Argus - Remote Surveillance

version 4.0

User's guide

Contents

Overview

"Argus - Remote Surveillance" is a flexible and easy to use video surveillance and monitoring system. The most important parts of the system are the server application called **ARS Server** and the client application called **Argus RS.**
The server runs on a Windows based computer which has attached to it one or more video capture devices (video cameras), while the client software is installed on the mobile smart phone and displays in real time images captured by the video cameras.
The system includes advanced features such as motion detection, full time 7/24 surveillance (recording) and support for multiple cameras and multiple locations. We have designed the streaming algorithm such to obtain good frame rates even over narrow bandwidth Internet connections.
The system has applications in many sectors, for small business: supervising manufacturing process, monitoring commercial buildings, supervising offices. Also it can be used in home surveillance or for entertainment, if a TV tuner is used as capture device then TV channels can be watched on the phone[1].

System requirements

- Video capture device attached to the computer (web cam, digital camera, TV tuner, etc.)
- Personal computer that runs Windows XP or Windows 2000 operating system and which is connected to the Internet.
- Internet GPRS or 3G services activated on the phone.

1 no sound available

Quick start

Server setup (on PC)

- Make sure that the video capture device is connected and working.
- Run the setup program for the ARS Server.
- Start the ARS Server from the start menu: **Start -> Programs -> ARS Server**
- When started for the first time the server will request a password and the phone's IMEI number.
  The IMEI is used to identify your server in the system. The password does not allow unauthorized access to your server. Make sure you will set the same password on the client application (on the phone). These settings can be changed anytime using the **Settings** menu.
  Verify that the "Has access" check box has been checked for corresponding IMEI.
- Next you should see the image captured by the camera in the server preview window.

Client setup (on phone)

- At this point you should start the phone application ("Argus RS").
- When started for the first time it requests the password. The password must match the ones you have set on the server.
- After that the application will connect to the server and will display the images captured by the camera.

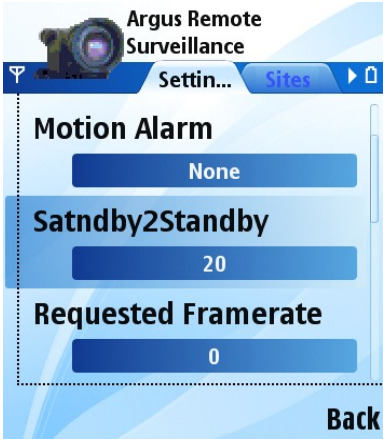
Motion Detection

Motion detection can be turned on while the system is connected. To do so you should select **Standby** menu item. This will send the application into the background. During standby the traffic over GPRS is minimum, the system can stay in this state for a long period of time. (This feature is useful when your service provider charges you on Internet traffic volume not on the time spent online.)

