



CathexisVision CatMobile Guide

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While Cathexis has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit nor implied. Specifications are subject to change without notice.

1. Introduction

This document will guide the user through the setup and operation of the CatMobile app.

Note: although the various CathexisVision packages have limits on the number of simultaneous client connections, the Cathexis mobile app does **not** count towards the client connection limit.

A NOTE ON CAMERA CHANNELS

The CathexisVision software packages have **limits on camera channels**. A multi-sensor camera is physically a single device (camera) but it **requires a camera channel for each one of the internal cameras**. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathexisVision software, even though it is a single device. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

USEFUL LINKS

To view **tutorial videos** on CathexisVision setup, visit <https://cathexisvideo.com/resources/videos>

Find answers to Cathexis **Frequently Asked Questions**: <https://cathexis.crisp.help/en/?1557129162258>

2. Requirements

2.1 Operating System and Corresponding CathesisVision Software

This is a list of the different operating systems that CathesisVision runs on, along with the corresponding software versions, and updates, needed to have Mobile access to CathesisVision.

2.1.1 NetBSD 4.0 DSS

5041h software: Apply *remote_upgrade.tgz.html5_5041h_2.001_RC17.40*

5042d software: Apply *remote_upgrade.tgz.html5_5042d_2.001_RC17.40*

50430a, and later, software: Apply *remote_upgrade.html5.40* **and** Enable "CatMobile Access" in the General setup.

2.1.2 Windows NVR

5042d software: Extract *html5_5042d_2.001_RC17_win32.zip* in the NVR installation directory.

5043a, and later, software: Enable "CatMobile Access" in the General setup.

2.1.3 Linux NVR

5043a, and later, software: Enable "CatMobile Access" in the General setup.

2.2 Supported Desktop Browsers

Minimum requirements are HTML5 with WebM video streaming support. Navigating to the CatMobile web app will indicate the level of browser support.

- Firefox 4, or later
- Internet Explorer 9, or later (with WebM installed)
- Chrome, Minimum version 8.0

2.3 Supported Mobile Devices

- iOS 5, or later
- Android 2.3, or later, with OpenGL ES 2.0 support.

2.4 TCP Ports

HTTP:80

I/O Control: 33104 (CathesisVision 2016.2 and later)

3. Setup

3.1 Networking

3.1.1 Live, Review and PTZ

To access individual servers from outside of the LAN on which they are situated, the user needs to make some network changes. Specifically, the user will have to set up Port Forwarding on your external router, which will route connections to specific servers. This is because any network access outside of the LAN will come through an external router, which connects to the internet via a single IP address (which is either static or dynamic). To redirect the incoming connections to the correct unit, specific ports have to be associated with specific units.

This can be understood through the analogy of postal addresses. A block of flats represents a LAN, and the external IP address of this LAN is the street address of the block of flats. By setting up Port Forwarding, the user adds the address of individual units to the address.

By default, all HTTP connections go via port 80. When a user types IP address into the HTTP browser, the user will either be directed to the router through which that network accesses the internet, or the main HTTP server on that network.

As an example:

If the user has forwarded port 8181 to a unit with the IP address xxx.xxx.xxx.100, a public IP address of xxx.xxx.xxx.200, and the user has an HTTP server set up on that unit. Type the public IP into the browser, followed by :8181 [e.g. xxx.xxx.xxx.200:8181] the router will pass the connection straight through to the HTTP server on unit xxx.xxx.xxx.100.

3.1.2 I/O Control

To access the site's inputs and outputs from the CatMobile app on Android and iOS devices, Port Forwarding must be setup for port 33104, as both external and internal ports on the external router. This port forward must point to the Master unit on the site, which handles the site I/O control.

