VEGA WIRELESS CAMERA

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![Digicom logo]

PREFACE

Dear Customer, congratulations on purchasing a Digicom product and many thanks for your confidence!
We advise a careful reading of the whole manual, in order to get an in-depth knowledge of our products' features and learn how to use it best.

Any critical comment is most welcomed as a reason for professional growth and precious contribution to the development of products and services aiming at customer's best satisfaction.

INSTALLATION PRECAUTIONS

In order to guarantee your safety and a correct device functioning, be sure to follow these safety warnings. The whole set (with cables included) must be installed in a place lacking of or distant from:

- Dust, humidity, high temperatures and direct exposure to sunlight.
- Heat irradiating objects, which may damage your device or cause any other problem.
- Objects producing a high electromagnetic field (Hi-Fi speakers, etc.)
- Corrosive liquids or chemical substances.

ENVIRONMENTAL CONDITIONS

Environment temperature	Relative humidity
from 0°C to +40°C	from 20 to 80% n.c.

Any sudden change in temperature and humidity must be avoided.

CLEANING INFORMATION

Use a soft dry cloth and avoid any solvents or abrasive materials.

SHOCKS OR VIBRATIONS

Caution against shocks or vibrations.

WARNING: This is a Class A device

This device may cause radio interferences in a residential environment. In such a cause the end user may be invited to take appropriate measures.

CE DECLARATION OF CONFORMITY

We, **Digicom S.p.A. via Volta 39 - 21010 Cardano al Campo (Varese - Italy)**, declare under our sole responsibility that the following product:

- **Vega Wireless Camera WLAN**

complies with the following directive:

1999/5/CE R&TTE Directive dated 9 March 1999 (on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity), as having been designed in conformity with the requirements of following Reference Standards:
EN 60950-1   EN 301 489-1   EN 300 328   EN 301 489-17   EN 55022   EN 55024

- **Vega Wireless Camera GPRS**

complies with the following directive:

1999/5/CE R&TTE Directive dated 9 March 1999 (on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity), as having been designed in conformity with the requirements of following Reference Standards:
EN 60950-1   EN 301 489-1   EN 301 489-7   EN 55022   EN 55024

BACKUP BATTERY

WARNING: this device is supplied with a Nickel Metal Hydride backup battery.

This battery may get burnt, explode or cause serious burnings. DO NOT disassemble, weld, burn or throw the battery into water. Keep out of children. Replace only with a same model battery and reserve the operation only to qualified staff. The use of a different battery may cause fire hazard or explosions. Italian laws consider batteries as dangerous urban waste that must be disposed according to the law provisions in force (Italian DPR 915/82 and local provisions).

The backup battery is excluded from warranty.

WARNING INSTRUCTIONS

SAFETY WARNINGS

Read these instructions and norms carefully before powering the Vega Wireless Camera. Violation of such norms may be illegal and cause hazard situations.

For any of the described situations please refer to the specific instructions and norms.

The Vega Wireless Camera is a low power radio transmitter and receiver. When it is ON, it sends and receives radio frequency (RF) signals.

The Vega Wireless Camera produces magnetic fields. Do not place it next to magnetic supports such as floppy disks, tapes, etc.

Operating your Vega Wireless Camera close to other electrical and electronic equipment - such as a television, phone, radio or a personal computer - may cause interferences.

INTERFERENCES

The Vega Wireless Camera, like all other wireless devices, is subject to interferences that may reduce its performances.

ROAD SAFETY

Do not use your Vega Wireless Camera while driving. In case of use on cars, you must check that the electronic equipment is shielded against RF signals. Do not place the Vega Wireless Camera in the air bag deployment area.

AIRCRAFT SAFETY

Switch off your Vega Wireless Camera when on board aircrafts by disconnecting the power supply and deactivating the internal backup battery. Using GSM devices on aircrafts is illegal.

HOSPITAL SAFETY

Do not use the Vega Wireless Camera near health equipment, especially pacemakers and hearing aids, in order to avoid potential interferences. Take care when utilizing the Vega Wireless Camera inside hospitals and medical centres, which make use of equipment that could be sensitive to external RF signals. Switch it off when use is expressly forbidden.

EXPLOSIVE MATERIALS

Do not use the Vega Wireless Camera in refuelling points, near fuel or chemicals. Do not use the Vega Wireless Camera where blasting is in progress. Observe restrictions and follow any specific regulation or instruction.

INSTRUCTIONS FOR USE

Do not use the Vega Wireless Camera in direct contact with the human body and do not touch the antenna if not strictly necessary.

Use approved accessories only. Consult documentation regarding any possible device connected to the Vega Wireless Camera. Do not connect incompatible products.

DISPOSAL OF OBSOLETE EQUIPMENT

The disposal of all obsolete electrical and electronic equipment must be performed separately from the municipal separate waste collection, by means of specific collection units designated by the government or by local authorities. When the product is marked by the symbol of a crossed-out wheeled bin, the device is covered by the European Directive 2002/96/EC (WEEE).

The norms provide for sanctions in case of illegal waste disposal of these products.

1. INTRODUCTION

The Vega Wireless Camera is Digicom's new camera, equipped with two high quality CMOS sensors, in order to ensure the best image capture under any light conditions. The Color sensor can be used for daylight shots, while the Black&White sensor is especially indicated for night shots with poor light. The built-in infrared LEDs help getting better quality images in poor light environments.
The Vega Wireless Camera utilizes the JPEG image compression technology providing high quality and small size images.

The display of the images filmed with the camera can be performed via any device - computer, Macintosh, PDA or advanced mobile phone - provided with a web browser (e.g. Internet Explorer, Firefox, Safari, Opera).

The Vega Wireless Camera's integrated CPU is able to perform a variety of tasks automatically:

- Automatic Color / Black&White switching function with changing light conditions;
- Alarm detection on 2 digital inputs;
- Flash-saving of images preceding and following the alarm;
- Internet connection via GPRS (Vega Wireless Camera GPRS model);
- SMS forwarding in case of intrusion detection, power lack and re-establishment (Vega Wireless Camera GPRS model).

The two products described in this manual are:
- Vega Wireless Camera WLAN
- Vega Wireless Camera GPRS
The two models differentiate for the wireless communication module they use. The WLAN version uses a LAN wireless communication module which is compatible with the 802.11g protocol (54Mbit/s) and the 802.11b protocol (11Mbit/s). The GPRS version uses a GSM/GPRS module. In the different sections of this manual you can find a description of the different features for the two versions.

1.1 PACKAGE CONTENTS

- 1 Vega Wireless Camera (GPRS or WLAN model)
- 1 Antenna (GPRS or WLAN model)
- 1 Power Adapter (INPUT: 230 Vac– OUTPUT 12 Vdc 1000 mA)
- 1 LAN Cable (UTP Cat 5)
- 1 Camera Stand
- 1 User's Manual

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1.2 TECHNICAL FEATURES

CAMERA
- Double sensor: Color / Black&White
- Day/night automatic detection
- Infrared LEDs for night vision (up to 5 metres)
- CMOS Sensors 1/4"
- Viewing angle: 70°
- Focal length: 3,8 mm
- F: 2,0
- Focus extension: 10mm – ∞
- Sensitiveness: Color = 1,12 V/Lux-sec
  Black/White = 3,0 V/Lux-sec

IMAGE
- JPEG compression
- Resolution: 640x480 pixel (VGA) and 320x240 (QVGA)
- Frame rate: 10 fps
- Pre and post-alarm image saving

HARDWARE INTERFACE
- 2-pin Micro-Fit™ power connector
- 1-port 10/100 Ethernet
- Integrated GPRS dual-band GSM modem, Class 10 (Vega Wireless Camera GPRS model)
- Integrated WLAN unit, 54Mbit/s – 802.11g/802.11b (Vega Wireless Camera WLAN model)
- WEP encryption (Vega Wireless Camera WLAN model)
- 2 digital inputs
- 2 power outputs for external sensors (PIR): 9 Vdc and 12 Vdc
- 3 status LEDs
- SMA/f antenna connector (Vega Wireless Camera GPRS model)
- SMArp/f antenna connector (Vega Wireless Camera WLAN model)
- Reset button for factory default settings
- SIM slot (Vega Wireless Camera GPRS model)

WLAN (VEGA WIRELESS CAMERA WLAN model)
- IEEE 802.11g and IEEE 802.11b standards
- Operating speed: from 54 to 1 Mbit/s
- Automatic or manual speed selection
- WEP 128-bit encryption
- Radio frequency 2.400 – 2.483 GHz, 13 channels
- Channel spacing: 5 MHz
- 802.11g OFDM (Orthogonal Frequency Division Multiplexing)
- 802.11b DSSS (Direct Sequence Spread Spectrum)
- Wi-Fi Interoperable
- Removable antenna – gain 2 dBi

GSM (VEGA WIRELESS CAMERA GPRS model)
- Dual-band 900 / 1800 MHz
- Class 4 (2W) – 900 MHz
- Class 1 (1W) – 1800 MHz
- ETSI GSM Phase 2+ compatible
- GPRS classe 10
- SMS support

POWER SUPPLY
- 12 Vdc – 1000 mA
- Internal rechargeable Nickel Metal Hydride battery

OPERATING ENVIRONMENT
- Operating temperature: from 0°C to +40°C
- Storage temperature: from –20°C to +70°C

OVERALL DIMENSIONS
- External dimensions: 127 x 77 x 48 mm
- Weight: about 300 gr

1.3 APPLICATIONS

The Vega Wireless Camera can be used in a wide range of applications. With the built-in CPU, it can work as a standalone system that provides a web-based solution transmitting high quality video images for monitoring purposes. It can be managed remotely, accessed and controlled from any PC desktop over the Intranet or Internet via a web browser. With the easy installation procedure, real-time live images will be available. In addition, once the Vega Wireless Camera is installed coupled with any application software for the camera management (such as Active WebCam), you can further expand the scope of the camera.

The typical applications for the Vega Wireless Camera are:

• Monitoring of local and remote places and objects such as construction sites, hospitals, amusement parks, schools and day-care centers.
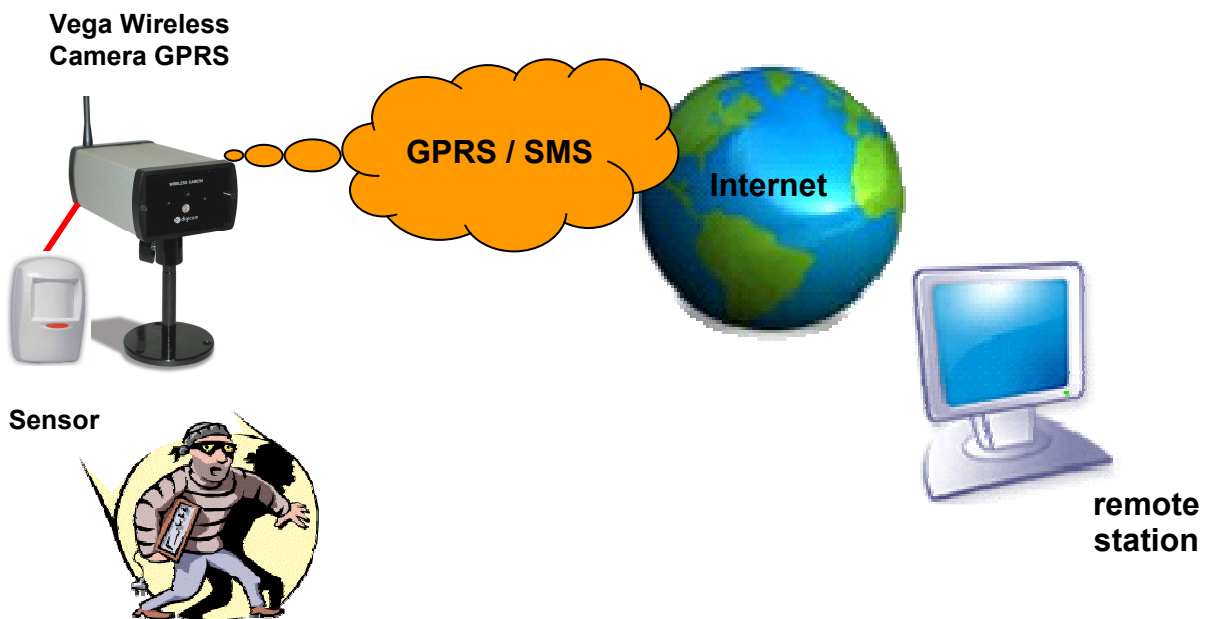• Capture single frame images for alarm detection.