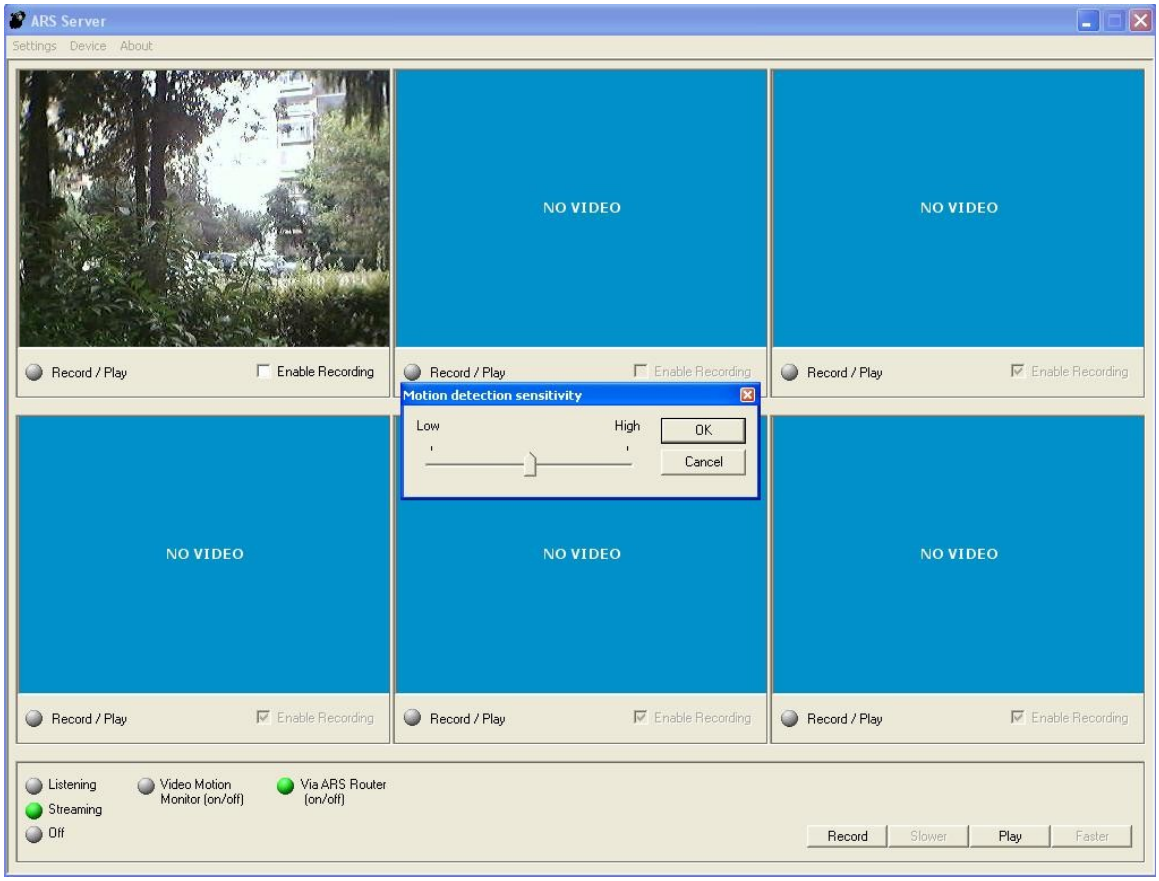
The system will exit standby mode either when motion is detected or when the application is activated and the **Exit Standby** menu is selected.

In the case when motion is detected the alarm tone will be played. The sound can be canceled by pressing the center of navigation key or navigation button. Alarm tone can be configured selecting the option **Settings->Motion Alarm**.

After a predefined "wakeup time" the system will go back to standby mode. The default value of "wakeup time" is 20 seconds and can be changed from: **Settings->Standby2Standby** on the phone.