Note: For information on setting up Port Forwarding look to www.portforward.com

3.1.3 How to configure custom CatMobile http listening port

3.1.3.1 Windows

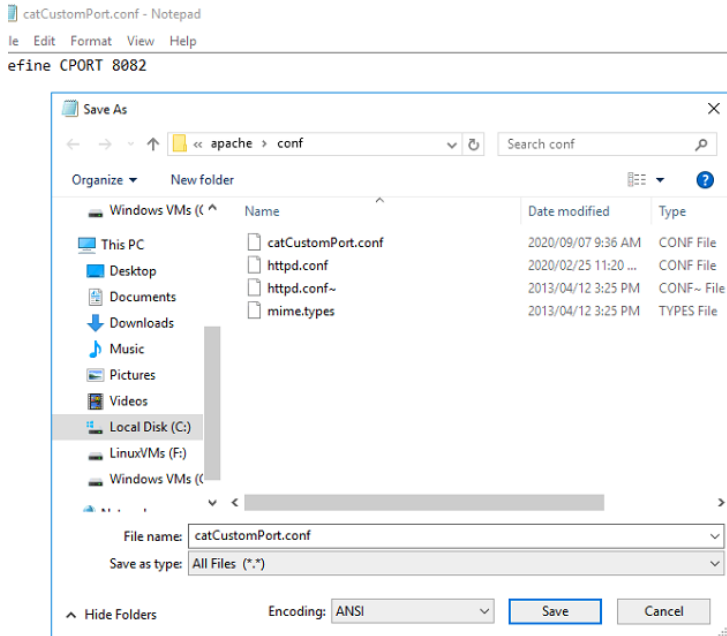
1. Create a file called "catCustomPort.conf" containing only "Define CPORT Port_number", where Port_number is the port desired for use.

Windows x64 path: c:\Program Files\CathesisVision Server\apache\conf\catCustomPort.conf

2. Open Notepad and define the custom port as per the example below:

Note: When saving the file in Notepad, change the “Save as Type” to “All files (*.*)” so no text extension is created for the saved file.

Do not use TCP port 8080 as this is internally used by the CathesisVision mobile service.



3. Restart the recording server for the http port change to be updated.

Alternatively, restart the CathesisVision HTML server manually by opening the web browser

- Visit <http://127.0.0.1:33101/control>
- Log in with CathesisVision admin credentials (default is admin admin)
- Stop and start nvr_htmlserver

3.1.3.2 Ubuntu

Create a file called “catCustomPort.conf” containing only “Define CPORT Port_number” where Port_number is the port desired for use.

Ubuntu path: /etc/apache2/catCustomPort.conf

Note: Create the file using an Ubuntu text editor like vi or Emacs.

Restart the recording server for the http port change to be updated.

Alternatively, restart the apache service:

- Open a terminal window in Ubuntu
- Type “sudo apache2ctl restart”

3.1.4 HTTPS Access

Here are the steps necessary to enable HTTPS access to the CatMobile.

Note: this only works on Windows machines.

3.1.4.1 Navigate to the \apache folder in the CathesisVision installation path

1. Create keys folder.
2. Copy the .key and .cer to the folder.

3.1.4.2 Navigate to \apache\conf folder in the CathesisVision installation path

1. Create a file (catCustomPort.conf) containing only Define CPORT 443 (where 443 is the port the user wishes to use).
2. Open httpd.conf.
3. Search for "ssl_module modules/mod_ssl.so"

Uncomment the line that says "LoadModule ssl_module modules/mod_ssl.so"

4. Search out "ProxyPassReverse", and add the following below it:

```
ServerName www.example.com
SSLEngine on
SSLCertificateFile keys/mycert.cert
SSLCertificateKeyFile keys/mycert.key
```

Note: "mycert" and www.example.com, above, must be replaced with the user's own names.

3.2 Enabling on Windows and Linux Units

Mobile access requires access to individual cameras. This means that the user needs to enable access on a server-by-server basis. To do so, follow these instructions:

3.2.1 Linux Packages

There are some packages which need installation, in order to get the mobile connection working, on Linux. **Note:** An internet connection is needed to install these packages.

3.2.1.1 Fedora

The packages needed are:

1. httpd
2. php
3. php-pecl-apc

Enter the command line of your unit, and as a superuser, type the following command:

```
yum install httpd php php-pecl-apc
```

3.2.1.2 Ubuntu 12.04

Note: This is only supported from CathesisVision 2014.3_RC7 (5043b3_RC7) or later.

