to update your software version up to date. First you have to deactivate all of your cameras. Therefore you will find two possibilities. First you can go to the menu “System Administration”. There is a function called:
Or you go directly to “Software Updates”. There is also a button which deactivates all of your activated cameras just with one click.

![C-MOR Updater]

Please de-activate all cameras prior starting the update procedure!
Some updates only can be installed when all cameras are stopped.

All cameras are activated. Please de-activate all cameras to proceed with the update!

**Deactivate all cameras**

Please fill out this form to list the available updates.

- **Username:** 
- **Password:** 
- **Server name:** update.c-mor-video.com
- **Directory:** /updates/v4/c-mor-v4.12

Updates are installed without a proxy!

**List available updates**

If you have deactivated all cameras, you can download the newest updates of C-MOR.

**Important!**

C-MOR needs free access to the internet to download and install the updates. For this, C-MOR supports the use of a web proxy or HTTP. Before you update your software you have to check in the “System Administration” the proxy settings are correct. Please make sure which update you import. Depending on the update a specific update sequence must be observed. When the installation has failed, this can lead to failure of C-MOR.

If you have started the software updates, so the update data will be requested from the web interface of C-MOR. Now you have to insert your username and your password from your datasheet (C-MOR Subscription) the name of the server and the directory are given from the system. More information about the updates and functions you can receive from the Support Forum where you have to be registered: [http://www.c-mor.com/video-surveillance/forum/](http://www.c-mor.com/video-surveillance/forum/)
After you click on the button “List available updates”, then a list of updates will appear. If there are no updates available, you will be redirected to the following page:

Available C-MOR updates, c-mor-v4, Version 4.1203:

<table>
<thead>
<tr>
<th>ID</th>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No updates for this C-MOR version were found. Update aborted!

But if there are updates available you will redirected on following page:

Available C-MOR updates, c-mor-v4, Version 4.1203:

<table>
<thead>
<tr>
<th>ID</th>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.1204</td>
<td>Update to Version 4.12PL04</td>
</tr>
<tr>
<td>2</td>
<td>4.1204</td>
<td>Update to Version 4.12PL04</td>
</tr>
<tr>
<td>3</td>
<td>4.1204</td>
<td>Update to Version 4.12PL04</td>
</tr>
</tbody>
</table>

Updates found: 3

The download and installation of the updates may take some minutes time. Do not interrupt the installation process once it was started!

**Software Update Disclaimer**

1. Limitation of Liability. NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT OR OTHERWISE, C-MOR WILL IN NO EVENT BE LIABLE WITH RESPECT TO ANY SUBJECT MATTER UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL, CONTRACTUAL OR EQUITABLE THEORY FOR: (I) ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND WHETHER OR NOT ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES; OR (II) DAMAGES FOR LOST PROFITS OR LOST DATA; OR (III) COST OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES. NOTWITHSTANDING ANYTHING IN THIS AGREEMENT TO THE CONTRARY OR THE FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITATION OF LIABILITY OR LIMITED REMEDY, C-MOR’S ENTIRE AGGREGATE LIABILITY ARISING FROM OR RELATING TO THIS AGREEMENT OR THE SUBJECT MATTER HEREOF, UNDER ANY LEGAL THEORY, WHETHER IN CONTRACT, TORT, INDUSTRY OR OTHERWISE, SHALL BE LIMITED TO THE AMOUNTS RECEIVED BY C-MOR UNDER THIS AGREEMENT WITH RESPECT TO THE PARTICULAR TRANSACTION GIVING RISE TO THE CLAIM REDUCED BY 1/24 OF THE PRICE PAID BY RESELLER FOR EACH MONTH SUCH APPLICABLE END USER HAS HAD THE PRODUCT.

2. C-MOR does not warrant that the use or operation of this product will be error free, nor does it warrant that any data stored on the product will remain accessible or uncorrupted. To protect against accidental data loss, back up your data frequently to multiple types of storage media.

Software updates are improvements and extensions, but not fundamentally new software. By installing the update, the warranty of this system is not renewed or extended. Please note that software updates can affect the system performance.