1.4 APPLICATION SCENARIOS

1.4.1 STANDALONE VEGA WIRELESS CAMERA GPRS

In this scenario, the Vega Wireless Camera GPRS captures and saves the images to an internal volatile memory: when the memory limit is reached, older images are overwritten by the most recent ones.
A presence detector, the **Sensor**, is connected to one of the **Vega Wireless Camera's GPRS** digital inputs. When an alarm is detected, the images preceding and following the alarm event are saved to the camera flash memory (non volatile memory). At this point the Vega Wireless Camera GPRS activates an Internet connection by using the **GPRS** network and sends a **SMS** to the users who were added during the configuration process to alert them on the intrusion.
The images saved by the camera can be accessed by a **remote station** via any device provided with a web browser (e.g. Internet Explorer, Firefox, Safari, Opera): a computer, Macintosh, PDA or advanced mobile phone connected to the Internet.

**Vega Wireless
Camera GPRS**

GPRS / SMS

Internet
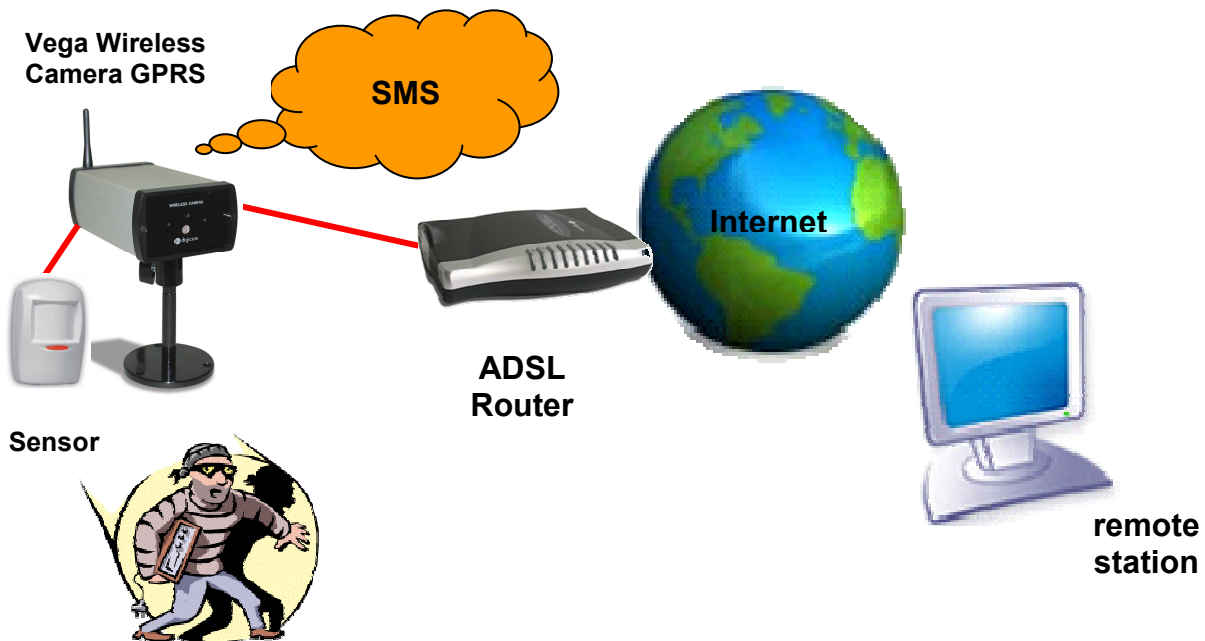
Sensor

**remote
station**

1.4.2 VEGA WIRELESS CAMERA GPRS CONNECTED TO AN ADSL ROUTER

In this scenario, the Vega Wireless Camera GPRS uses a faster means of transport: the ADSL line. An **ADSL Router** was connected to the camera LAN port in order to monitor the real status and the alarm-relevant images by a remote station. This process is much faster if compared to the use of a GPRS network. As for the previously described application, the Vega Wireless Camera GPRS captures and saves the images to an internal volatile memory: when the memory limit is reached, older images are overwritten by the most recent ones.

A presence detector, the **Sensor**, is connected to one of the **Vega Wireless Camera's GPRS** digital inputs. When an alarm is detected, the images preceding and following the alarm event are saved to the camera flash memory (non volatile memory). At this point the Vega Wireless Camera GPRS activates an Internet connection by using the **GPRS** network and sends a **SMS** to the users who were added during the configuration process to alert them on the intrusion.

The images saved by the camera can be accessed by a **remote station** via any device provided with a web browser (e.g. Internet Explorer, Firefox, Safari, Opera): a computer, Macintosh, PDA or advanced mobile phone connected to the Internet.

1.4.3 VEGA WIRELESS CAMERA WLAN CONNECTED TO AN ACCESS POINT ADSL ROUTER

In this scenario two Vega Wireless Cameras WLAN have been installed and both are provided with presence detection sensors.
The images can be accessed by a **remote station** with a LAN wireless connection to the **Access Point** via any device provided with a web browser (e.g. Internet Explorer, Firefox, Safari, Opera): a computer, Macintosh or PDA. If using an **Access Point with ADSL Router**, images can be also accessed by a **remote station** connected to the Internet.

The Vega Wireless Camera WLAN captures and saves the images to an internal volatile memory: when the memory limit is reached, older images are overwritten by the most recent ones.
A presence detector, the **Sensor**, is connected to one of the two **Vega Wireless Cameras WLAN**' digital inputs. When an alarm is detected, the images preceding and following the alarm event are saved to the camera flash memory (non volatile memory).

Vega Wireless Camera WLAN

Sensor

local station

Vega Wireless Camera WLAN

Internet

Access Point with ADSL Router

Sensor

remote station

1.4.4 VEGA WIRELESS CAMERA WLAN CONNECTED TO DIGICOM'S VEGA VIDEO

In this scenario, a new device is mentioned: **Digicom's Vega Video**. The Vega Video is an image concentrator with an integrated Access Point. The Vega Video is able to connect up to four **Vega Wireless Cameras WLAN** with **local stations** and **remote stations**, for an optimal management of the cameras with a single device. It can also save the images to an external memory, such as a **Hard-disk** or an USB memory key, with no further computer or software aid. According to the Vega Video's configuration you can either choose non-stop image save or alarm detection image save to a larger memory than the Vega Wireless Camera's WLAN one. The Vega Video can be then compared to a digital recorder with an integrated Access Point.

Thanks to its 4 LAN ports, the Vega Video can be connected to the local network and to an **ADSL Router**, in order to access the images saved to the hard-disk and check the current status from a remote location, too.
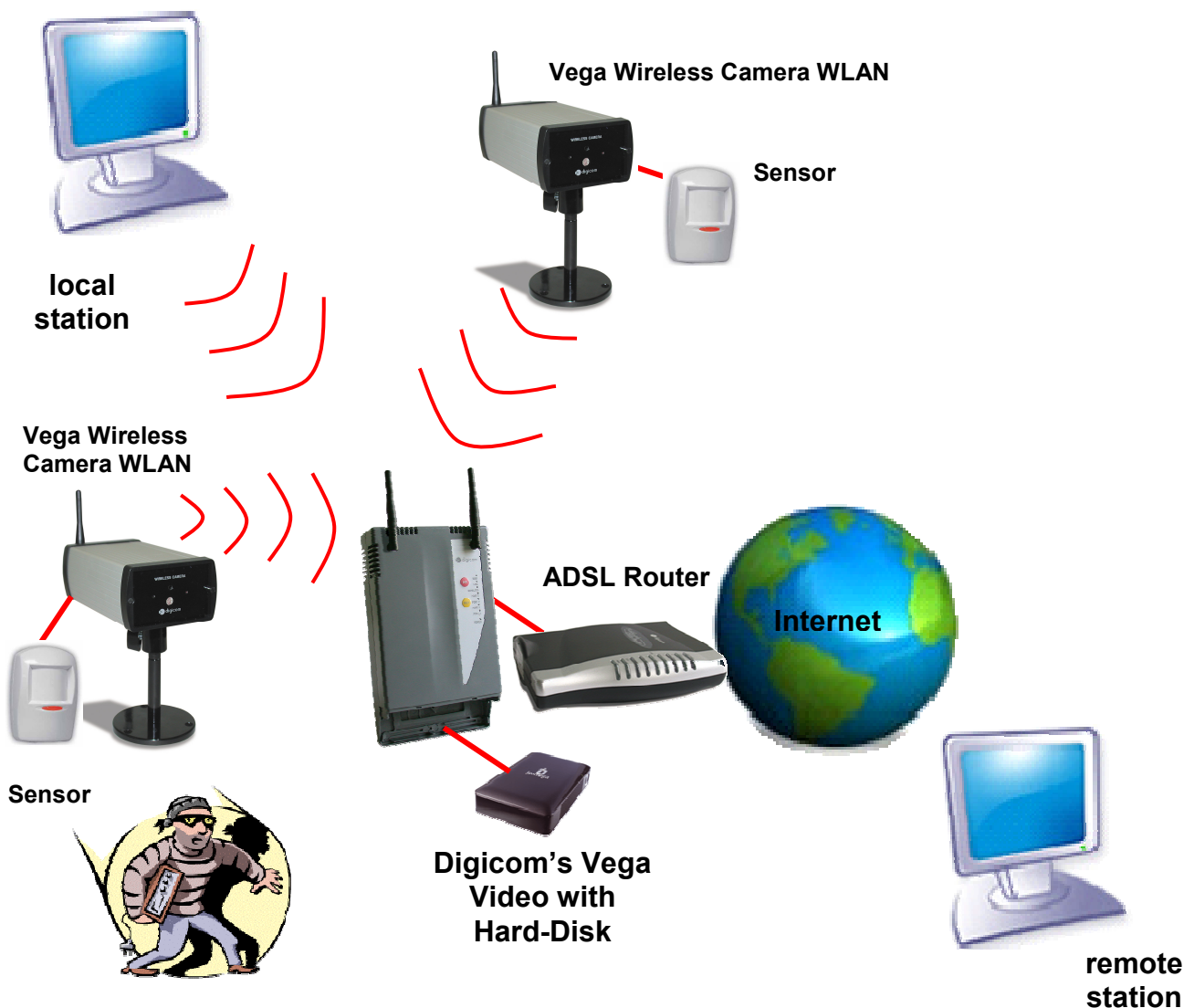
1.5 ALARM DETECTION

In the event of an alarm detection, the Vega Wireless Camera WLAN and the Vega Wireless Camera GPRS act in a different way. The following table shows such differences:

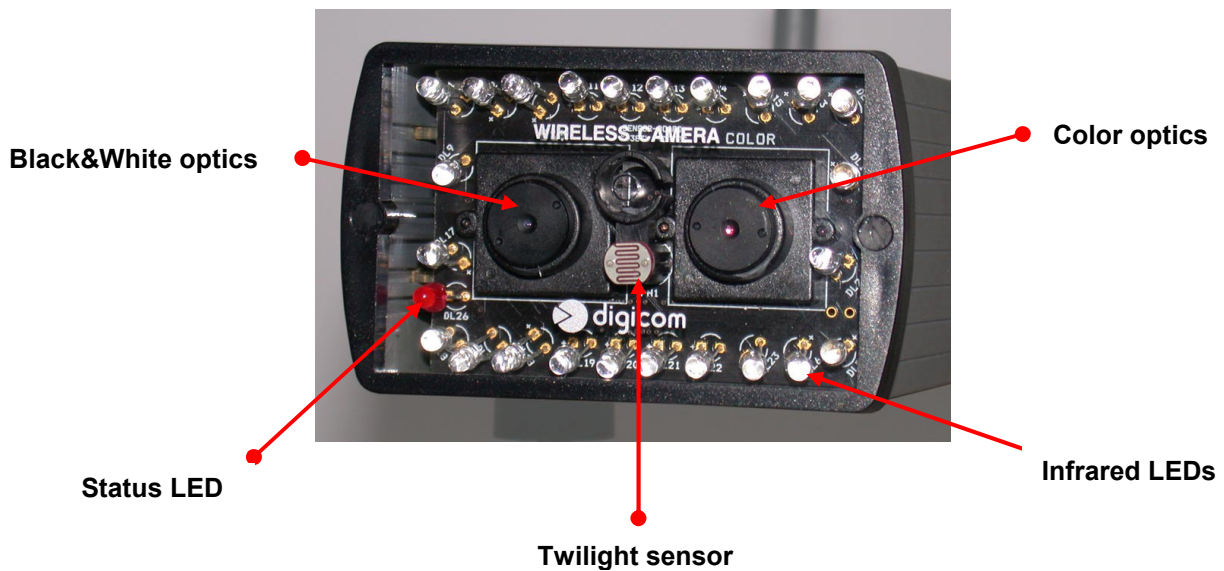| Vega Wireless Camera WLAN	Vega Wireless Camera GPRS
When the camera detects a motion on one of the activated digital inputs, it saves the images preceding (Frame before) and following (Frame after) such a motion according to the configuration values. You can save the images preceding the alarm event because the Vega Wireless Camera is able to capture and save images to its volatile memory up from start. On the alarm detection, images are then moved from volatile to flash memory.	When the camera detects a motion on one of the activated digital inputs, it saves the images preceding (Frame before) and following (Frame after) such a motion according to the configuration values. You can save the images preceding the alarm event because the Vega Wireless Camera is able to capture and save images to its volatile memory up from start. On the alarm detection, images are then moved from volatile to flash memory. When saving the images following the alarm event, the Vega Wireless Camera GPRS also activates a GPRS Internet connection and sends a SMS message to all users added during the configuration process (GPRS page, **SMS Number** field). From now on the Vega Wireless Camera GPRS can be reached by any web browser for the time set in the field **Connection timeout** (GPRS page). The user will get a SMS message with the text inserted during the configuration process (Alarm Cfg page) and with the Internet address the camera can be reached from, e.g.: http://217.201.196.19/mnt/flash/config/alarm.html In the address box of a web browser you will only need to enter the whole address or the initial part, e.g.: http://217.201.196.19 to access the Vega Wireless Camera's GPRS pages.