Packages needed to use CatMobile connections:

1. php5
2. apache2
3. libapache2-mod-php5

Before installing the CathesisVision software, run the following command.

Note: If the CathesisVision software is already installed, the user will need to rerun the installation package. Do **not** uninstall, and reinstall.

```
sudo apt-get install php5 apache2 libapache2-mod-php5
```

3.2.1.3 Ubuntu 16.04

Note: This is only supported from CathesisVision 2017.2 or later.

Packages needed to use CatMobile connections:

1. php
2. apache2
3. libapache2-mod-php

Before installing the CathesisVision software run the following command.

Note: If the CathesisVision software is already installed, the user will need to rerun the installation package. Do not uninstall, and reinstall.

```
sudo apt-get install php apache2 libapache2-mod-php
```


3.2.1.4 Ubuntu 20.04

Note: this is only supported from CathesisVision 2021.1 or later.

Packages needed to use CatMobile connections:

1. php
2. apache2
3. libapache2-mod-php

Before installing the CathesisVision software, run the following command.

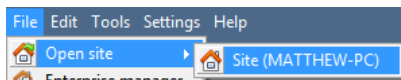
Note: If the CathesisVision software is already installed, the user will need to rerun the installation package. Do not uninstall, and reinstall.

```
sudo apt-get install php apache2 libapache2-mod-php
```

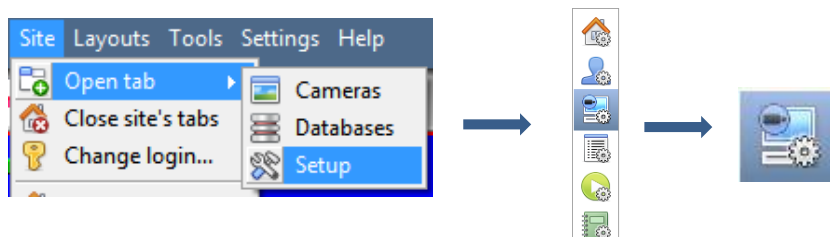
3.2.2 CathesisVision Interface Settings

These will be the same across distributions.

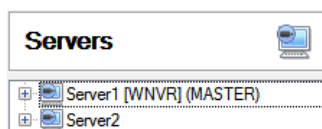
3.2.2.1 Click on File / Open Site / siteName



3.2.2.2 Site / Open Tab / Setup / Configure Servers



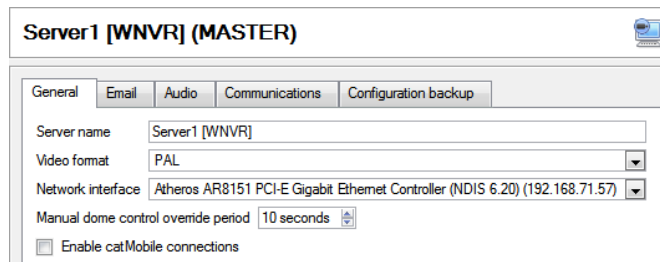
3.2.2.3 Select Individual Servers from the Servers Panel



There are two servers on this site [Server1, and Server2].

The user has to select each one and configure it to allow remote Mobile connections.

Once the user has selected the server, the options for this server will appear in the panel to the right, headed with the server's name.

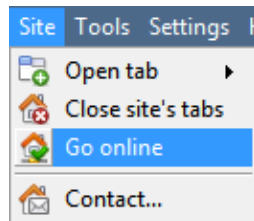


Under General check the box titled

Enable catMobile connections. Click



Enable catMobile connections



Note: This will close the software and restart the CathesisVision servers running on the unit. The user can run the software again which will start when all of the servers are up again.

Mobile access is now enabled for this particular server. Make sure to repeat these steps for each server whose cameras you want available for Mobile viewing.

3.3 On NetBSD Units

Upgrade DVR units to 5041g3/5042c3 or above.