Accept Terms and Conditions for software update and Disclaimer

Download and install updates now

To install the updates first you have to accept the disclaimer, just put a check mark in the box provided.
After that you can click on the button “Download and install updates now” to start the updates. All affected files are downloaded and installed now. This process may take several minutes to complete. If the update was successful, it is indicated in the following website:

Depending on the type of update C-MOR must be restarted. Whether this is necessary is specified with the update instructions in the C-MOR web, or forum.

Once the update is complete, with or without restart, you have to activate your cameras in the “System Administration” again. Thus, the update process is finished.

Note:
This functions just activates that cameras, which were already active before the update.
3.1.20.2 Camera Update

C-MOR continuously recorded new cameras. If your camera model may not be listed in C-MOR, maybe a camera-update will help you. With a camera update the latest camera database is loaded via the internet.

C-MOR Updates installation

Do not stop the installation and wait until it shows the installation has finished.

1. 94 Update camera types 2015-06-03 added more Tevis IP Cameras
2. 94 Update camera version file

Number of installed updates: 2

The camera updates have been installed!

Start Page
3.1.21 License Upgrade

You can upgrade each C-MOR up to 15 cameras, but you must remember that the processor performance will be affected. The built-in processors are designed in each case for the different C-MOR models.

In order to perform a license upgrade, you will get from us the following information: user name, password, and a license key.

As like the software update, C-MOR needs at this point unrestricted access to the Internet.

3.1.22 Backups

C-MOR offers different options to manage camera settings. These options are:

- Download and save camera settings on a local computer (PC/Mac)
- Restore camera settings from a local computer
- Transfer camera settings between cameras
- Delete restored (uploaded) camera settings

C-MOR generates automatically up to 5 backup sets per camera. These backups are always generated on saving the camera settings. The oldest set is automatically deleted when the 6th backup set is generated. C-MOR will hold always a maximum of 5 backup sets for each camera.
3.1.22.1 Backup Management

The menu for the backup management can be found on the page “System Administration”:

A click on the button “Backups” opens the Backup Management page:

The Backup Management page exists of 2 parts. The first part lists the automatically generated backups of each camera. Each backup can be downloaded by clicking the "Download" button. The second part includes the function to upload backups manually. Such backups maybe were transferred from another C-MOR.
3.1.22.2 Restore Camera Backups

Existing camera backups on C-MOR can be restored into any camera settings. If a camera backup from another system needs to be restored it must be uploaded first. Please verify on the page “backup.pml” if the desired backup exists. Upload if it does not exist. Use the function “Upload Camera Backup” to load a local backup on C-MOR:

The function to restore a backup into a camera is located in the camera settings menu in the top area directly beneath the PTZ settings:

![Backup Selection Menu]

The restore function selects automatically the first available backup. Be aware and do not click “Load Backup Data” if the selected backup is not the one you want to restore. Simply leave the page without saving if you have loaded the backup in error. Click into the backup drop down menu to get a full list of all available backups with name of the camera and the date and the time:

![Backup List]

Click on “Load Backup Data” to restore the data from the backup you want to restore. You have now the option to optimize the settings. Click on the button “Save Configuration” to store the restored data permanently.

If the desired Backup-Data is not in this list, you can click on the button “Backups” to upload your desired backup.

Notice:

Please notice that the camera backup does not include PTZ settings!
3.1.23 Stream-Type

For each user the display method of the Livestream can be selected. This Setting is significant for the usage over Internet or the local network, or which browser you use. In addition it is not always possible to use Java.

To use the desired Stream-Type, the Administrator can setup the Settings in the System Administration or the user self, if the user selects the System Administration page. The administrator can change this setting for each user as described in this manual.

If the process was successful the following Information should appear:

Live view mode for user admin set to Script-Stream.

With the Button “Start Page” you will be redirected to the Live View on the Start Page.