2. INSTALLATION

The installation of the Vega Wireless Camera must be performed according to the instructions of this manual.

2.1 FRONT PANEL

The Vega Wireless Camera's front panel consists of:

- Color optics
- Black&White optics
- Infrared LEDs
- Twilight sensor
- Status LED

The hole located in the middle of the panel will be used as a room monitor function microphone in future versions.

2.2 REAR PANEL

The Vega Wireless Camera's rear panel consists of:

- LAN port
- Antenna connector
- PWR connector
- INPUT clamp strip
- PWR LED
- SIGNAL LED
- Reset/factory default button
- SIM card slot (only for the Vega Wireless Camera GPRS)

PWR LED
SIGNAL LED
RESET button
LAN port
SIM Card slot
(for Vega Wireless Camera GPRS)
INPUT clamp strip
PWR connector
Antenna connector
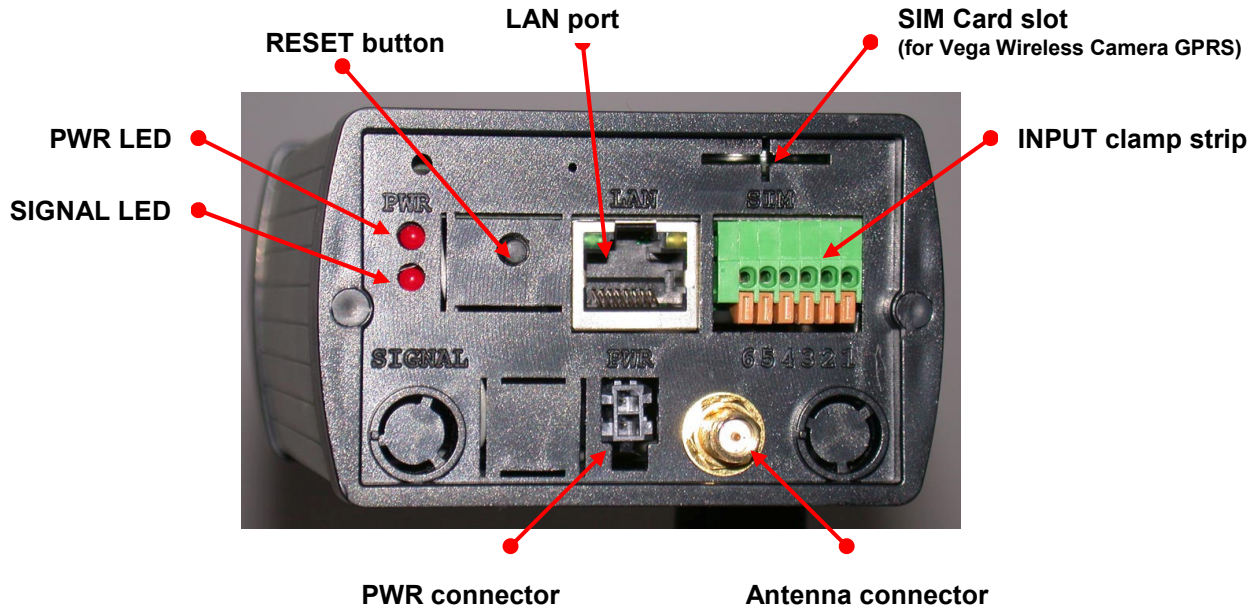
2.3a LED DESCRIPTION (VEGA WIRELESS CAMERA WLAN)

Three LED options indicate a different camera status, as follows:

- **PWR:** Vega Wireless Camera's power
- **SIGNAL:** information on WLAN connection
- **STATUS:** information on remote connection

The LEDs can act as follows:

PWR		SIGNAL		STATUS	
OFF	Camera is OFF	*OFF*	WLAN unit is OFF	*OFF*	Image capture is OFF
Blinking	-	*Blinking*	-	*Blinking*	-
ON	Camera is ON	*ON*	WLAN unit is ON	*ON*	Image capture is ON

When the Vega Wireless Camera WLAN is powered, the device goes through the following stages:

1. Vega Wireless Camera's power: PWR LED is ON;
2. Start of the Operating System: LED is steady ON for about 30 seconds;
3. Status LED steady ON for about 10 seconds;
4. WLAN unit identification: Status LED turns OFF and SIGNAL LED turns ON in the rear panel. In case of problems with the WLAN unit, the Status LED will blink for about 10 seconds and the Vega Wireless Camera can be used only through the LAN port.
5. Start of the image capture after about 2 minutes: Status LED is ON.

2.3b LED DESCRIPTION (VEGA WIRELESS CAMERA GPRS)

Three LED options indicate a different camera status, as follows:

- **PWR:** Vega Wireless Camera's power
- **SIGNAL:** information on GSM network
- **STATUS:** information on remote connection

The LEDs can act as follows:

PWR		SIGNAL		STATUS	
OFF	Camera is OFF	*OFF*	GSM signal is OFF or PIN is requested	*OFF*	Camera is OFF
Blinking	-	*Blinking*	Login to GSM network	*Blinking*	-
ON	Camera is ON	*ON*	-	*ON*	Camera is connected to the Internet

When the Vega Wireless Camera GPRS is powered, the device goes through the following stages:

1. Vega Wireless Camera's power: PWR LED is ON;
2. Start of the Operating System: LED is steady ON for about 30 seconds;
3. Status LED steady ON for about 10 seconds;
4. GPRS unit identification: Status LED turns OFF and SIGNAL LED blinking in the rear panel. The blinking SIGNAL LED indicates the correct login to the GSM network. In case of problems with the GPRS unit, the Status LED will blink for about 10 seconds and the Vega Wireless Camera can be used only through the LAN port.

2.4 CLAMP STRIP

A clamp strip with 6 contacts can be found in the rear panel, with the following pin layout:
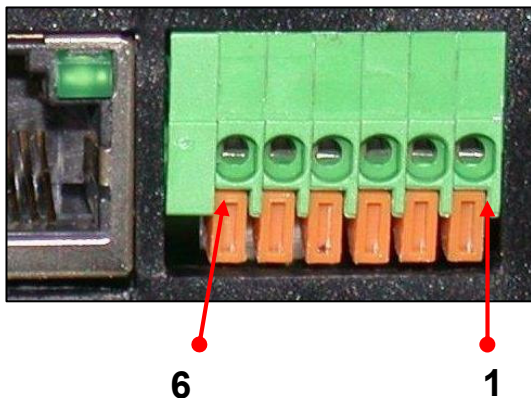
PIN	DESCRIPTION
1	Power output 9 Vdc – 50 mA
2	Input 1
3	GND
4	Power output 12 Vdc – 50 mA
5	Input 2
6	GND

To insert the sensor cable, press the flap under the contact. After a right positioning of the cable, release the flap for a correct fixing.

2.4.1 DIGITAL INPUTS
Two status options are accepted for each digital input: open input or ground closed input. You only need to connect a "clean" (without voltage) contact between the input pin (e.g. pin 2) and the ground pin (e.g. pin 3). **No voltage to inputs is necessary**.
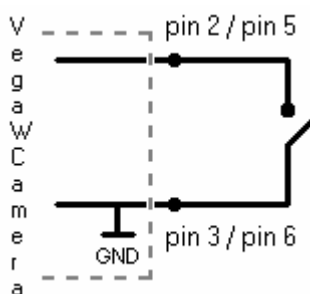
DIGITAL INPUT FEATURES	
Status options :	• open input • ground closed input (GND)
Possible connections :	• pin 2 – pin 3 (input 1) • pin 5 – pin 6 (input 2)

![Digicom logo]

2.4.2 POWER SUPPLY OUTPUTS

The Vega Wireless Camera's clamp strip is provided with 2 power supply outputs to power any possible presence detection sensor.

To power the sensor you only need to connect the Vega Wireless Camera's pin 1 to the positive contact (+) of the presence detector and the Vega Wireless Camera's pin 3 to the negative contact (–) of the presence detector. To connect and power a second presence detector you must connect the Vega Wireless Camera's pin 4 to the positive contact (+) of the presence detector and the Vega Wireless Camera's pin 6 to the negative contact (–) of the presence detector.

When using the backup battery, the power supply outputs are subject to a deterioration of around 3 Volts.
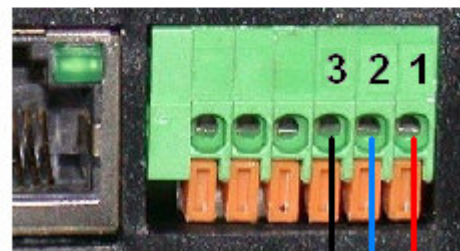
2.4.3 CONNECTION OF A PRESENCE DETECTOR TO THE VEGA WIRELESS CAMERA

Together with the above-mentioned information, herewith you will find a diagram and a table with the description of the pins to use for a direct connection of a presence detector to the Vega Wireless Camera.
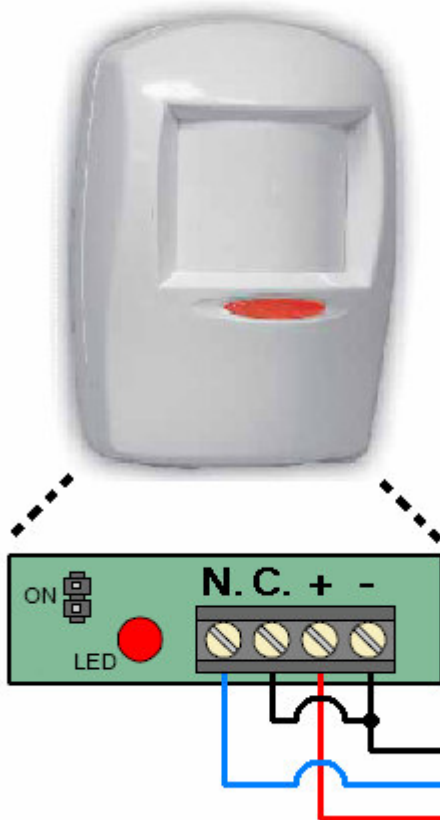
PRESENCE DETECTOR

VEGA WIRELESS CAMERA

PRESENCE DETECTOR	VEGA WIRELESS CAMERA
PIN +	PIN 1
PIN –	PIN 3
PIN N	PIN 2
PIN C	PIN 3

2.5 SIM CARD (only for the VEGA WIRELESS CAMERA GPRS)

The Vega Wireless Camera GPRS supports **PLUG-IN** SIM cards.
In order to prevent damaging of the SIM or an information loss we advise not to touch the golden section of the SIM card (where the contacts are to be found).

WARNING: the Vega Wireless Camera GPRS can operate with any SIM Card. The GPRS function is available according to the type of contract stipulated for the SIM Card. Check availability and any possible restriction to the functions of the SIM card profile. Check the parameters for the Internet access (APN, User Name and Password) with your phone company. In order to gain a remote access to the Vega Wireless Camera GPRS, the phone company - once identified User Name and Password - has to assign a public IP address.