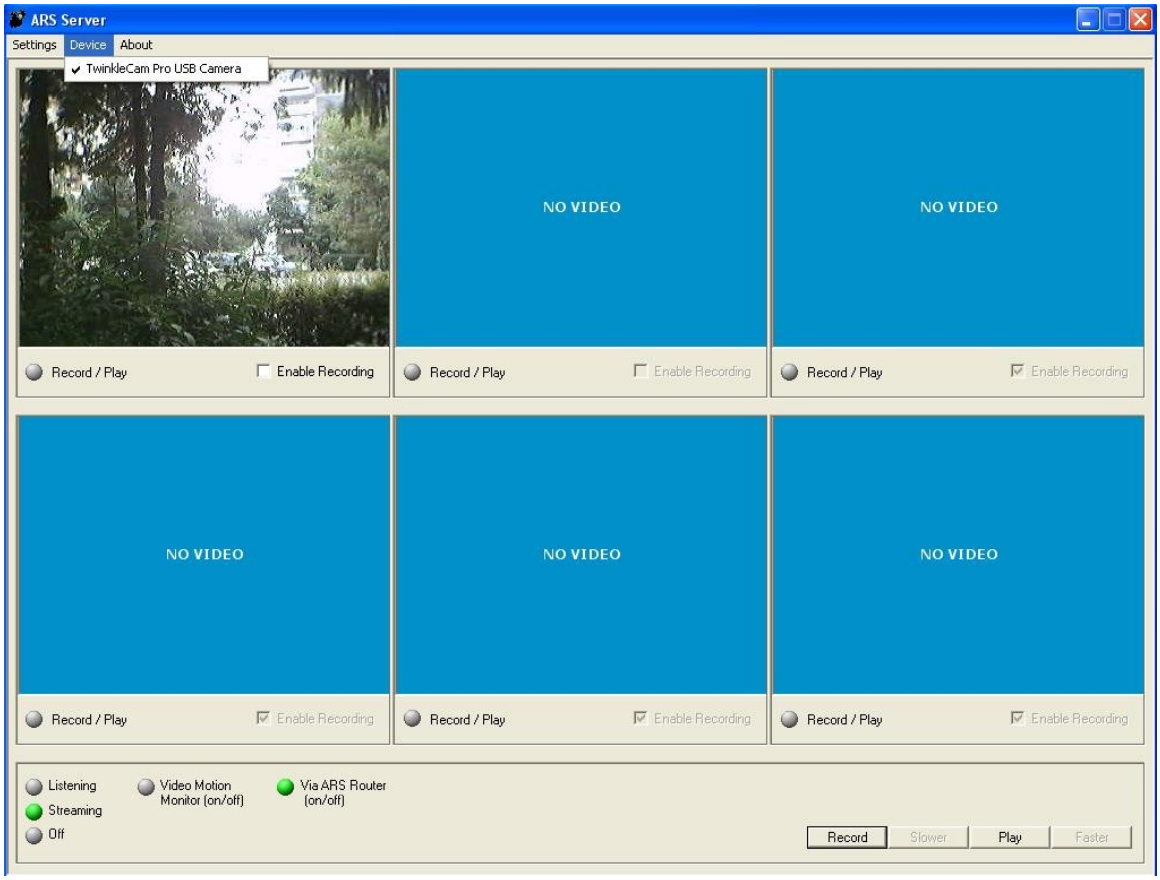


Motion detection sensibility can be adjusted from the **ARS Server** menu **Settings->Motion Detection.** Selecting high sensibility might generate false alarms.



Multiple Cameras

If you have more video devices connected to the computer the **ARS Server** will automatically discover and use them. A list of the video devices can be obtained selecting the **Device** menu from **ARS Server**.