Upgrade DVR units with new HTML 5 remote upgrade file.

3.4 On Browser

The core requirement needed to run CatMobile is HTML5. (E.g. the latest Mozilla Firefox.)

3.4.1 Firefox

Minimum version 4.0

3.4.2 Internet Explorer

Minimum version 9.0. (The user will need to have the WebM addition installed. If the user does not have it, IE will prompt the user to do so, and direct the user to a download location.)

3.4.3 Chrome

Minimum version 8.0

3.5 On Phone/Tablet

CatMobile¹ for iPhone, iPad, and iPod touch is available here on the Apple AppStore:



CatMobile² for Android is available on Google Play:



¹ Apple, the Apple logo, iPad, iPhone, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

² Android is a trademark of Google Inc. Google Play is a trademark of Google Inc.

4. Web Interface

The Cathexis desktop HTML interface uses that latest in HTML5 technology. To get to the server, type in the address unit to be accessed, followed by a colon and the port number of the specific unit to be accessed. For example: xx.xxx.x.xx:8181

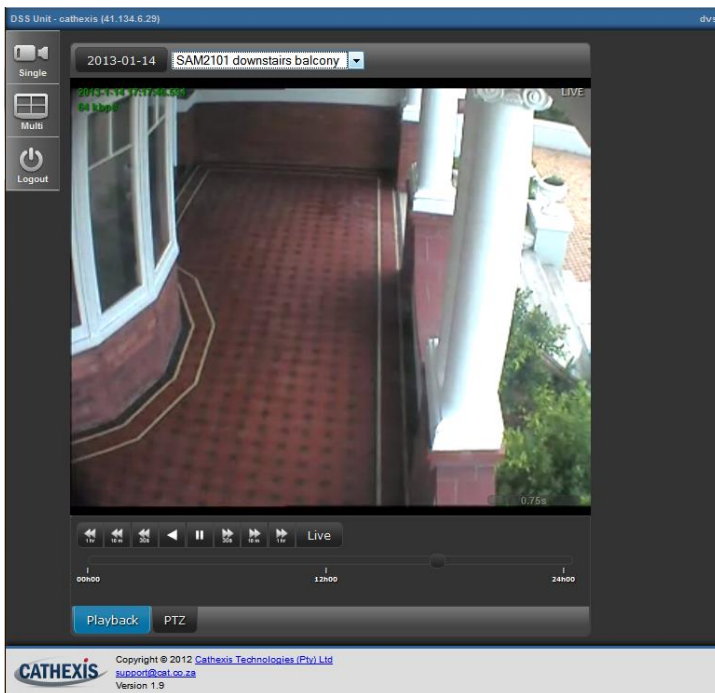
4.1 Log in Screen



Enter the Username, and password, for the relevant user. (This is the same as if the user were logging in to a regular site.)

Note: Users log into CatMobile onto individual servers, and not onto entire sites. Users therefore need to remember which servers contain the cameras they wish to view, and their corresponding IP Address and port number.

4.2 Graphical User Interface [GUI]



PTZ Gives you full PTZ control



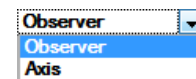
Sets the default view to a single camera.



Will set the view to a matrix of a possible 4 simultaneously viewed live cameras.



Will log the user out of the current session, and allow the user to log in with a different use account.



To choose a camera click the drop-down menu next to the date, and select one of the available cameras.



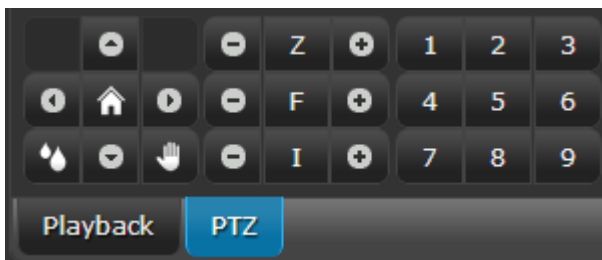
Clicking on playback will give the user playback controls.

Note: Hovering the mouse over any of the buttons will cause the name of the button to pop up.