To swap short-term to another Stream-Type you can use the dropdown Menu on Start Page to choose the desired Mode.
3.1.23.1 Java Mode in Live View

If you have JAVA-Mode enabled you can choose a list of different symbols to call more Features. To view this list, simply move the mouse, e.g. on the Start Page, over the Live image from the camera. Now you have the following choices:

- Restore the default Live View
- Zoom out the current Live Image
- Zoom in the current Live Image
- Direction control for zoomed Live Image
- Displays information about the current Live Image
- Weblink to the C-MOR Video Homepage
3.2 Camera Configuration

3.2.1 General Description of Configuration Options

In order to configure a camera the following settings can be carried out:

- Define description of the camera’s location
- Activate / deactivate recordings
- Define storage time of recordings
- Define camera network data
- Configuration of camera type (Axis, Mobotix, Panasonic, Sony, etc.)
- Threshold for motion detection
  This function increases or decreases the sensitivity threshold to activate motion detection.

- Fast Motion Permanent Recording
  Besides motion detection it is possible to create a permanent recording. This mode generates a movie with images that are recorded in the given interval.
  This interval shows when a picture is taken. If you want a real-time recording, set for example the interval to “1 second”. This means that every second a new image is recorded.
• **Recording length of time-lapse recordings**
  This parameter defines the length in time after a new recording will be started for time-lapse recordings. If set to Hourly each hour a new recording will be generated.

• **Enable JPEG images in motion detection mode**
  In motion detection mode the recording is in MPEG format. This feature enables JPEG images to be generated as well. These images can be easily saved as a ZIP archive.

• **Enable JPEG images in scheduled recording mode**
  In scheduled recording mode the recording is in MPEG format. This feature enables JPEG images to be generated as well. These images can be easily saved as ZIP archive.

• **Scheduled recording mode - JPEG image intervals**
  When the feature generating JPEG images is enabled, this function sets the time interval between when each JPEG image is generated.

• **Number of images Pre-Recording**
  In motion or event detection mode, sets the number of frames recorded pre-event.

• **Number of images after Recordings**
  In motion or event detection mode, sets the number of frames recorded post-event.

• **Frames per second (fps) in motion detection mode**
  This defines the number of images per second during the recording with motion detection. Please select this parameter carefully. The interval can be set between 1 frame every 3 seconds up to 25 frames per second. You must be careful how high the maximum number of frames per second can be supplied by the camera. If the camera can supply up to 5 frames per second, then C-MOR isn’t able to record in a higher interval.
  Please keep in mind that a too high number of frames with a very high resolution can overload the system.

• **Rotation of Image**
  The cam can be installed at an angle of 0, 90, 180 or 270 degrees and this function allows the orientation of the viewed image to be rotated for normal viewing. A 180 degrees recording makes e.g. sense in case the cam is installed on the ceiling down sided.

• **Maximum Time of recording for Motion Detection**
  Sets a limit to how long recording takes place in Motion or Event Detection mode irrespective of whether the event that triggered the recording still exists or not.
• **Recording Mode**

The recording mode switches between motion detection and permanent recording (not time-lapse). When the permanent recording mode is activated, motion is no longer detected and not individually recorded (no more alarming is possible!). The duration of the recordings have the length which is set for motion detection.

• **Display Frame around changed Pixels**

This parameter defines whether a frame will be displayed around changed pixels. This is very helpful in case the threshold for the motion detection for the cam image is defined.

![Motion detection with frame](image1)

• **Display the Number of changing Pixels**

This feature shows the number of changing pixels in the top right corner of the video. This parameter is very useful when optimizing motion detection parameters.

![Motion detection with number of changed pixels](image2)

• **Display Text with time and date in cam image**

Feature for the activation and deactivation of the display of time and date in the cam image.

• **Automatic email alarm during Motion Detection**

Feature for the activation and deactivation of the email alarm in case motion has been detected by the cam. A plain text email will be sent (excluding image or movie attachment).
- **Email address for alarm email**
  This is the email address alarm mails are sent to.
  
  **Please note:** in case of a lot of motion and many recordings that are effected during motion detection your mailbox might reach its storage limit very fast and cannot receive emails anymore!

- **Attach Motion Detection recordings to alarm email**
  This feature enables video images to be attached to the event email alert.

- **Mobile device compatible Email attachments**
  Enable this feature if email attachments are sent to a mobile device.

- **Direct Cam Link**
  Network Cams might be linked directly over C-MOR. This setting is needed when network cameras are not located at the same location and are only accessible behind a router through the internet.