SIM CARD INSERTION
Most probably the SIM card will be supplied on a support which is compatible with devices using a full-size SIM.

Detach your SIM card from its support carefully to fit PLUG-IN dimensions.

Make sure that the Vega Wireless Camera GPRS is off by **turning off the power supply and deactivating the backup battery** in the configuration pages.
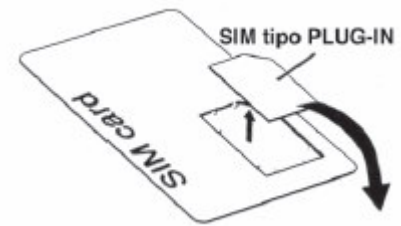
Locate the SIM slot in the Vega Wireless Camera GPRS's rear panel.

Insert the SIM card in the specific SIM slot with the contacts downwards and make sure that the **cut angle** is inserted within the camera correctly.
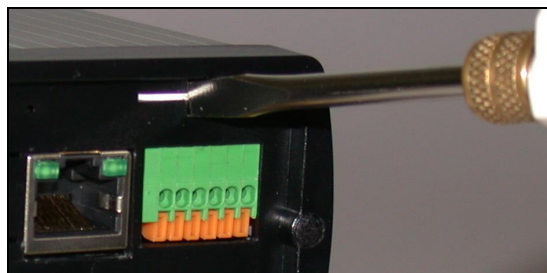
Complete the SIM card insertion by pressing it **fully** with a pencil or screwdriver, until it comes to its end stroke position. In case of problems do not force the SIM card and check if it is right positioned.

WARNING: the Vega Wireless Camera GPRS can only work with a SIM Card with a disabled PIN code request. The PIN code can be disabled by temporarily inserting the SIM Card in any mobile phone and disabling such a request.

WARNING: the Vega Wireless Camera GPRS will usually establish GPRS Internet connections and send SMS messages. The costs of such services will be calculated by the phone company according to the tariffs of the SIM card. Check your tariff with the phone company.

2.6 INSTALLING THE EXTERNAL ANTENNA

To install the external antenna follow these steps:

Make sure that the Vega Wireless Camera is off by turning off the power supply and deactivating the backup battery in the configuration pages.

Connect the external antenna connector to the Vega Wireless Camera's connector by screwing it clockwise. In case of problems do not force the connector and check if it is right positioned.

In the configuration pages you are able to test the GSM signal quality and the presence of GPRS recording (for the Vega Wireless Camera GPRS) or the connection to the Access Point (for the Vega Wireless Camera WLAN).

Sometimes the stylus antenna supplied with the device may not be alone sufficient to guarantee the correct functioning of the system. This can be due to a poor GSM coverage in the installation place (for the Vega Wireless Camera GPRS) or to interferences in the installation place (for the Vega Wireless Camera WLAN). For this reason we suggest to check the accessories available for the two Vega Wireless Camera models, in order to get the best results for your installation.

2.7 POWER SUPPLY

Power the Vega Wireless Camera with the power adapter supplied in the package. For your information keep the following power supply details of the camera: 12Vdc – 1000 mA.
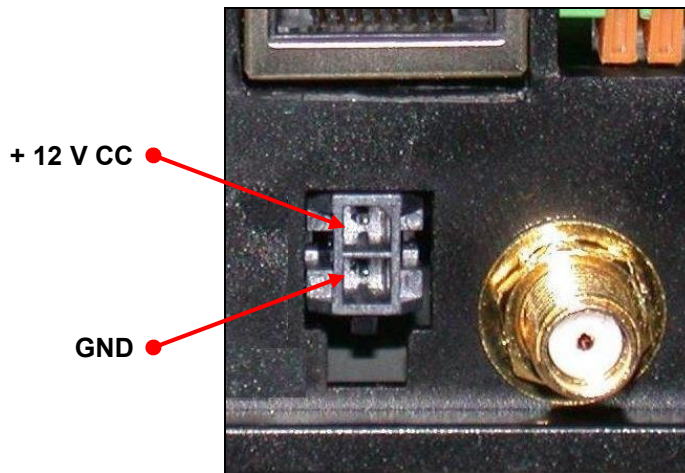
2.8 RESET BUTTON

In the Vega Wireless Camera's rear panel you find the Reset button. To access the Reset button you may use a sharpen object, like a pencil or a paper clip.
To reset the device back to factory settings hold the button for 2 seconds; when the Status LED in the front panel turns on you can release the button.
To reboot the camera hold the reset button for at least 7 seconds.

2.9 FACTORY SETTINGS

When first started, the Vega Wireless Camera shows the factory parameters indicated in the following table. To access the configuration, connect the NIC of your PC to the Vega Wireless Camera's LAN port, using the Ethernet cable in the package. Follow the instructions described in the CONFIGURATION chapter.

Vega Wireless Camera GPRS		Vega Wireless Camera WLAN	
User Id:	admin	User Id:	admin
Password:	digicom	Password:	digicom
LAN Address:	192.168.30.1	LAN Address:	192.168.30.1
Subnet Mask:	255.255.255.0	Subnet Mask:	255.255.255.0
Gateway:	0.0.0.0	Gateway:	192.168.2.1
		WLAN Address:	192.168.2.10
		WEP:	Enable
		SSID:	Digicom
		Channel:	1
Backup battery: 20 minutes' activity.			
(In case of main power supply lack, the Vega Wireless Camera will be active for 20 minutes before turning off).			

2.10 CAMERA STAND

The Vega Wireless Camera comes with a camera stand with a swivel ball screw head that can be attached to the Vega Wireless Camera's bottom screw hole. Attach the camera stand to the Vega Wireless Camera and station it for your application. There are three holes located in the base of the camera stand allowing the Vega Wireless Camera to be mounted on the ceiling or any wall securely.
The Vega Wireless Camera must be installed in the shooting direction. A rotation of the camera will effect an incorrect shooting and a non conforming use of the Vega Wireless Camera.

Correct installation   **Incorrect installation**

3. CONFIGURATION

The Vega Wireless Camera is configured through its built-in Web-based configuration (e.g. Internet Explorer, Netscape, Firefox or other web browsers). You can therefore use any device (PC, PDA) equipped with a NETWORK INTERFACE CARD and an Internet Browser. This chapter describes the necessary checks to access the configuration, together with the main configuration menus for the installation and use of the Vega Wireless Camera.

3.1 PC CONFIGURATION

System requirements:

- 1 PC with a 10/100BT Ethernet NETWORK INTERFACE CARD
- 1 UTP Cat 5 LAN Cable
- 1 web browser (Internet Explorer, Netscape, Firefox, etc.)

The default IP address of the Vega Wireless Camera is **192.168.30.1**.
To proceed with the camera configuration, the computer's IP address must correspond to the same LAN network: 192.168.30.xxx

To access the configuration menu of the computer Network Interface Card, follow these steps.

Configure the TCP/IP protocol of the PC Network Interface Card with an IP address corresponding to the Vega Wireless Camera's network (e.g. **192.168.30.3**). Do not use the address 192.168.30.1 (already used by the Vega Wireless Camera).
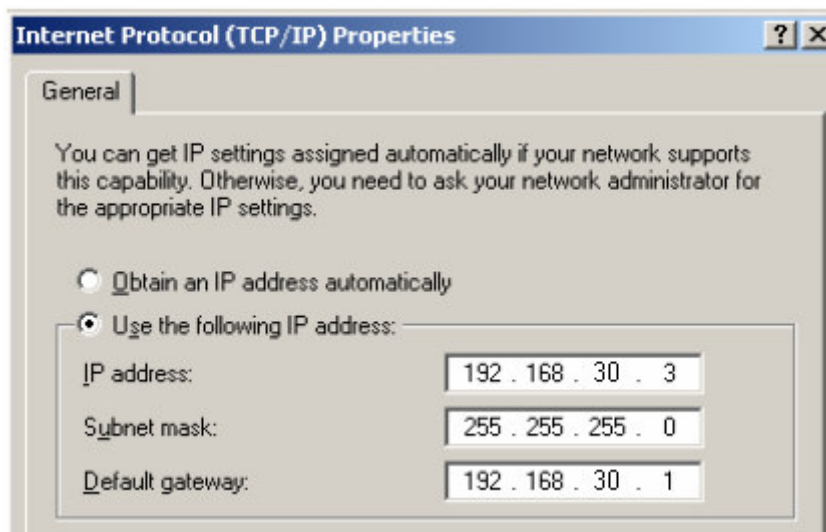
Power the Vega Wireless Camera and verify the starting up sequence described in the preceding sections of this manual.

Connect the computer to the **LAN** port in the rear panel of the camera by using the Ethernet cable found in the package.

The two small LEDs on the LAN port are supplied for future use and could therefore stay OFF.

In case of problems please refer to your system administrator for a correct setting of the computer's IP address.

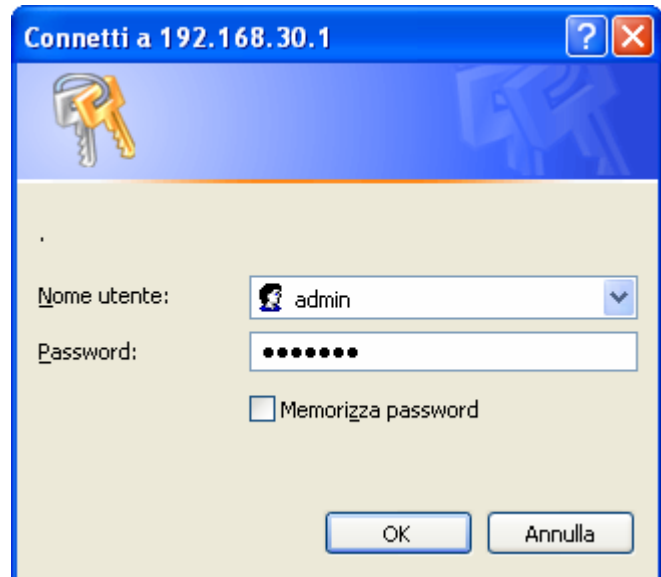## 3.2 VEGA WIRELESS CAMERA CONFIGURATION

On your PC open the web browser (Internet Explorer, Netscape, Firefox, etc.) and establish a connection by entering the following address**: http://192.168.30.1** .
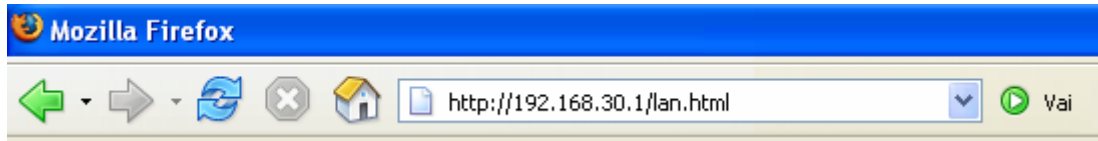

After the connection is established, you will find the following window:

In the User Id field enter: **admin**
In the Password field enter: **digicom**

User Id and Password must be entered in lower-case digits.
By default settings, the User Id and Password are blank. For security purpose, you are recommended to activate those parameters by changing the factory settings immediately.

After confirmation of the User Id and Password you will access the configuration menu.
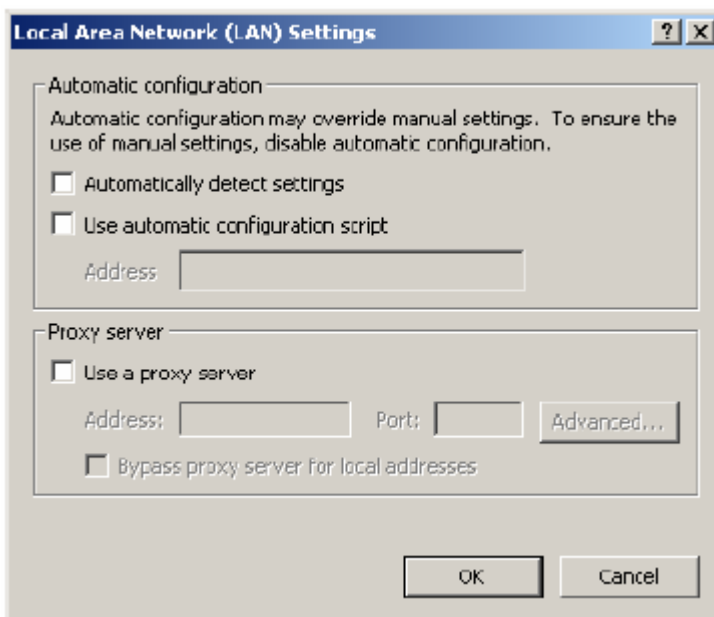
WARNING: in case of problems with the display of the configuration, besides checking the correct connection of the Vega Wireless Camera, verify that a proxy server is not active.

