

# Mobile Player



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## USER MANUAL

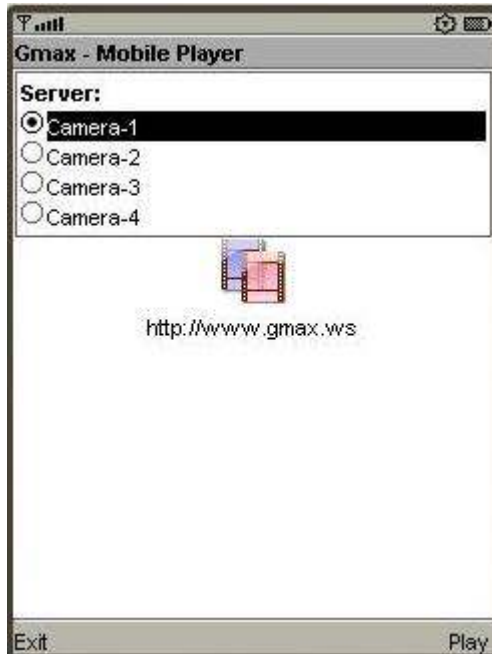
This player has been designed to play **HTTP** video **M-JPEG/JPEG** and audio **G.711 64 Kb/sec** streams from almost all **IP cameras** vendors on wireless devices like mobile phones and PDA's Java enabled. The player is small, compact and fast designed to work on almost all devices. It is a complete solution offering support for **HTTP Basic** and **Digest** access authentication, **PTZ** (Pan-Tilt-Zoom) controls, electronic messages (**MMS**, **SMS**, **SMTP** e-mails), **FTP** upload and digital zoom. The player is developed under the Sun Java(TM)® Wireless Toolkit 2.5.2 for CLDC framework.

List of cameras and devices tested with this player:

CAMERA VENDORS	DEVICE VENDORS
Axis	Nokia
VIVOTEK	Sony Ericsson
Edimax	LG
FlexWATCH	HP
PANASONIC	MIO
CANON	Samsung
MOBOTIX	RIM BlackBerry

Requirements: **MIDP 2.0, CLDC 1.0**

## 1. THE MAIN SCREEN



**Main screen**

The main screen allows you to select one of the four cameras. The parameters for each camera are stored into the **JAD** file and loaded automatically when you start to play the stream. The fields **Username** and **Password** are loaded from the **JAD** file parameters only for commercial licenses.

Example:

**Camera-URL1:** http://server/mjpg/video.mjpg  
**Username1:** demo  
**Password1:** demo

For testing purposes you can use the following URL's:

### **LIVE VIDEO M-JPEG STREAMS:**

http://87.101.127.24/axis-cgi/mjpg/video.cgi?resolution=QCIF  
http://194.218.96.93/axis-cgi/mjpg/video.cgi?resolution=320x240  
http://194.218.96.93/axis-cgi/mjpg/video.cgi?resolution=160x120  
http://130.236.85.241/axis-cgi/mjpg/video.cgi?camera=&resolution=160x120

### **JPEG STILL IMAGES:**

http://194.218.96.93/axis-cgi/jpg/image.cgi?resolution=320x240  
  
http://demo.iimg.com/video.cgi?sourceid=10&cameranumber=1&frames=1&fps=0  
Username: demo  
Password: demo

### **M-JPEG and PTZ:**

http://81.92.254.3/axis-cgi/mjpg/video.cgi?resolution=176x144

More cameras can be found at <http://www.123cam.com/>

## 2. THE KEYBOARD



Keyboard layout

In order to extend the number of available keys three set of keys are predefined, the **CONTROL**, **PTZ** and the **EXTENDED PTZ** key sets. To switch between the key sets you have to use the **Key-Fire**. The current key set is indicated by a small icon displayed on the bottom left corner of the screen as follow:

- **CONTROL (CTRL)** key set
- **PTZ (PTZ)** key set.
- **EXTENDED PTZ (ALT)** key set.

The **CTRL** key set is used for special operations which are hardcoded.



Control





PTZ



Extended PTZ

### 3. THE PTZ COMMANDS


The  **PTZ** and  **EXTENDED PTZ** key sets are reserved for **PTZ** commands. The association between keys and **PTZ** commands can be created by editing the **JAD** file. Also you have to set a valid **URL** for **PTZ** commands on **PTZ-Path** parameter. For **PTZ-Path** parameter you can specify a relative or an absolute **URL**:

Examples:

```
(relative): PTZ-Path1: /axis-cgi/com/ptz.cgi?  
(absolute): PTZ-Path1: http://server:port/axis-cgi/com/ptz.cgi?
```