4.2.1 Playback Tab

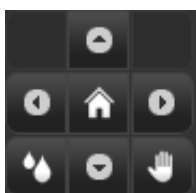
Controls	Timeline
<p>The Playback Tab is intuitive. When opening the camera, the user is presented with a symmetrical panel of buttons.</p>	<p>The timeline is presented in 24 hour time, and conveniently shows one day at a time, giving the user greater accuracy when drag-selecting a point in the timeline.</p>
<p>Allows the user to playback the video, either forwards or backwards at normal speed.</p>	<p>To select previous days, simply click the date in the top left [2013-01-12] and select the day from the drop down calendar.</p>
<p>The corresponding right facing arrows, allow the user to skip ahead, or backwards in 30 second, 10 minute, and 1 hour intervals.</p>	
<p>Will return the user to the live feed.</p>	

4.2.2 PTZ panel



When a camera has PTZ capabilities the PTZ tab will be clickable. Clicking on this tab will bring up the interface to the left.

The functions of this panel are expanded upon, below.

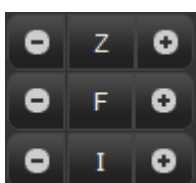


This icon is for PTZ cameras that have a wash function.

These PTZs usually also come with a wipe function:



This will take the user to the home position of the camera, and the 4 arrows that surround it at the compass points allow the user to pan and tilt the camera.



Z Zoom



The third section of the PTZ panel, numbers 1-9 relate to specific PTZ presets that can be programmed via the main CathexisVision program.

5. Phone App Interfaces

5.1 Common Actions and Characteristics

There are a number of characteristics that are common across the two App platforms.

5.1.1 Login

When logging into either of the apps, the username must be entered in all lowercase letters. Uppercase letters for the password may be entered if needed.

5.1.2 Touch Actions

5.1.2.1 Multi view

When in the Video Wall View, tap and hold any of the camera images, to bring up the list of available cameras. Tap any of these cameras to access its feed.

5.1.2.2 Cycle through cameras

In any camera view swiping left/right across the feed image will change to the next available camera feed.

5.1.2.3 Pinch to zoom

Pinching inwards/outwards on the feed image will zoom in/out.

Note: on a PTZ camera this will do be a regular zoom; on a camera without a zoom lens, this will simply be a digital zoom.

5.1.3 PTZ Control

The user may control the full range of PTZ motion via the apps using two finger swipes:

Pan Two finger swipe horizontal.

Tilt Two finger swipe vertical.

Zoom Pinch two fingers inwards, to zoom in; pinch them outward, to zoom out.

5.1.4 Review Icons

In the top-right corner of the feed panel, there will be a small icon which will indicate the current status of the viewing pane.

Green TV sign  = **Live view mode**

Red Film Roll sign  = **Review mode**

Note: the user may only review footage in single pane mode.


5.2 CatMobile for Android App

5.2.1 Getting Started

The first time the user opens the CatMobile, the following message will be shown: “No connections. Please add a connection.” To access a server, the user will need to add a connection:

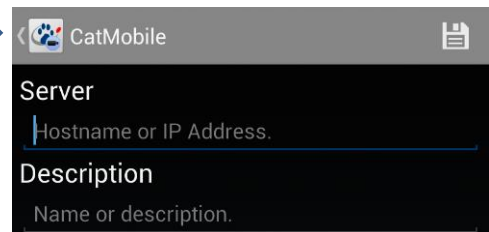
5.2.1.1 Adding a Connection




 To add a connection to a server, tap this button.

This will bring up the addition screen. Enter the address and other details.

Use a description that makes the server and its contents identifiable by name.




Note: Remember to include the port number of the relevant unit.


 Tap this icon to save the server.