In Microsoft Internet Explorer you will find the proxy server setting in:
Tools > Internet Options > Connections > LAN settings.

3.3 CONFIGURATION MENU

This section describes the configuration menus of the Vega Wireless Camera. Most menus are equivalent for both the WLAN and GPRS versions; some differences are yet to be found. In the descriptive configuration sections you will obviously find only the menu for the specific version.

The configuration windows are split in two parts. On top of the screen you may enter the values to change the configuration settings; the lower part of the window shows the current values. During the configuration, whenever you click the Digicom logo or the window title in the top menu bar will make you return to the main menu.
After inserting the new values click **Save** to confirm and save the value.
To erase a value, e.g. a telephone number, you may enter a new value by overwriting the older one or entering the **minus symbol (–)** . Click Save to apply your changes.
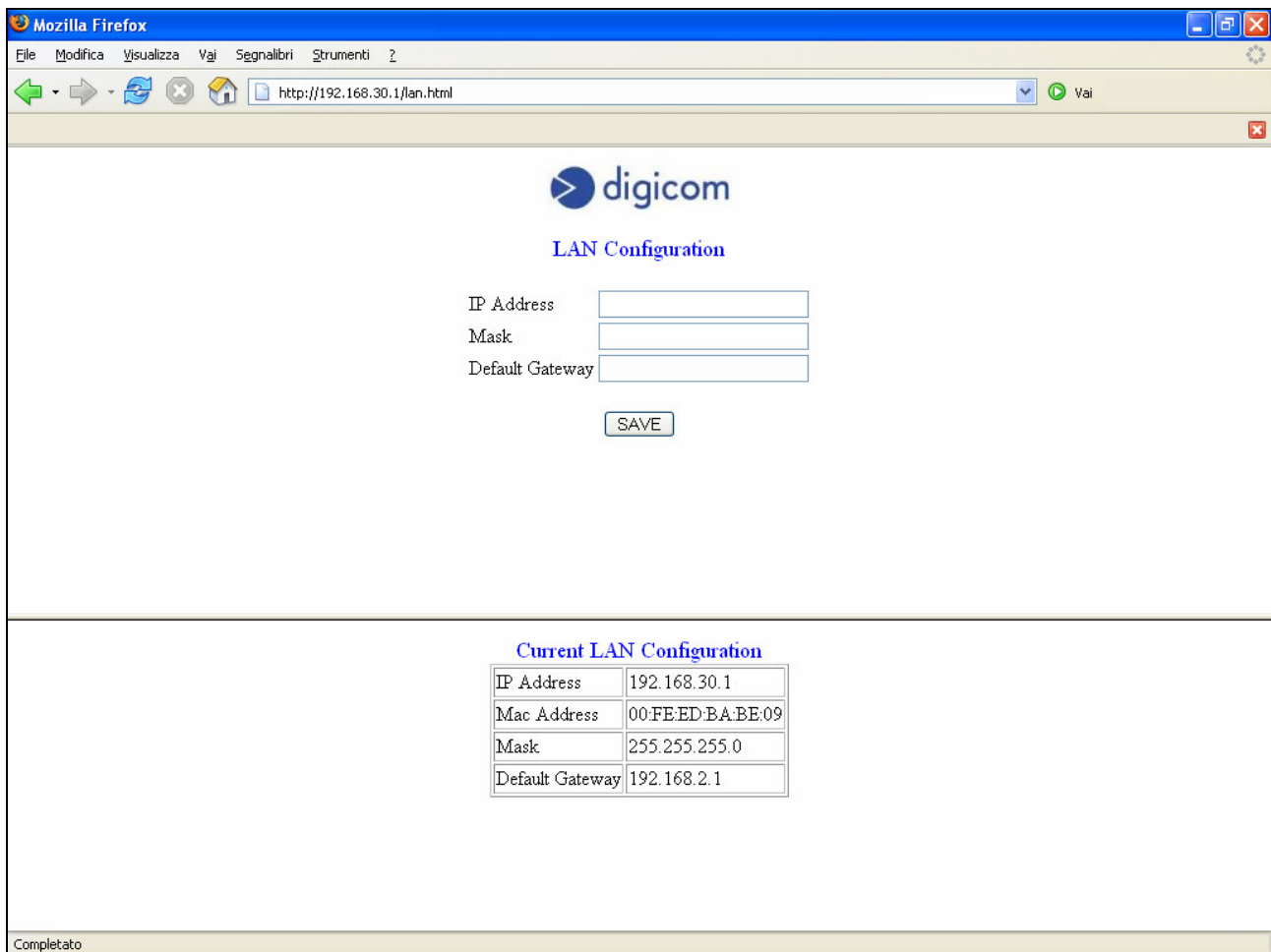
3.3.1 MAIN MENU
After authentication (User Id and Password) you will see the following main menu (to access the different specific configuration menus).

Vega Wireless Camera WLAN	Vega Wireless Camera GPRS
digicom **Vega WiFi Camera V0.45** **Configuration** Lan Wi-Fi Camera System AlarmCfg Security Dynamic DNS **Option** Alarm Live Status Log	digicom **Vega Gprs Camera V0.45** **Configuration** Lan Gprs Camera System AlarmCfg CallBack Security Dynamic DNS **Option** Alarm Live Status Log

3.3.2 LAN

In this window you may change the parameters of the LAN interface to be found on both Vega Wireless Camera versions.

Enter the value you wish to change and click **SAVE**. The new settings will be immediately effective.

IP Address: insert the IP address the camera will use for transmission on the LAN port.

> *WARNING: the IP address of the LAN interface must belong to another network than the IP address of the WLAN interface.*

After changing the IP address of the Vega Wireless Camera, switch off the device and switch on after 10 seconds. You may be asked to modify also the IP address of the computer, in order to proceed with the camera configuration.

Mask: insert the Subnet mask value.

Default Gateway: insert the IP address of the Gateway.

Mac Address: this window shows the Mac Address value of the camera.

3.3.2 WiFi (only for the VEGA WIRELESS CAMERA WLAN)

In this window you may change the parameters of the WLAN interface to be found on both Vega Wireless Camera versions.
In order to communicate via wireless LAN with the Vega Wireless Camera WLAN you need to use an Access Point. For a correct communication with the camera you then need to set all values for this window.
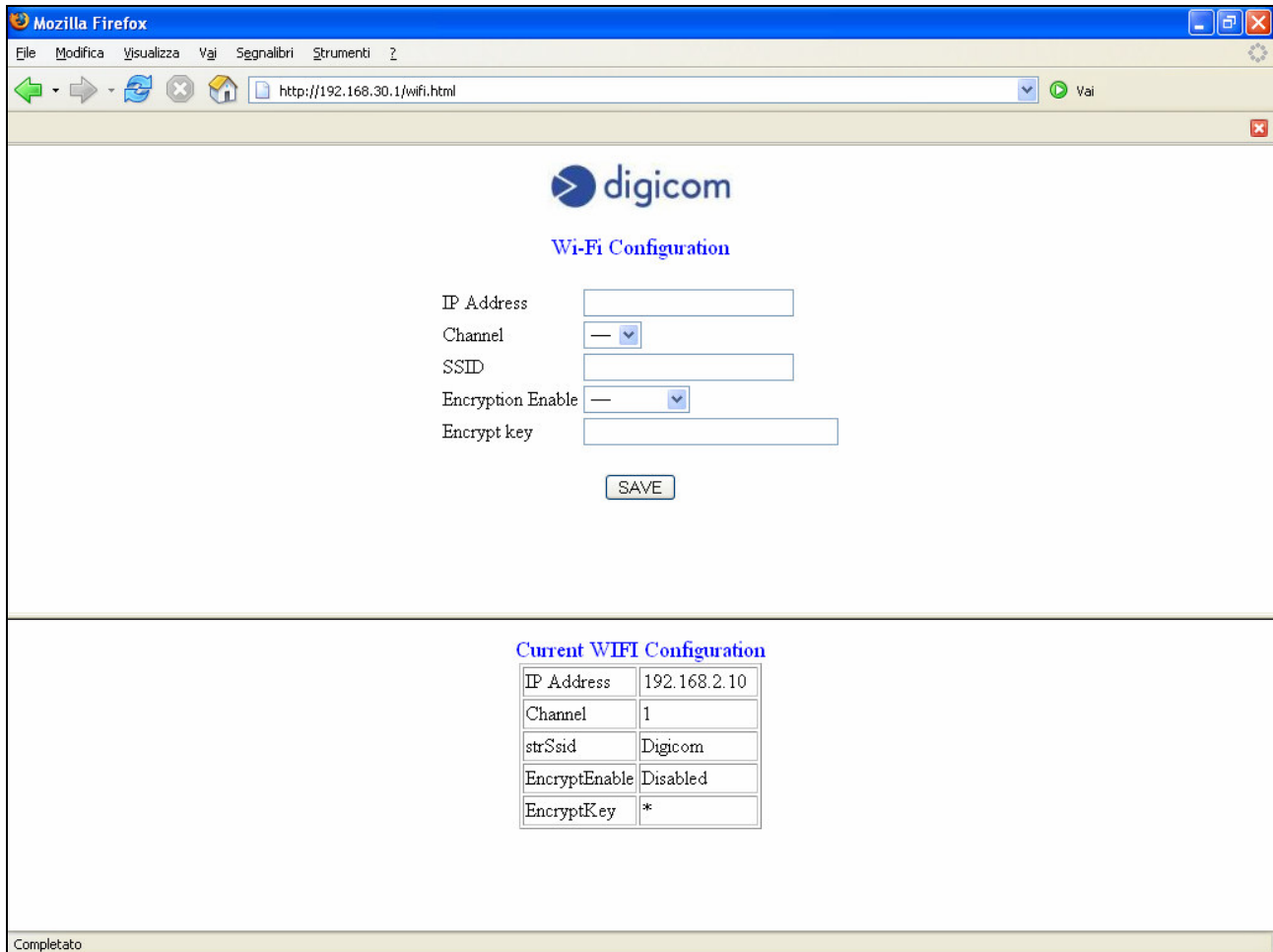
IP Address: insert the IP address the camera will use for wireless transmission on the LAN port.

> *WARNING: the IP address of the WLAN interface must belong to another network than the IP address of the LAN interface.*

> After changing the IP address of the Vega Wireless Camera, switch off the device and switch on after 10 seconds. You may be asked to modify also the IP address of the computer, in order to proceed with the camera configuration.

Channel: this drop-down menu provides the wireless communication channel. A "channel" is a range of frequencies to use for the communication between the camera and the Access Point. Select the channel in order for it to correspond with the value set in the Access Point. The default setting is Channel **1**.

SSID: *Service Set Identifier*, is the name assigned to the wireless network. To connect the camera to a specific access point on the network, please make sure to set the SSID of the camera to correspond with the access point's SSID for communication. Type any string up to 32 characters long (**spaces, symbols and punctuation are not allowed**).