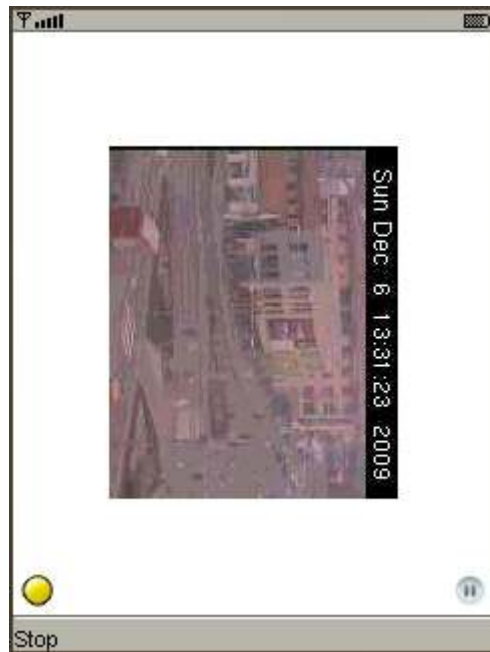
The examples are for Axis® cameras. Please check your camera manual for details regarding the **PTZ** commands.

#### 4. THE IMAGE OPERATIONS

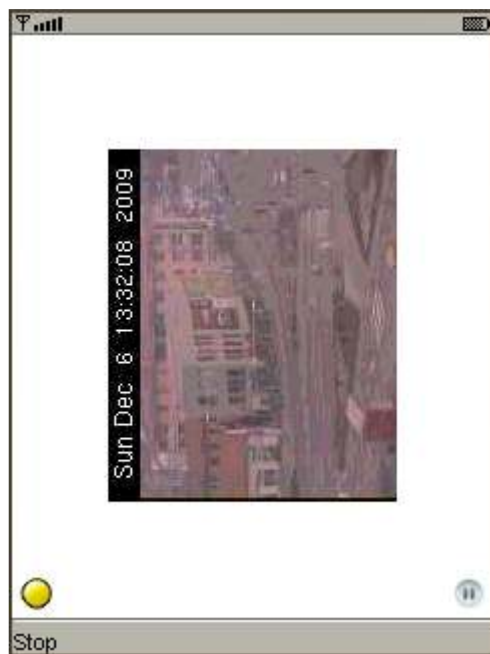
The  **CTRL-Key-0** is used to rotate the image **90°** clockwise each time you press the key. See the images below.



**Normal**



**Rotate 90°**



**Rotate 270°**



**Rotate 180°**

The following keys:

● **CTRL-Key-4** [⏮ zoom out]

● **CTRL-Key-5** [reset]

● **CTRL-Key-6** [⏭ zoom in]

are used to change the image size between **25%** and **400%**. Using ● **CTRL-KeyLeft**, **CTRL-KeyRight**, **CTRL-KeyUp** and **CTRL-KeyDown** you may move the image to the left, right, up and bottom direction.



**Zoom out**



**Zoom in**





**Move right-bottom**



**Move left-bottom**



**Freeze image**

Using  **CTRL-Key-8** you can **freeze / unfreeze** the image. While the image is freeze you may still use others operations like rotate, zoom, move, etc. When an image is freeze the following icon  occur on the screen.



## 5. THE AUDIO MANAGER

Some **Axis**® cameras and servers offer a **G.711  $\mu$ -law 64 Kb/sec** audio stream over the **HTTP**. Because a live audio streaming with acceptable quality is difficult to obtain due to the limitations in **MMAPI** of the **J2ME** framework a new scenario for sound has been designed. The existing audio stream can be recorded in real time in an “in memory” buffer that can be played like an ordinary audio file. The quality of sound is the same as in the original stream. The length of the recorded buffer can be no longer than 1 minutes due to the memory size constraints. The audio manager operates using the 🟡 **CTRL-Key-7**, **CTRL-KeyStar**, **CTRL-Key-9** and **CTRL-KeyPound** keys as is described below. A small icon on the right bottom corner of the screen shows the present status of the manager.

You must set the **Audio-Path** parameter on the **JAD** file according to your camera specifications in order to enable the audio manager. You can specify an absolute or relative URL for this parameter.

Examples:

```
(relative): Audio-Path1: /axis-cgi/audio/receive.cgi?camera=1  
(absolute): Audio-Path1: http://server:port/axis/cgi/audio/receive.cgi?camera=1
```

If your camera does not support sound or if you want to disable the audio manager just put an empty audio path into the **JAD** file.

Example:

**Audio-Path:**



**Pause state**



**Play state**



**Recording state**

### ⏸ Pause

The pause state is the main state of the player. From this state you can start to play or to do new records.

### ▶ Play

Play the last recorded buffer. The player starts using the **CTRL-Key-9** key and stops at the end of the media or when you stop them using **CTRL-KeyPound** key.