5.2.1.2 Delete, or Edit, a Connection

To delete or edit any added connection, tap and hold on the connection name in the list. This will bring up the respective editing conditions.



 is for addition

 is for editing

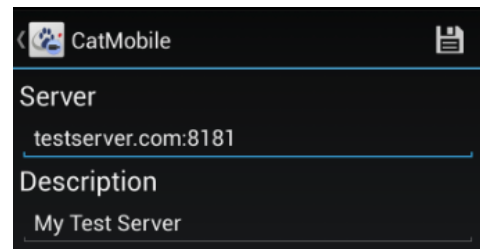
 is for deletion

 Tap this when finished.

5.2.1.3 Logging In

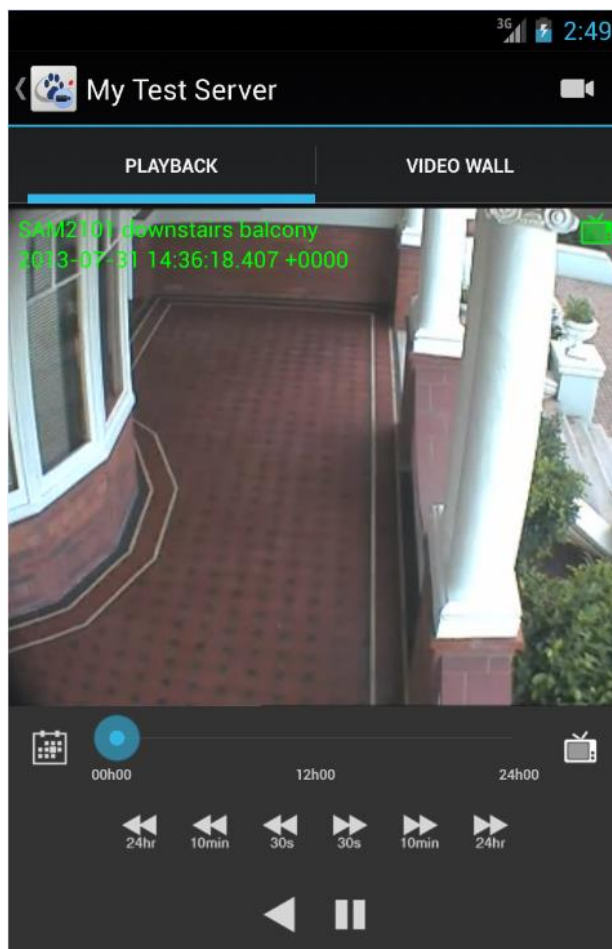
Tap the server to be accessed, and enter a relevant username and password.


Note: Username must be all lowercase. Password may contain uppercase letters.




5.2.2 Graphical User Interface


5.2.2.1 Single Panel

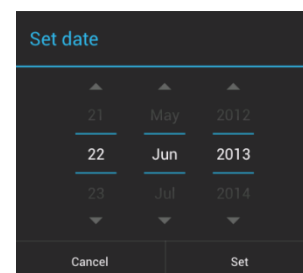


 To **Select a Camera**, tap on this icon. Select the camera from the list that appears.


To **Review**, simply tap on one of the playback arrows. The time below the arrows indicate how far back or forward it will jump.


 To play backwards in normal speed, tap this icon.

 To play forwards in normal speed, tap this icon.

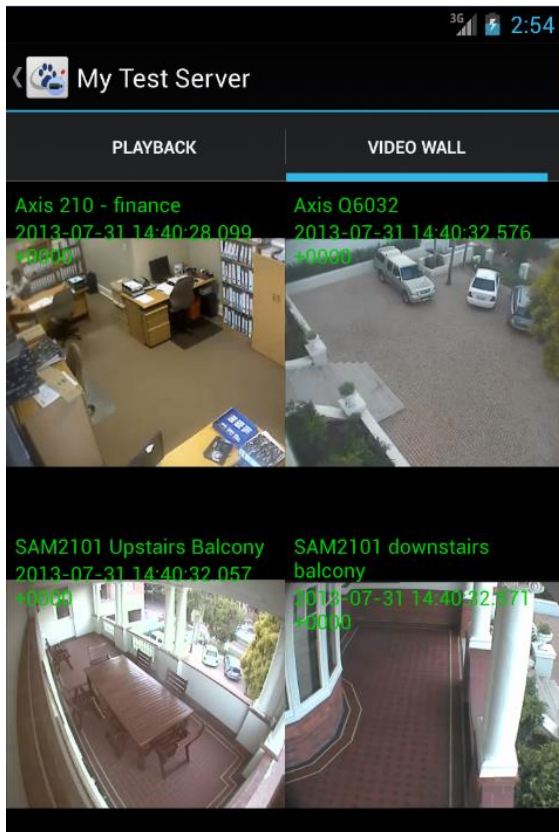


The timeline will show a 24-hour period.