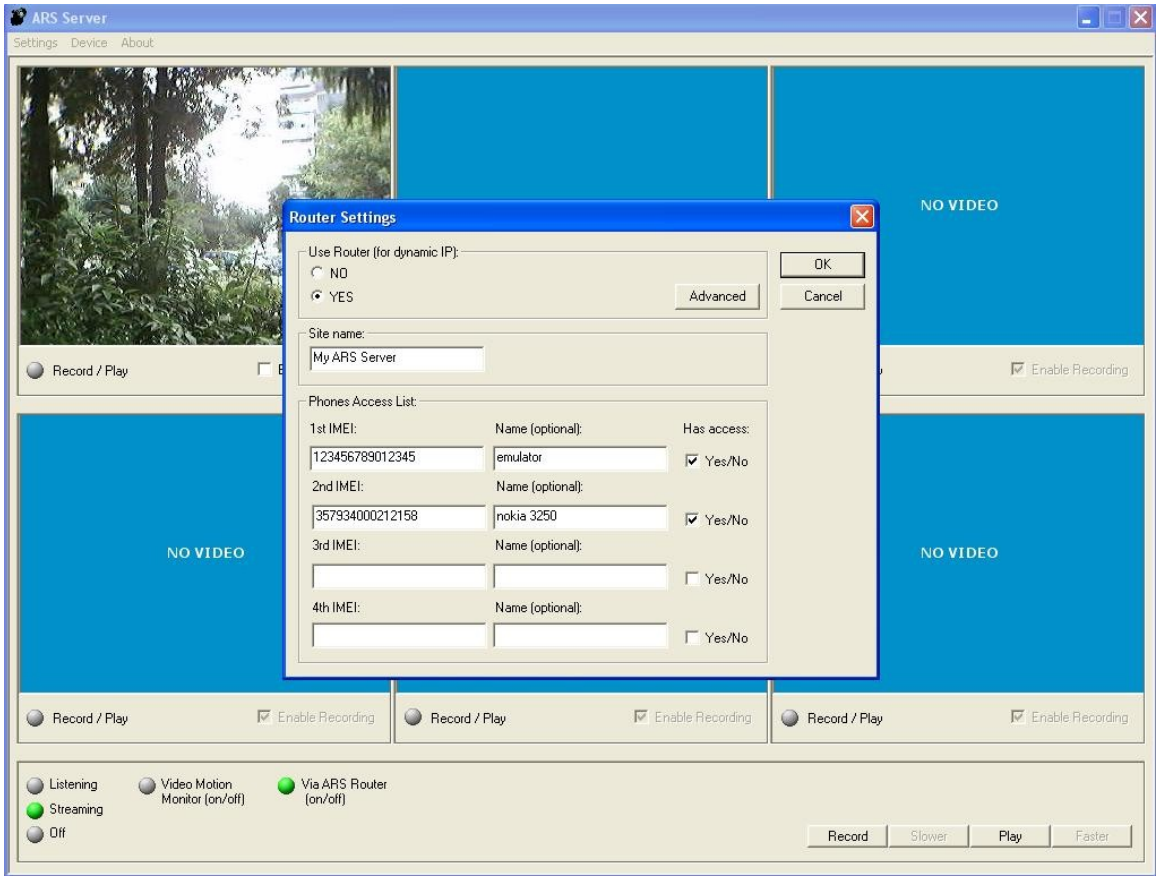


Each camera can be previewed in full screen mode on server. Full screen can be activated or deactivated using left mouse click.

On the phone you can change between cameras using **Next Camera** and **Previous Camera** menu items. Or you can use the **right arrow** and the **left arrow** from the navigation button.

Multiple Locations

The system can handle multiple locations, for example you can have one **ARS Server** installed at your office and one **ARS Server** installed at home. When it is installed for the first time the server asks for a site name. The default value is "My ARS Server", when you install the server on more than one location you should change this value. Later on the site name is available within the menu **Settings->Router Settings.**



On the phone application under the **Settings** menu there is the **Sites Management** item. Here you can add, edit or remove site names corresponding to all locations where **ARS Server** was installed.

The phone will be connected to one surveillance site at a time. The current location (surveillance site) is displayed in the navigation bar for S60 phones, and on the screen for Nokia Series 80 smartphones.

The current location can be easily changed by opening the menu **Change Site.** Under this menu the application displays a list of all defined site names and you can select any of them.