### 🔴 Record

A new “in memory” record is started. The record could not be longer than 1 minutes. The recorder starts using the **CTRL-Key-7** key and stops after 1 minutes or when the user stop them using the **CTRL-KeyStar** key.



## 6. THE WIRELESS MESSAGES




**Send message**


The player is able to send alert messages or multimedia messages containing snapshots from your camera to a predefined address.

It support three kind of messages:

1. **MMS**
2. **SMS**
3. **SMTP** e-mails.

Whenever you want to send messages you can do that using the **CTRL**  keys as follow:

1. **CTRL-Key-1** for **MMS** messages.
2. **CTRL-Key-2** for **SMS** messages.
3. **CTRL-Key-3** for **SMTP** e-mails.

Before sending a new message a dialog window offers you the possibilities to change the default properties or to cancel the operation. When a message is about to send you will see on the main screen this  icon.

After the message was sent the icon is removed from the screen. Also if the message was successfully sent you will hear a short message beep. Before using messages you must configure the services by editing the following keys into the **JAD** file.

**MMS-Address:** destination number or an e-mail address.

**MMS-Subject:** the subject of the message

**SMS-Address:** destination number

**SMS-Text:** message text to send

**SMTP-Host:** name or address of **SMTP** server.

**SMTP-MailFrom:** the e-mail address of the sender.

**SMTP-MailTo:** the e-mail address of the receiver.

**SMTP-Subject:** the subject of the message.

**LOGIN** credentials for **SMTP** authentication.


**SMTP-Authentication:** **Yes** (if your server require authentication.)

**SMTP-Username:** username

**SMTP-Password:** password

## 7. FTP UPLOAD



Using the embedded **FTP** client you can upload the snapshots from your camera directly on your servers using a **FTP** server connection. Use  **ALT-Key-0** in order to open the **FTP** client dialog window and do an upload. Before using the **FTP** client you have to set the following properties keys on the **JAD** file:



















**FTP-Host:** the **FTP** server name or address.

**FTP-Username:** username.

**FTP-Password:** password.

**FTP-Path:** path on the sever storage file system where the file will be uploaded.

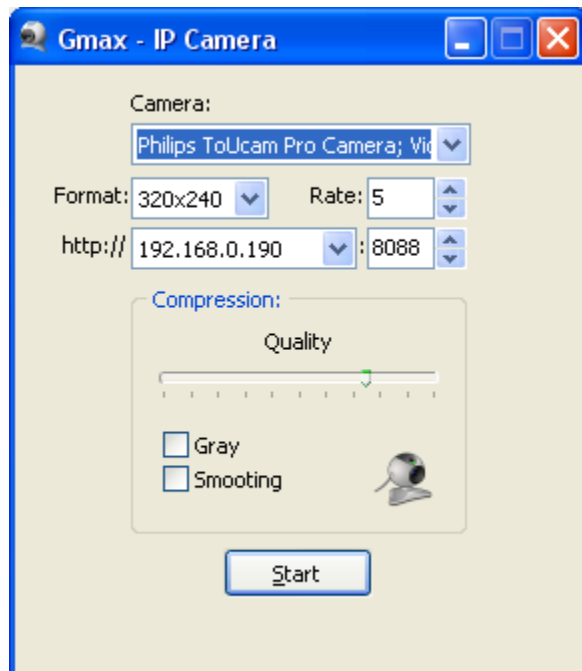
## HARDCODED COMMANDS

 <b>CTRL-Key-Left</b>	Move the image to the left
 <b>CTRL-Key-Right</b>	Move the image to the right
 <b>CTRL-Key-Up</b>	Move the image up
 <b>CTRL-Key-Down</b>	Move the image down
 <b>CTRL-Key-Fire</b>	Key set switch
 <b>CTRL-Key-0</b>	Rotate the image
 <b>CTRL-Key-1</b>	Send <b>MMS</b> messages
 <b>CTRL-Key-2</b>	Send <b>SMS</b> messages
 <b>CTRL-Key-3</b>	Send e-mail messages using a <b>SMTP</b> server.
 <b>CTRL-Key-4</b>	Zoom out the image
 <b>CTRL-Key-5</b>	Reset the image (no zoom, center aligned, portrait oriented)
 <b>CTRL-Key-6</b>	Zoom in the image
 <b>CTRL-Key-7</b>	Start audio recorder
 <b>CTRL-Key-8</b>	Freeze / Unfreeze the image
 <b>CTRL-Key-9</b>	Start audio player
 <b>CTRL-KeyStar</b>	Stop audio recorder
 <b>CTRL-KeyPound</b>	Stop audio player.
 <b>ALT-Key-0</b>	<b>FTP</b> upload