 To **Set a Date** to review, tap on this icon. This will bring up the calendar, from which the user can select the date to be reviewed.

 To **return to the servers list**, tap the icon in the top left of the screen.

5.2.2.2 Video Wall



The user is able to view up to four video feeds simultaneously, with the video wall option.

To **Select a Camera**, simply tap and hold on any of the camera panes. This will bring up a list of available cameras. Tap on the one to view.



To return to the servers list, tap the icon in the top left of the screen.

Note: On earlier model smartphones, there may be insufficient memory to allow full functionality on all 4 video feeds. This may be evidenced by only a single camera being available on the 4th video feed, without the ability to change it.

5.3 CatMobile for iPhone, iPad, and iPod Touch

This section details the interface, and procedures, of these apps.

5.3.1 Getting Started

5.3.1.1 Adding a Connection



To add a server, tap this button.



This will bring up the addition screen. Enter in the address and other details. Use a description that makes the server, and its contents identifiable by name.



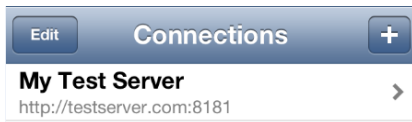
Note: The HTTPS, and Port, sections will be obscured by the keyboard. Remember to scroll down if you want to enter this information.

5.3.1.2 Delete, or Edit, a Connection

Tap and hold the connection name.

- This will bring up this icon. Tap this icon to delete the connection.
- To edit the connection, tap on this icon.

5.3.1.3 Logging in



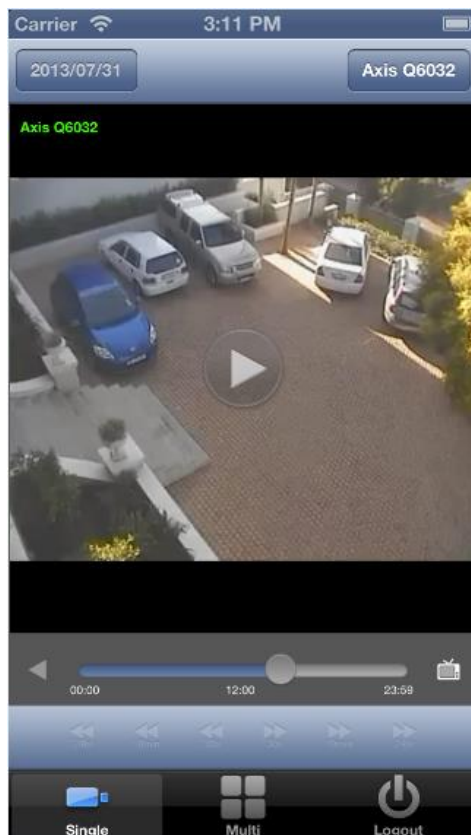
Tap the server to access, and enter a relevant username and password.

Tap **Login** to access the unit.

Note: Username must be all lowercase. Password may contain uppercase letters.

5.4.1 GUI

5.4.1.1 Single Panel (and Review)



To select a specific camera from within the Live viewing interface, tap the button above the camera image, which will bear the name of whichever camera is currently being viewed. For example:

This will bring up a menu of all available live cameras.

Note: Cameras that have no recordings will not be present in the review list, even if they are currently streaming live video.

Review

To review footage, tap on the timeline, or one of the arrow icons. Choose them based on the amount of time the user wants to skip forwards/backwards.