- **Text on left side in cam picture**
  This optional text will show up in the left lower corner of the camera picture. If this field is empty no text will be shown.

- **Show picture text in double size**
  The text in the camera picture can be shown in double size. This is useful for big pictures or special usage of the pictures.

- **Web camera picture quality**
  This value defines the video quality in percent for the data transfer of the camera picture to C-MOR. The default value is 50%. Changing this parameter may cause a high system load which can cause system failures.

- **JPEG image quality**
  This setting defines the quality of the JPEG images stored on C-MOR. The default value is 100% - highest quality.

- **Time between two events**
  Time in seconds without motion after a new motion movie is recorded.

- **Automatic camera image quality (bitrate)**
  This feature automatically adjusts the quality of the image transferred from the video camera to C-MOR. A value of 2 represents the highest image quality and requires the most storage capacity. Higher values reduce data storage capacity requirements by decreasing the image quality.
- **Manual bitrate for recordings**
  This feature manually sets the quality of the image transferred from the video camera to C-MOR manually. A value of 9999999 represents the highest image quality and requires the most storage capacity and bandwidth. Lower values reduce data storage capacity requirements by decreasing the image quality. This value should not set lower than 200000. This value is only active if the automatic value above is switched off (value 0).

- **Minimum number of pictures with changes for Motion Detection**
  The number of pictures with changes to detect motion. The value 1 is capable in the most cases. This means only one picture is compared to detect motion.

- **Sudden light intensity**
  This feature defines the percentage of the total video image area that has to experience a sudden light intensity change before triggering a recording event.

- **Number of ignored Lightswitch Frames**
  The number of frames in sudden light indicates how many camera frames should be ignored in serial not triggering motion detection. This value is ignored if sudden light intensity is set to 0%.

- **Noise**
  Noise in the camera picture can lead to erroneous motion detection. With this parameter failures in motion detection are reduced.

- **Deinterlacing**
  Enable this setting if using video cameras with deinterlacing.

- **Number of Frames per Second in Live view**
  This setting configures the fps rate in live view mode. The higher the fps rate the higher the internet bandwidth requirement. This setting does not affect the fps rate in motion/event or permanent recording mode.
• **Time-controlled recordings**
  Setting of hour and day per week when recordings have to be carried out. This applies e.g. when recordings should only be carried out during nighttime at a store.

**Time controlled recordings**

The selected hours 0-23 display, when the recording on the individual weekdays takes place according to the selection:

<table>
<thead>
<tr>
<th>Time (Hour)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
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<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holidays</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Monday</td>
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<td>Thursday</td>
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<tr>
<td>Sunday</td>
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</tr>
</tbody>
</table>

- **Save Time Recording**
- **Unselect all**
- **Select all**

- **Time Table Email Alarm Camera 1**
- **Load Time Table**

• **Time-controlled motion detection**
  Definition of hour and day per week motion detection should be carried out.

• **Time-controlled alarm emails**
  Define weekdays and hours in which alarm emails are sent.
• **Transfer of timescale**
  Every timescale, even if time-controlled motion detection or time-controlled alarm emails is able to transfer to another timescale. Therefore you have to choose a timescale and commit your selection with “Load Time Table”:

  ![Load Time Table]

If you want for example your camera 3 with the same settings like your camera 1, so you have first go to the configure site for your cam 3.
With help of the drop-down menu you can choose the timescale you want. For example choose the “Time Table Motion Detection Camera 1”:

![Dropdown Menu]

Now you have to confirm your selection by clicking in “Load Time Table”, you can see that the settings are transferred:

**Recording by motion detecting and time**

The selected hours 0-23 display, when the recording by motion detection on the individual weekdays takes place according to the selection:

| Time (Hour) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|-------------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Holidays    |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Monday      |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Tuesday     |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Wednesday   |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Thursday    |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Friday      |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Saturday    |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Sunday      |   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

![Time Table](image)

Now you have to click on the button “Save Motion Detected Time Recording” to save it:
• **Note to the time tables**
  Since version 4.01 of C-MOR, you have additional switching functions for “Motion Detection” and “Email Alarm”. On the C-MOR interface you see them top right if the user is logged in as administrator:

With these buttons the administrator is able to deactivate “Motion Detection” and “Email Alarm”. So the Time Tables for motion detection or email alarm can also be switched off. These buttons you also have on the iPhone or mobile interface of C-MOR.