## 8. PARAMETERS

AltKey-0:  
AltKey-1: gotodevicepreset=1  
AltKey-2: gotodevicepreset=2  
AltKey-3: gotodevicepreset=3  
AltKey-4: gotodevicepreset=4  
AltKey-5: gotodevicepreset=5  
AltKey-6: gotodevicepreset=6  
AltKey-7: gotodevicepreset=7  
AltKey-8: gotodevicepreset=8  
AltKey-9: gotodevicepreset=9  
AltKey-Pound: rzoom=9999  
AltKey-Star: rzoom=-9999  
Audio-Path1:  
Audio-Path2:  
Audio-Path3:  
Audio-Path4:  
Camera-URL1: http://90.145.4.49:8080/axis-cgi/mjpg/video.cgi?camera=1&resolution=320x240  
Camera-URL2: http://129.22.128.85/axis-cgi/mjpg/video.cgi?camera=1&resolution=320x240  
Camera-URL3: http://81.92.254.3/axis-cgi/mjpg/video.cgi?resolution=352x288  
Camera-URL4: http://81.221.123.70/axis-cgi/mjpg/video.cgi?camera=1&resolution=352x288  
FTP-Host:  
FTP-Password:  
FTP-Path:  
FTP-Username:  
Key-0:  
Key-1: move=upleft  
Key-2: rtilt=5  
Key-3: move=upright  
Key-4: rpan=-5  
Key-5: move=home  
Key-6: rpan=5  
Key-7: move=downleft  
Key-8: rtilt=-5  
Key-9: move=downright  
Key-Down: move=down  
Key-Left: move=left  
Key-Pound: rzoom=1000  
Key-Right: move=right  
Key-Star: rzoom=-1000  
Key-Up: move=up  
License-Key: http://www.gmax.ws  
MIDlet-1: Gmax - Mobile Player,/player.png,gmax.Gmax  
MIDlet-Description: IP Cameras Viewer  
MIDlet-Info-URL: http://www.gmax.ws  
MIDlet-Jar-Size: 39442  
MIDlet-Jar-URL: Player.jar  
MIDlet-Name: Mobile Player  
MIDlet-Permissions: javax.microedition.io.Connector.http, javax.microedition.io.Connector.mms,  
javax.wireless.messaging.mms.send  
MIDlet-Vendor: Gmax  
MIDlet-Version: 11.0  
MMS-Address: +55000000  
MMS-Subject:  
MicroEdition-Configuration: CLDC-1.0  
MicroEdition-Profile: MIDP-2.0  
PTZ-Path1: /axis-cgi/com/ptz.cgi?  
PTZ-Path2: /axis-cgi/com/ptz.cgi?  
PTZ-Path3: /axis-cgi/com/ptz.cgi?  
PTZ-Path4: /axis-cgi/com/ptz.cgi?  
Password1:  
Password2:  
Password3:  
Password4:  
Rep-Clock: 200  
Rep-Delay: 500  
SMS-Address: +55000000  
SMS-Text:  
SMTP-Authentication: No  
SMTP-Host:  
SMTP-MailFrom:  
SMTP-MailTo:  
SMTP-Password:  
SMTP-Subject:  
SMTP-Username:  
Username1:  
Username2:  
Username3:  
Username4:

## 9. USING YOUR WEBCAM FOR MJPEG STREAMING



IP Camera is a simple application that allows you to use your webcam as MJPEG streaming server over the Intranet or Internet. How to use:

1. Download the binaries of the application from <http://www.gmax.ws/IPCamera.zip>
2. Unzip the application on a folder from your disk.
3. Plug-in your webcam and start the application. You should see a dialog like on the left figure
4. Select your camera, the video format, the capture rate and the compression properties. Also you have to set the network port. The IP address is not mandatory because the embedded server listen on any addresses.
5. Start the application by pushing the button. If no error occur the message **"OK."** should be displayed on the status

Bar. On error the message displayed is **"Cannot start the camera"**. In order to see the stream open a web browser and type the URL of your camera displayed on the dialog. In this example the URL is <http://192.168.0.190:8088/>. You have to use Mozilla Firefox, Opera or Google Chrome which are able to render MJPEG streams.

Using a network router you can also stream your camera over the Internet. You always have a public IP address assigned to you by your ISP. Your public address is displayed on the router status. If you are not sure you can also find your public IP using the following link <http://www.whatismyip.com/>. Unfortunately this address is not a fixed one, that is, your ISP can change this IP address from time to time so you have also to check periodically your public address. Also you can ask your ISP to assign you a static address.

You have to configure your network router to map the local network address and port to the public address and a public port. You can now access your camera from outside using the following URL: `http://<your public IP address>:<the public port>`

EXAMPLE: <http://24.32.1.5:8080/>