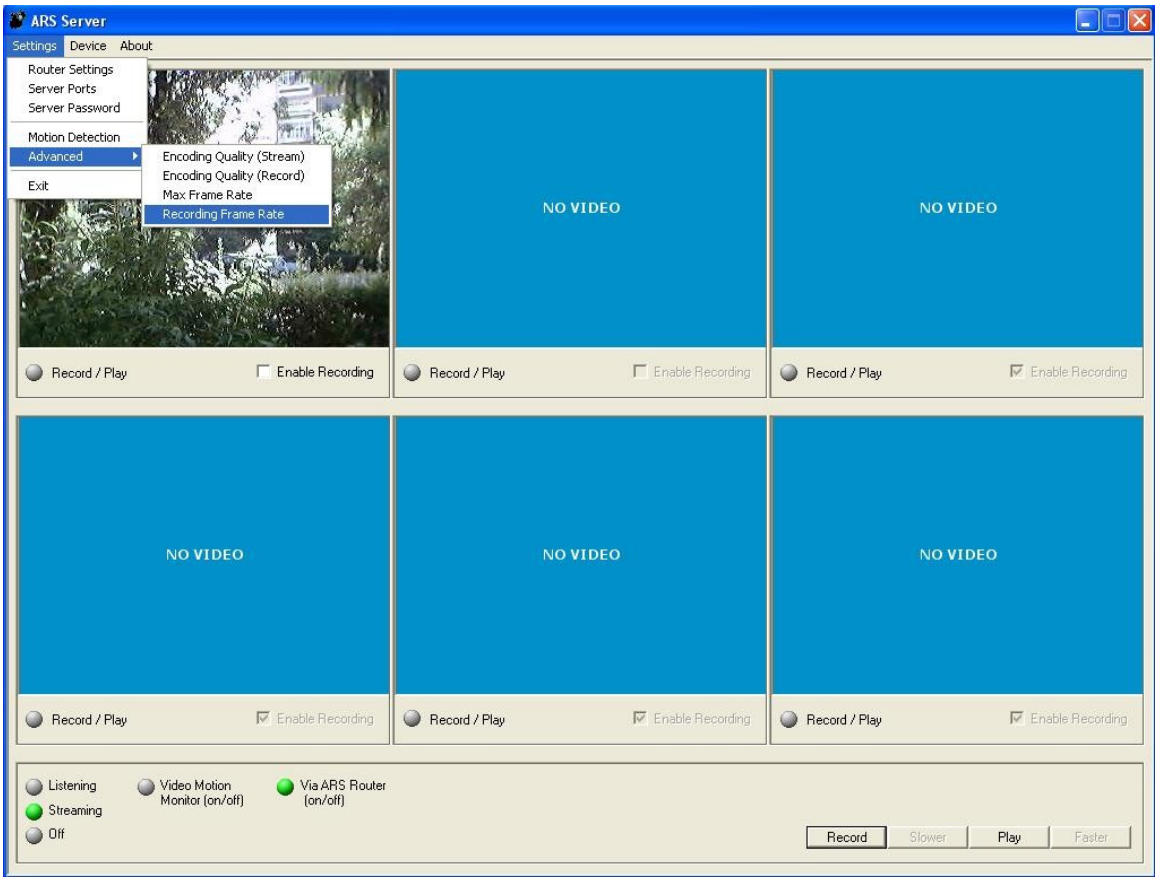
Network settings on phone are persistent and bound to site name (a set of IP addresses and port numbers must be defined for each site name)

Simultaneous multiple clients access

The server supports up to four simultaneous clients. Clients are discriminated using IMEI numbers. Allowed clients are defined on **ARS Server** into **Settings->Router Settings** menu, access is granted or denied by checking/unchecking **Has access** check box for each IMEI.

Full time surveillance

ARS Server is capable of full time video surveillance by recording frames at a predefined interval for all connected cameras. The default frame rate is one frame at every 10 seconds and it can be changed from **ARS Server** menu **Settings->Advanced->Recording Frame Rate.** The recording is stored