• **Holidays Configuration**

  C-MOR offers the option to define holidays. Holidays are days which need a special time table configuration. All time tables have a row holidays. These holidays are configured here. C-MOR will not use the weekday configuration if the current day is a defined holiday.

![Holidays Configuration](image)

• **Configuration of camera event for network alarms**

  Recordings by C-MOR can be triggered by the use of external switches (special accessories) that report events over your network. Here it is necessary to use an IP switch, which is sending messages to C-MOR via the so-called syslog service. This will then start a recording for the selected camera.

• **Image mask for the definition of the area of motion detection**

  In case motion should not be detected within the complete camera image the area where motion should be detected (white area) can be defined by a black & white mask. The defined black area will not trigger motion detection. The size of the image mask has to be identical to the size of the camera image.
- **Link to the camera direct access**
  The button “Cam Administration” leads you to the web interface of the selected camera.

**General information about motion detection:**

Motion detection carried out by C-MOR is based on differences in the respective camera image and not due to conventional motion detectors (exception: special accessory external switch). Motion detection can also be effected by changes in light.

### 3.2.2 Camera Activation

Under “Start/Stop of Recordings” it is possible to control the activities of the individual cameras and start or stop recordings. In case the recording of a camera is deactivated there will not be any saved video recordings of this camera. Depending on the camera configuration in case of an activated camera, permanent recordings and/or motion detection is saved in individual files.
You can activate or deactivate the camera directly in the respective camera configuration:

![Camera Configuration Camera 1](image)

**3.2.3 Camera Configuration, Integration of Existing Camera**

Under **Adjust Camera Configuration** you can define further settings for the individual cameras.

![Camera Type Configuration](image)
Under **Network Data** the following data is displayed: the current IP address of the camera, the TCP port, the user name and the password C-MOR is accessing the camera with.

<table>
<thead>
<tr>
<th>IP Address/DNS Name</th>
<th>172.20.1.137</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP IP Port</td>
<td>80</td>
</tr>
<tr>
<td>User Name</td>
<td>admin</td>
</tr>
<tr>
<td>Password</td>
<td>********</td>
</tr>
</tbody>
</table>

When you change any data in this section you also have to change it on the individual camera with its own configuration program or over the web interface of the camera. Otherwise C-MOR is no longer able to access the camera and thus no longer able to record.

In case you already have a camera that is supported by C-MOR, you can integrate it by entering the IP address, the port, the user name and the password of your camera. The same settings have to be done for the camera itself.

Under “Configuration Camera Type” you can select the camera type that is most suitable for your camera. C-MOR currently supports all cameras with the standard JPG and MJPG. A complete list of supported IP-Cameras including many more models can be viewed under [http://www.c-mor.com](http://www.c-mor.com). In case you cannot find your model in the list you can request the support of your model either by email or telephone, we will then give you all the details you need.

In case your camera is not listed but supported it can easily be connected under the item “Manual Path” in C-MOR. Just enter the directory of the URL of the camera’s live image or the camera’s MJPEG live stream, such as e.g.

```
,axis-cgi/jpg/image.cgi?resolution=640x480
```

After that single camera options such as image rotation or maximum recording time can be defined. The description of each setting can be found next to the respective option in the table.

On the same configuration page you are able to plan time-controlled recordings. Please click time and day when you would like to start the video surveillance.
Please carry out the settings in the table below for “Time Controlled Recording during Motion Detection” just as described above.

The third table defines the times in which alarm emails are sent. The configuration works again as described above. Please configure in the long configuration table if time based alarm emails are sent in general and if recordings are attached to emails. The email address is configured in this section as well.

Recordings can be started by external events (door switches, ultrasonic motion detectors, bell switches and many more). This requires a network switch, like e.g. Barionet or other Syslog-IP switches, to send a system message to C-MOR. The message has to be in accordance with the line defined in this section, which will then trigger the recording.
3.2.4 Image Mask for the Definition of the Areas for Motion Detection

C-MOR reacts on motion in the complete camera image. This might require some kind of limitation so that not every kind of motion leads to motion detection. An example of this would be cars driving by or pedestrians at the property lines. By using this function a black & white mask can be loaded. By the help of this mask C-MOR will only carry out motion detection in the respective white areas.