Encryption: Wireless network communications can be intercepted easily. To prevent unauthorized access to the network you may activate WEP encryption. WEP (Wired Equivalent Privacy) is an encryption method specified by the IEEE 802.11g standard to make any intercepted communications extremely difficult to interpret by unauthorized parties. The default setting for this option is **Enable**. Enable WEP encryption also for the Access Point.
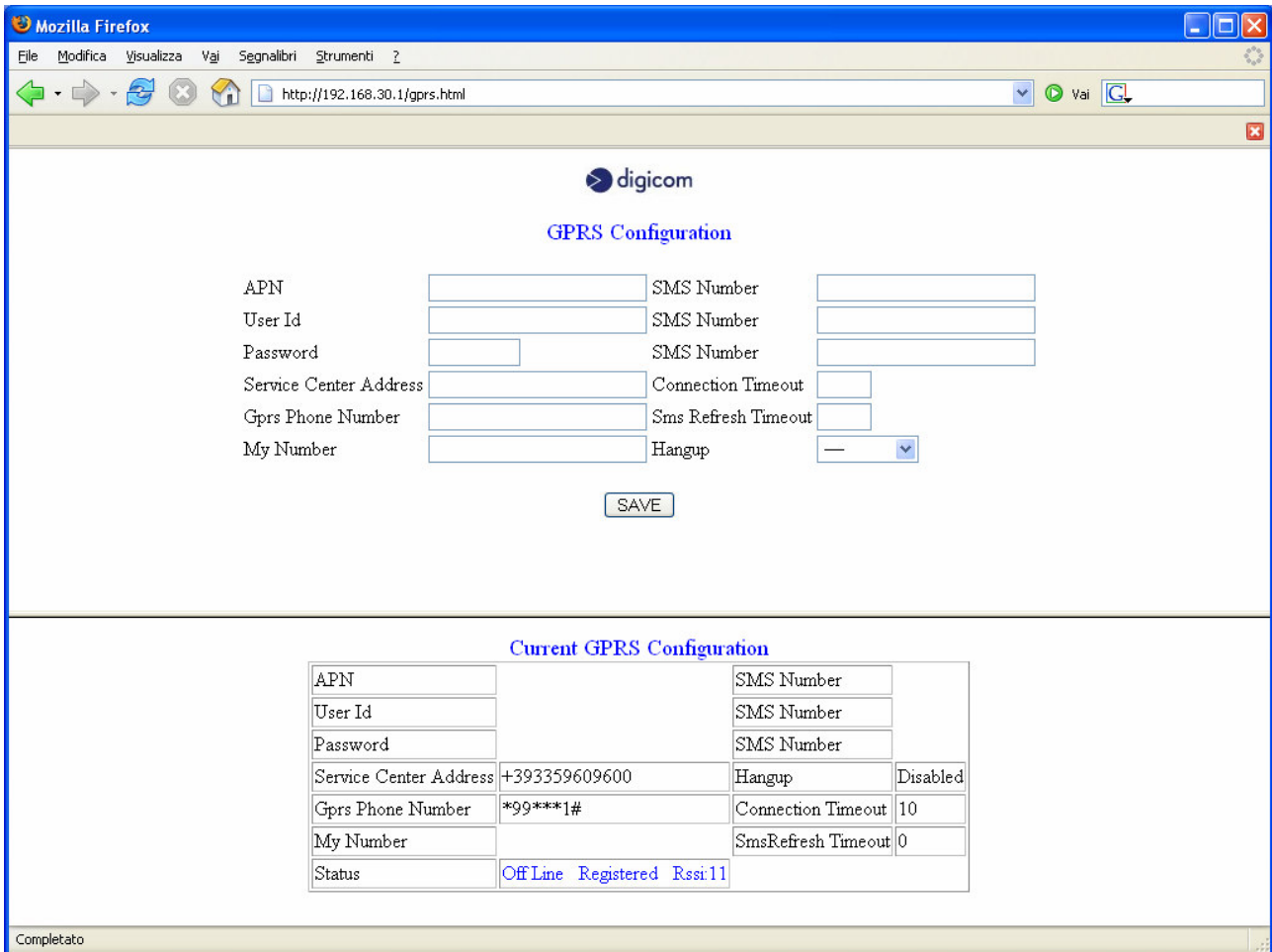
EncryptKey: WEP encryption uses an encryption key. In this field enter your encryption key to fit the value inserted in the Access Point configuration. We also suggest to change the encryption key periodically to avoid intrusions in the wireless network by unauthorized users. The value inserted in the EncryptKey field must respect the 128-bit hexadecimal format (HEX 128 bit): each pair of characters you type is interpreted as an eight-bit value in hexadecimal (base 16) notation. Only the digits 0 through 9 and the letters A through F (in upper or lower case) are valid.   To setup an 128-bit WEP key, input 26 HEX format.   For example, '31323334353637383930313233', which is the same with ASCII input '1234567890123'.

> *WARNING: Vega Wireless Camera WLAN is supplied with an enabled WEP encryption and a preconfigured encryption key. This factory setting allows to install the camera and Digicom's Vega Video image concentrator in a few minutes. In case of use of the Vega Wireless Camera WLAN with a specific Access Point and in order to change the key you only need to enter a new value in the EncryptKey field and then click SAVE. For a greater data security, Digicom has decided not to divulge the default encryption key value.*

3.3.3 GPRS (only for the VEGA WIRELESS CAMERA GPRS)
In this window you may set the parameters of the GPRS configuration for the Vega Wireless Camera GPRS.

WARNING: the Vega Wireless Camera GPRS can operate with any SIM Card. The GPRS function is available according to the type of contract stipulated for the SIM Card. Check availability and any possible restriction to the functions of the SIM card profile. Check the parameters for the Internet access (APN, User Name and Password) with your phone company. In order to gain a remote access to the Vega Wireless Camera GPRS, the phone company - once identified User Id and Password - has to assign a public IP address.

APN: (Access Point Name) this value determines the access point for the Internet connection via GPRS. Check your access point with the phone company.

User Id: in this field you must enter the User Id for the Internet connection via GPRS. Check this value with the phone company. Approximately you may keep in mind that if you use the usual above-mentioned APN addresses you do not need to insert any User Id.

Password: in this field you must enter the Password for the Internet connection via GPRS. Check this value with the phone company. Approximately you may keep in mind that if you use the usual above-mentioned APN addresses you do not need to insert any Password.

Service Center Address: it is the phone number of the Service Center provided by the phone company managing the SMS messages. Such a value is read directly by the SIM card inserted in the camera.

GPRS Phone Number: it is the phone number you must dial for the GPRS Internet connection. For all phone companies the correct number is usually ***99***1#**. In case of problems, check the correct number with your phone company.

Connection timeout: defines the Internet connection duration.

255	The Internet connection will be unlimited; it is up to the user the task of disconnecting the camera by selecting **Hangup: Enabled** from the System menu.
from 1 to 254 minutes	The Internet connection will last for the indicate time. Once the set time has expired, the camera will disconnect automatically.
0	The Internet connection is disabled.

Hangup: from this field you can operate the disconnection, when the camera is connected to the Internet. After selecting Enabled and clicking the SAVE button, you will lose the remote connection to the camera. For an automatic disconnection, please refer to the Connection timeout section.

SMS Number: in these fields you must enter the phone numbers of the users who will receive a SMS message, in the event of an alarm detection. The phone number should be preceded by the international prefix (e.g. +393351234567).

The Vega Wireless Camera GPRS can synchronize the internal clock with the GSM network. To perform this synchronization the camera sends a SMS message to your phone number. Once the SMS message has been received, the Vega Wireless Camera will read date and time from the information in the SMS message received by the GSM network. To enable this option you must enter the My Number and SMS Refresh Timeout values. The outgoing SMS costs will be calculated by the phone company according to the tariffs of the SIM card. Check your tariff with the phone company.

My Number: to synchronize the internal clock of the camera (as above described), in this field you must enter the phone number of the SIM card in the camera. The phone number should be preceded by the international prefix (e.g. +393351234567).

SMS Refresh Timeout: to synchronize the internal clock of the camera (as above described), in this field you must enter the synchronization frequency of the internal clock with the GSM network.

from 1 to 999 hours	Set the synchronization frequency. The camera sends a SMS message when starting up and then at regular intervals, according to the inserted value. Check the inserted value in My Number.
0	The synchronization of date and time is disabled.

Status: to check registration to the GSM network, signal quality and GPRS network presence, verify the Status field.

Off Line	Vega Wireless Camera GPRS disconnected to the Internet.
On Line	Vega Wireless Camera GPRS connected to the Internet.
Searching	GSM/GPRS network research.
Registered	Vega Wireless Camera GPRS registered to the GPRS network.
Not Registered	GPRS network is absent or SIM card is not enabled to the GPRS traffic or GSM signal is not sufficient or PIN request is enabled
Rssi: xx	GSM signal quality. Index from 31 to 21 = Excellent GSM signal Index from 20 to 11 = Good GSM signal Index from 1 to 10 = Poor GSM signal (in such a case you must change the installation place, or install an external antenna with a higher gain, or start thinking about a different phone company SIM card)

3.3.4 CAMERA

In this window you may change the parameters of the image capture.
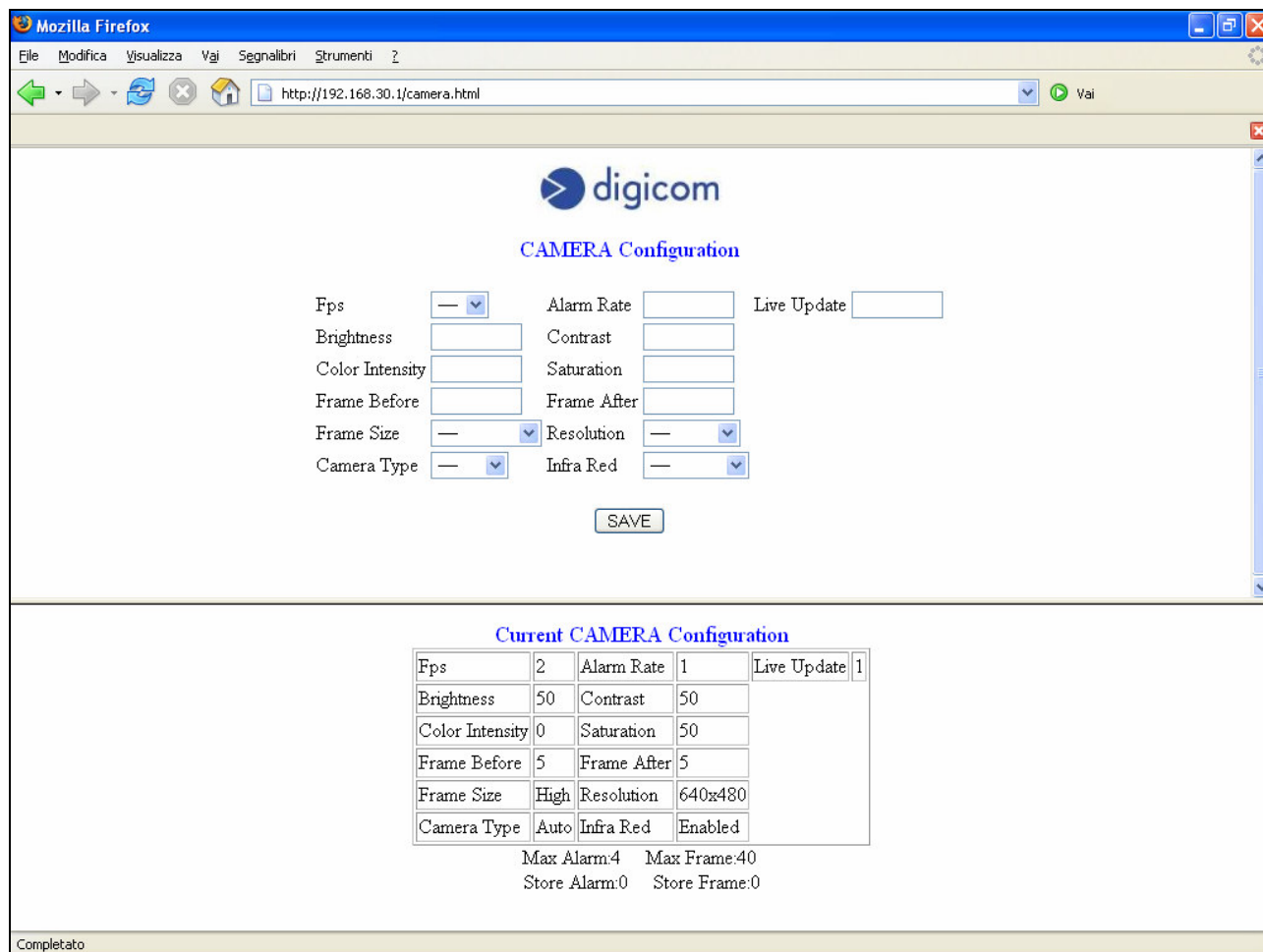
Fps (Frame per second): it is the frame rate of the camera. It supports values from 1 to 10 frames per second.

Alarm Rate: it is the saving rate, in case of alarm detection on digital inputs. The value inserted will define the time interval (expressed in seconds) for an image saving. The minimum value is 1 second.

Live Update: it is the image display frequency in the Live page. The value inserted will define the time interval (expressed in seconds) for an image update in the Live page. The minimum value is 1 second. In order to display the Live page through the GPRS page we suggest to use a value which is higher than 5 seconds.

Brightness: to adjust image brightness. Values may vary from 0 to 100.

Contrast: to adjust image contrast. Values may vary from 0 to 100.

Color Intensity (Hue): to adjust color intensity. Values may vary from -50 to +50.

Saturation: to adjust color saturation. Values may vary from 0 to 100.

Frame Before and **Frame After:** define the image quantity to save before and after the alarm event respectively. The maximum image quantity is indicated in the **Max Frame** table. This value will vary each time you modify the values in the **Frame Size** and **Resolution** fields.