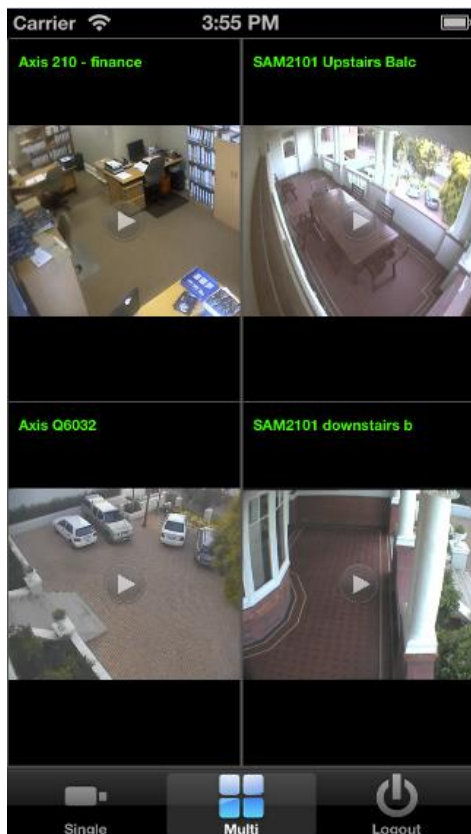


The timeline will show a 24-hour period.



If the user wants to access recordings on other days, select the date icon in the top left of the video panel. Select the date from the drop-down calendar.

5.4.1.2 Video Wall



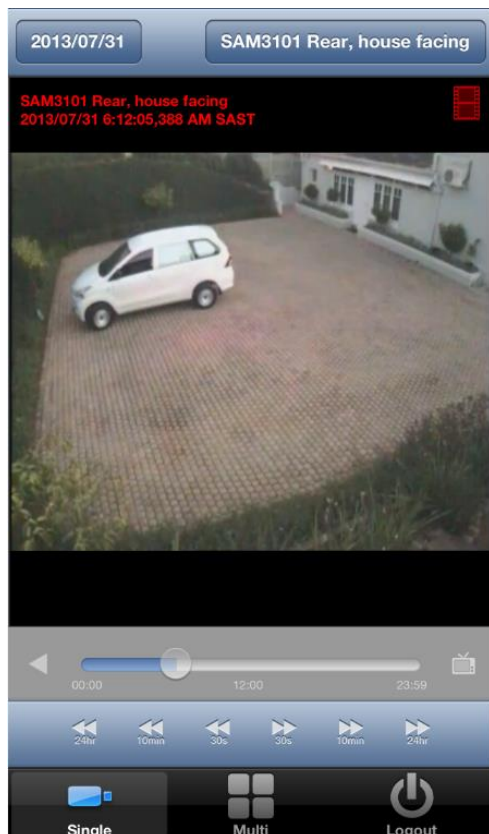
To bring up a video wall of four cameras, tap on this icon.

To **Select a Camera**, simply tap and hold on any of the camera panes. This will bring up a list of available cameras. Tap on the one to view.



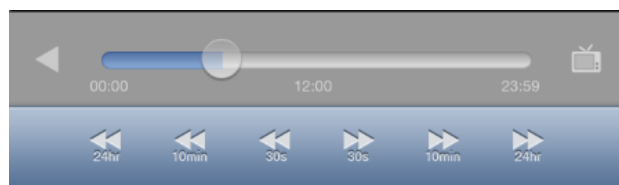
To **return to the servers list**, tap this icon.

5.4.1.3 Review



To **Review** simply tap on one of the playback arrows. The time below the arrows indicate how far back/forward the time will jump.

In the review panel, there is now a timeline, as well as back and forward buttons:



The timeline will show a 24-hour period.

If the user wants to access recordings on other days select the

date icon in the top left of the video panel.



Then select the date from the drop-down calendar.

6. Conclusion

Please remember that this document was designed to deal specifically with the CatMobile aspect of the software. For further information about the CathesisVision software please consult the main manual (<http://cathesisvideo.com/>).

For support, please contact support@cat.co.za