The black & white mask can be created as follows: please start with creating a white image of the size of your camera resolution. Please add black layers to those areas where no motion detection should be effected. Then save the image as a JPG file and upload it to C-MOR. All black areas will then be ignored in terms of motion detection.

The following pages describe the steps to create such a mask with your Windows computer.

Call the camera settings page for the camera you want to add a motion detection mask. Scroll down to the section “Picture Mask”. This function will be used later after the mask was drawn.

The creation of a mask works simple and quick and can be done by using the Windows Paint Program.
Please proceed as follows to create a mask:

Save the image of the camera for which you want to create a mask on your computer. Do this by calling the “Quickstart” page. Make sure the stream type on top right is set to “Script-Stream” and select the live view with the highest resolution for the selected camera. In this example we create a mask for camera 1 and the resolution is 640x480 pixels. A new window will open.

The new opened window: Move your mouse pointer over the live view and click the right mouse button. Select “Save picture as…” from the opened context menu.

Please determine in the opened window a filename, such as "livepicture.jpg" and remember the position where the picture has been saved on the hard disk. In the next step the image has to be loaded into Windows Paint Program.
The menu of the Windows Paint can be opened on the top left by a button.

Click on "Open". The following window allows opening the file, which just has been saved.

The picture of the camera is now loaded in Windows Paint.
The loaded picture will now be re-painted with black and white areas. White areas are for motion detection areas. Black areas are not motion-sensitive. It is ideal to paint the black areas first. Please note, that on the top of the menu you lodged the colors "Color 1" and "Color 2" as black color. The second color is the fill color, for example circle, rectangle etc., which is activated as "solid color" at "Fill".

Paint the black areas first (no motion detection):

Now please change both colours to white.
Afterwards the white areas will be painted (area for motion detection):

If the mask is ready, it will be saved locally on the computer. Please open the menu left on top. Then click on "Save as" and choose "JPEG picture".
Please choose a file name. Be careful! If the name would not be changed, the existing name will be maintained and the saved live picture will be overwritten.

Please remember where you saved the mask.

Next, the mask has to be uploaded on C-MOR. Please switch to the camera configuration menu of the camera for which to limit the motion detection. In the example this is "Camera 1". Please select the “System Administration” page on your C-MOR web. Scroll down to "Camera Configuration" and select “Camera 1”.

The menu for the camera management opens now. Scroll down to area “Picture Mask for…”:
The just created mask has to be chosen and has to be uploaded. Click on "Browse" and select the just created mask in the window that has opened:

![Choose File to Upload]

Click on "load File" after the file has been selected:

![Picture Mask for the Definition of the Picture area in which Motion Detection is active]

The file is uploaded to C-MOR. Click now “Activate Mask” to enable the created motion detection mask:

![The mask has been uploaded. Activate the mask to enable it.]

The mask is now activated! Click on “Camera Configuration” to assure the mask is active and is defined for the right motion area:
The created mask is shown beside the live picture. To the far right the mask is shown in front of the live viewing.

**Picture Mask for the Definition of the Picture area in which Motion Detection is active**

If you would like to correct the mask, simply change the created mask again in Windows Paint on your computer and upload it like you did before.

**Important!** The black area will also be completely recorded! Only motion will not be recognized. Please refer to your camera manual if you would like to use a privacy mask, a function where the complete area already can be broadcasted blacked out or contact C-MOR directly under [www.c-mor.com](http://www.c-mor.com).

Please note that a mask needs to have the same width and height like the camera image. If the mask has other dimensions, it leads to failure.
3.2.5 The C-MOR PTZ Control

Behind the PTZ-Control (PTZ: Pan/Tilt/Zoom) stand the Motion of moveable cameras directly with the C-MOR Web Interface.

A great advantage of the PTZ-Control is the consistent interface for all camera types. Also no software has to be installed on the PC to manage the cameras. Furthermore the PTZ control works with the iPhone, iPod or iPad and other mobile devices with internet function.