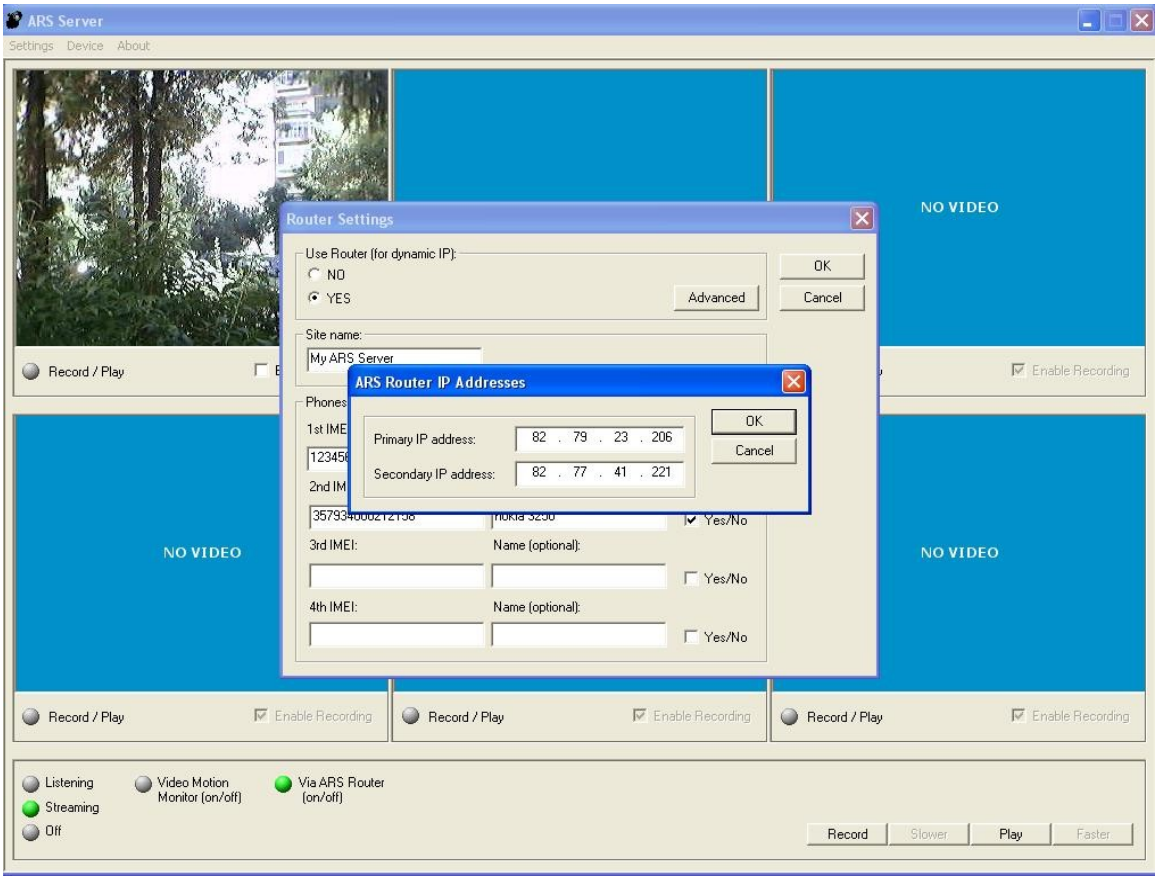


locally on the computer hard disk, and can be played back later at an adjustable speed. A long time recording will be played back day by day. Recording on server can be started or stopped remotely from the phone. The start/stop command applies to each camera and a mark will be displayed on the phones screen to show the recording status.

Recorded files are stored in the "data" subfolder of the folder where the server is installed. For example E:\Program Files\ARS Server\data. When the disk is almost full you should delete some of these files.

About Server IP Address

In general there are three situations. The first one is when your computer is connected directly to Internet having a static and visible IP address. In this



case you will use the computer IP in the phone settings. You can find the IP, for example, using ipconfig command.

Important: in case of direct connection your computer IP must be entered in both **1st Server Address** and **2nd Server Address** fields.

The second situation is when you have a broadband router or another computer (or any other device) running NAT (masquerading). In this case you must set into the phone settings the IP of the router and configure the router such to forward the streaming and command ports to the machine where ARS Server is installed. Port forwarding should be documented in your router manual.

The third case is when you do not have a static IP or when your IP is not visible. For example the router performing NAT is located at your ISP so it is out of your reach. The system is configured by default for this case. In this situation you can use **Argus - Remote Surveillance Router Service**. On **ARS Server** the menu item **Settings->Router Settings** allows you to enter the ARS Router IP and the phone IMEI.

Other settings

The **Requested Framerate** option available on the phone can be used to determine the streaming algorithm to find optimal frame rate according to current network conditions (default value 0). If a value larger than 0 is selected the streaming will be made at requested frame rate, but if there are not enough network resources frames will be dropped.

After the first successful connection the network access point is memorized and reused each time a new connection is initiated. In case of connection failure or if access point has changed the default access point can be reseted by setting **Default Access Point** on **False.**

Final Note

By using this product you consent to the terms and conditions defined in the License Agreement document.