The setting of the Frame Before and Frame After values will allow you to increase or decrease the alarm quantity to be handled by your camera. Check the **Max Alarm** value in the relevant table.

Frame Size: defines the image quality.

Very High	Excellent image quality.	(VGA: 80 KByte – QVGA: 20 KByte).
High	Good image quality.	(VGA: 50 KByte – QVGA: 12 KByte).
Medium	Standard image quality.	(VGA: 30 KByte – QVGA: 8 KByte).
Low	Poor image quality.	(VGA: 20 KByte – QVGA: 6 KByte).

This option will allow you to increase or decrease the total number of images that can be saved to the internal memory of the Vega Wireless Camera. Check the **Max Frame** value in the relevant table.

Resolution: defines the image resolution.

640x480 pixel	Image resolution: 640x480 pixel (VGA)
320x240 pixel	Image resolution: 320x240 pixel (QVGA).

This option will allow you to increase or decrease the total number of images that can be saved to the internal memory of the Vega Wireless Camera. Check the **Max Frame** value in the relevant table.

Camera Type: enables the selection of the optics to be used for the image capture.

|	
Auto	The Vega Wireless Camera will automatically change the optics, shifting from Color to Black & White according to the light conditions of the installation place.
Color	Color optics enabled and Black & White optics disabled.
B&W	Black & White optics enabled and Color optics disabled.

Infrared: allows to activate the infrared LEDs. If the infrared LEDs are active (Enabled), these will light up in conjunction with the activation of the Black & White optics.

Store Alarm and **Store Frame:** remind you of the alarms stored and the total number of images saved in your camera up to now.

WARNING: the internal memory of the Vega Wireless Camera is 2 MByte. The total number of images that can be saved depends on the image quality and the selected resolution. The Vega Wireless Camera GPRS alerts on the reached memory limit with the message MEMORY FULL contained in the alarm detection SMS. Once this message has been received, the user must view and remove the images stored in memory before proceeding with the camera. The image removal can be performed by selecting the Reset Alarm item in the System page, or by sending the SMS message DELETE to the Vega Wireless Camera GPRS by an enabled user whose number has been inserted in the GPRS page.

3.3.5 SYSTEM
In this window you may act on some of the camera's functions.
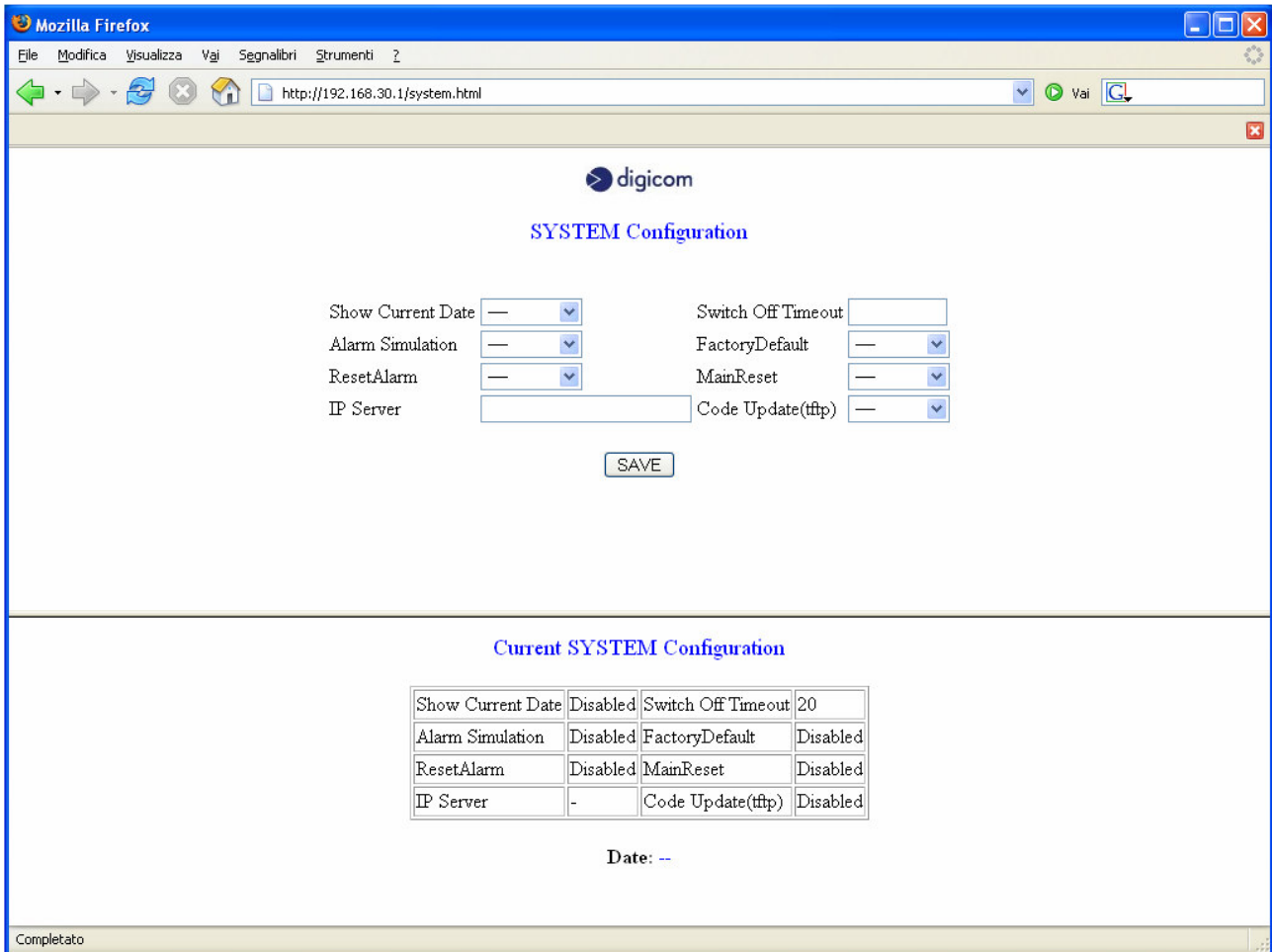
Show Current Date: by selecting the Enabled item and clicking the SAVE button you may check date and time for the Vega Wireless Camera GPRS. For date and time synchronization, please refer to the description contained in the GPRS page.

Alarm simulation: in the Vega Wireless Camera GPRS this command allows for an alarm simulation: in this way you may check the correct settings for the Internet connection (GPRS values) and the correct inserting of the phone numbers that will receive an alarm SMS message.

Reset Alarm: by selecting the Enabled item and clicking the SAVE button you may remove the images stored to memory. We suggest to view the images before removing them. With the Vega Wireless Camera GPRS version, the user will be alerted on the full memory status with an alarm SMS message announcing "MEMORY FULL".

Switch Off Timeout: defines the management of the backup battery. In case of main power supply lack, the Vega Wireless Camera keeps functioning thanks to a rechargeable backup battery.

|	
0	Battery management is disabled. In case of main power supply lack, the camera turns off.
1	Battery management is disabled only with next main power supply lack. This option can be used, for example, during configuration and installation, in case you really want to turn off the device and preserve the backup battery charge. To turn off the camera immediately, set the Switch Off Timeout option to 1 and take off the main power supply.
from 2 to 254 minutes	Battery management is enabled. The camera will be powered by the battery for the fixed time. Once this time expires, the Vega Wireless Camera will turn off.
255	Battery management is enabled. The camera will be powered by the battery for the whole operation time, which is about 40 minutes.

Factory default: allows to reset all camera configuration parameters to factory values. The same operation is possible through the reset button.

Main Reset: this command enables to reboot the camera. The same operation is possible through the reset button.

IP Server (tftp) and **Code Update (tftp):** these items can be used to update the camera firmware revision. When new firmware updates are available, these will be published on our web site with the relevant explanations.

3.3.6 ALARM CFG

In this window you may enable the digital inputs, the relevant messages associated to it and the relevant management in case of main power supply lack.
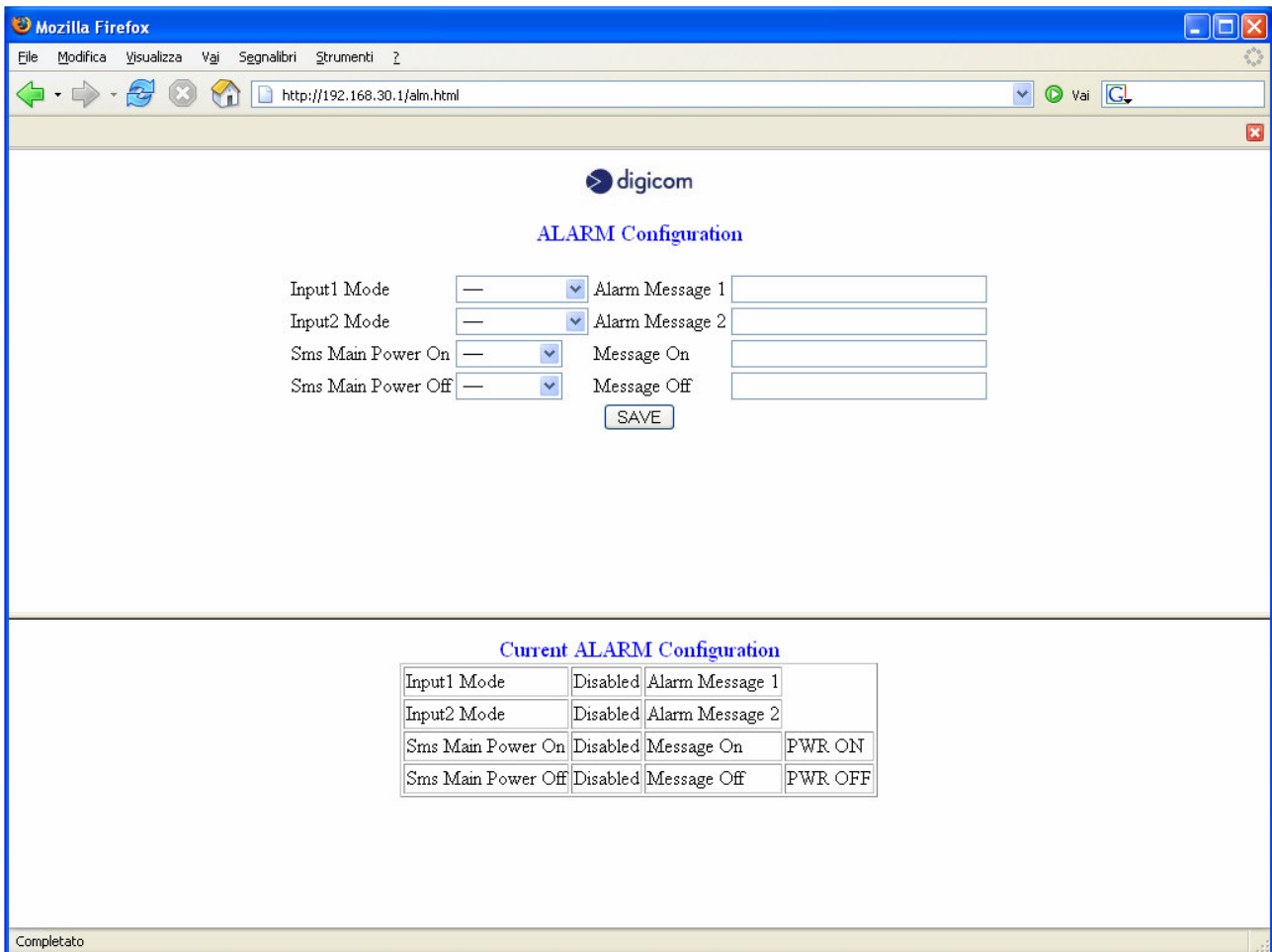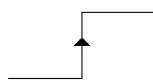

Input1 Mode and **Input2 Mode:** activation and deactivation of the two digital inputs.
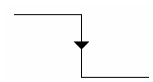
Disabled
Disabled input. Any change of status on the input will not be handled by the camera.

Rising Edge
Enabled input. The Vega Wireless Camera will start managing the alarm event as soon as the input turns from the falling to the rising edge.

Falling Edge
Enabled input. The Vega Wireless Camera will start managing the alarm event as soon as the input turns from the rising to the falling edge.

Alarm Message1 and **Alarm Message2:** defines the text associated to the input 1 and the input 2. The text can be maximum 30 characters long.

Sms Main Power On: enables the sending of a SMS message (with the Vega Wireless Camera GPRS) each time the camera is turned on or the power supply is re-established after a blackout. The SMS message will be sent to the phone numbers inserted in the **SMS Number** item to be found in the GPRS configuration page.