For the configuration of the PTZ-Cameras there is a configuration page in the C-MOR web interface that can be reached from the camera configuration page.
In the PTZ configuration page all known PTZ cameras are available. In the section **Load pre-defined camera data** the settings for the PTZ camera can be loaded.

Simply select the right camera in drop-down menu.
If the PTZ configuration of the selected camera was loaded, the second step follows for the configuration of the PTZ control: The setup of the login data for the camera and the setting for the camera rotation.

If the PTZ configuration of the selected camera was loaded, the second step follows for the configuration of the PTZ control: The setup of the login data for the camera and the setting for the camera rotation.

If the camera was fixed on a ceiling, which has the effect, that the camera is upside down, the PTZ control has to be configured with the rotation of 180 degrees. Otherwise the PTZ commands will navigate to the wrong direction.

Of course the loaded PTZ commands can be adjusted. If a camera has a configurable pan or tilt setting, so the command can be adjusted with your own requirements.

Next to the control commands for pan, tilt and zoom, moveable cameras usually own the function to set up pre-defined positions. These positions can be stored in the PTZ menu, too. The pre-defined positions commands you will find in the C-MOR web forum or by asking the C-MOR support team.

<table>
<thead>
<tr>
<th>PTZ command</th>
<th>Camera command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>/cgr/bin/operator/ptzset?move=left</td>
</tr>
<tr>
<td>Right</td>
<td>/cgr/bin/operator/ptzset?move=right</td>
</tr>
<tr>
<td>Up</td>
<td>/cgr/bin/operator/ptzset?move=up</td>
</tr>
<tr>
<td>Down</td>
<td>/cgr/bin/operator/ptzset?move=down</td>
</tr>
<tr>
<td>Zoom in</td>
<td>Not supported by camera</td>
</tr>
<tr>
<td>Zoom out</td>
<td>Not supported by camera</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PTZ command</th>
<th>Camera command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>/command/ptzcf?Relative=0401</td>
</tr>
<tr>
<td>Right</td>
<td>/command/ptzcf?Relative=0601</td>
</tr>
<tr>
<td>Up</td>
<td>/command/ptzcf?Relative=0801</td>
</tr>
<tr>
<td>Down</td>
<td>/command/ptzcf?Relative=0201</td>
</tr>
<tr>
<td>Zoom in</td>
<td>/command/ptzcf?Relative=1104</td>
</tr>
<tr>
<td>Zoom out</td>
<td>/command/ptzcf?Relative=1004</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preset Position</th>
<th>Camera command</th>
<th>Name/description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preset Position 1</td>
<td>/command/presetposition?PresetCall=1</td>
<td>StartPoint</td>
</tr>
<tr>
<td>Preset Position 2</td>
<td>/command/presetposition?PresetCall=2</td>
<td>Castle</td>
</tr>
<tr>
<td>Preset Position 3</td>
<td>/command/presetposition?PresetCall=3</td>
<td>Church Downtown</td>
</tr>
<tr>
<td>Preset Position 4</td>
<td>/command/presetposition?PresetCall=4</td>
<td>Gas Company</td>
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<tr>
<td>Preset Position 5</td>
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<tr>
<td>Preset Position 6</td>
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<tr>
<td>Preset Position 7</td>
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<tr>
<td>Preset Position 8</td>
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</tbody>
</table>
If the PTZ commands are configured, at least you have to activate the PTZ control over the camera Menu.

PTZ Configuration for Camera 1

PTZ function camera 1: disabled

Load pre-defined camera data

ABUS-SC TVIP21550 PT

CAMERA ORIENTATION

0 degrees
90 degrees
180 degrees
270 degrees

Access data for the camera (needs access to control the camera)

User name: admin
Password: ******
IP/Name: 172.20.1.76
TCP/IP Port: 80
3.2.6 Usage of the PTZ control

If the PTZ function is activated for a camera, the control icons will be shown on the camera web pages automatically.

The PTZ buttons are self-explanatory. These functions are pan from left to right, tilt from up and down and zoom in and out.

In the drop-down menu underneath the pan, tilt and zoom buttons you will find the menu for the pre-defined positions.
4 Legal Information

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