Main Power On Message: defines the text of the message sent if the Sms Main Power On item is enabled. The text can be maximum 30 characters long. The default message is PWR ON.

Sms Main Power Off: enables the sending of a SMS message (with the Vega Wireless Camera GPRS) in case of a main power supply lack. The SMS message will be sent to the phone numbers inserted in the **SMS Number** item to be found in the GPRS configuration page.

Main Power Off Message: defines the text of the message sent if the Sms Main Power Off is enabled. The text can be maximum 30 characters long. The default message is PWR OFF.

3.3.7 CALLBACK (only for the VEGA WIRELESS CAMERA GPRS)

In this window you may associate a function of the Vega Wireless Camera GPRS to a phone call. After selecting the phone call association option according to your needs, you may call the phone number of the SIM card in the Vega Wireless Camera GPRS from your mobile phone, as if you were calling an ordinary mobile phone number.

When you get a phone call, the camera detects the incoming phone number by comparing it to the phone numbers inserted in the **Cli Enabled** configuration window. If the user is enabled, the Vega Wireless Camera GPRS performs the enabled function.

Specifically, the camera will deny the phone call without answering and with no costs: in such cases you will normally see a busy line message on your mobile's display. The camera will then send a SMS message or call you in order to confirm the performing of the requested operation.
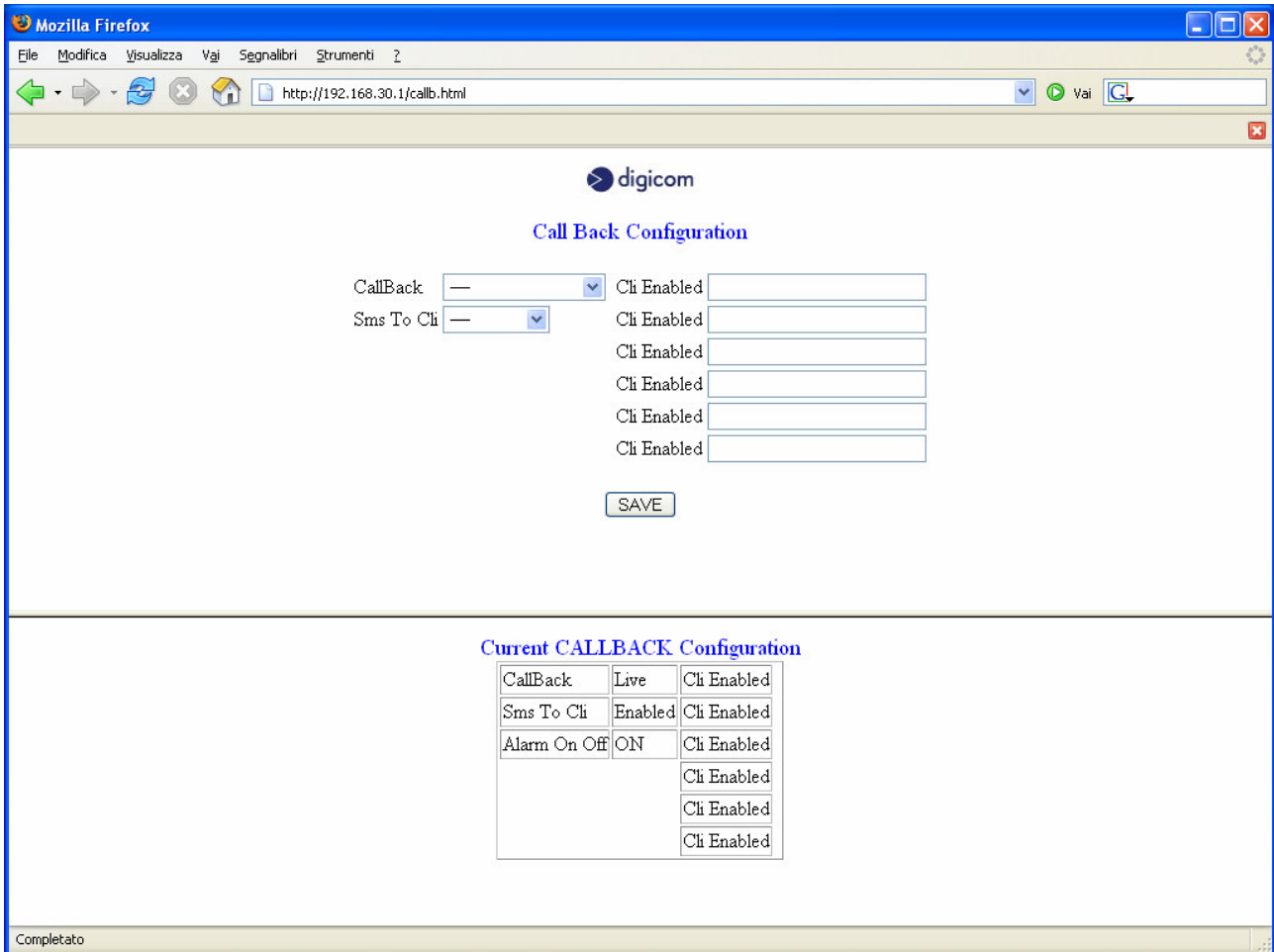
CallBack: in this field you define the function you wish to associate to a phone call.

Disabled	No function associated to a phone call.
Alarm Simulation	The phone call is associated to an alarm simulation. Each time you wish to save the images according to the **Frame before** and **Frame after** settings inserted during the configuration process, you will only need to call the Vega Wireless Camera GPRS phone number from your mobile phone. The camera reads the incoming phone number and compares it to the phone numbers in the **Cli Enabled** configuration page. If the user is enabled, then Vega Wireless Camera denies the call and immediately manages an alarm event, as if the alarm had been detected on one of the digital inputs.

Live	The phone call is associated to an Internet connection request. When you need to access the Vega Wireless Camera GPRS remotely, you only need to call the Vega Wireless Camera GPRS phone number from your mobile phone. The camera reads the incoming phone number and compares it to the phone numbers in the **Cli Enabled** configuration page. If the user is enabled, then Vega Wireless Camera denies the call and immediately activates an Internet connection via GPRS. Then it notifies the user requesting it with its IP address, via a SMS message.
Alarm On Off	The phone call is associated to the camera Standby management. The Standby function allows – with the camera on - to enable or disable the digital inputs and to perform the alarm detection. For example, you may disable the camera before entering home and reactivate it when leaving it. When the Vega Wireless Camera GPRS is active, you only need to call the Vega Wireless Camera GPRS phone number from your mobile phone. The camera reads the incoming phone number and compares it to the phone numbers in the **Cli Enabled** configuration page. If the user is enabled, then Vega Wireless Camera denies the call. From now on the camera will ignore the status changes on the digital inputs and you may, for example, enter home without receiving an alarm message by the camera. When you go out again, to reactivate your camera you just need to behave in the same way: you will have to call the camera that is going to detect the phone number and deny the call again. This time, to make sure about activation, you will receive a phone call by the camera after a few seconds: deny the phone call by pressing the call end button on your mobile phone (usually the red hang-up button). To sum up: - to **disable** the digital inputs, call the Vega Wireless Camera GPRS; this will deny the call without calling back. - to **enable** the digital inputs, call the Vega Wireless Camera GPRS; this will deny the call and after a few seconds it will call you back to confirm the operation.

Cli Enabled: in these fields you must digit the phone numbers of the users who will be allowed to manage the phone call. The phone number should be preceded by the international prefix (e.g. +393351234567).

SMS To CLI: SMS management to confirm the operation.

Disabled	The SMS message with the IP address following a **Live** Internet connection request is sent to all phone numbers in the GPRS configuration page.
Enabled	The SMS message with the IP address following a **Live** Internet connection request is sent to the user who requested the connection and called the Vega Wireless Camera GPRS.

WARNING: before calling the phone number of the SIM card in the Vega Wireless Camera GPRS, check that your mobile phone is enabled to transmit your phone number. If the camera receives an anonymous call (that is no phone number is displayed), it does not perform any operation and only denies the call. Check with your phone company that the SIM card in the Vega Wireless Camera GPRS is enabled to receive voice phone calls. The SIM cards with a Machine To Machine contract are not allowed to receive voice phone calls.

3.3.8 SECURITY

In order to guarantee a more secure access to the camera, you can enable the **User Id** and **Password** request each time you access the configuration pages of the Vega Wireless Camera.
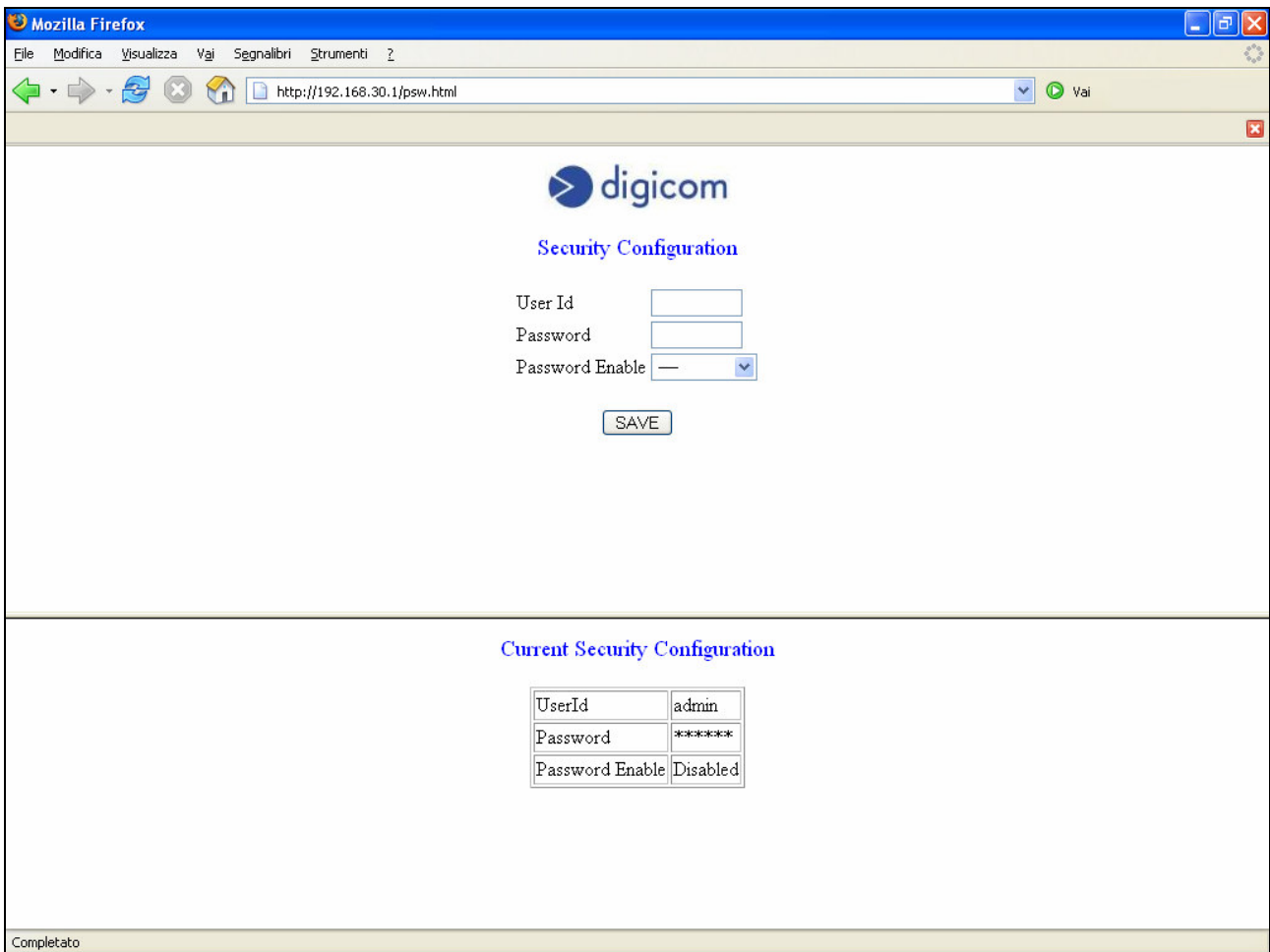
User Id: in this field you must enter the User Id selected to access the camera. The default value is **admin**.

Password: in this field you must enter the Password selected to access the camera. The default value is **digicom**.

Password Enable: enables or disables the authentication request. The default value is **Disabled**.
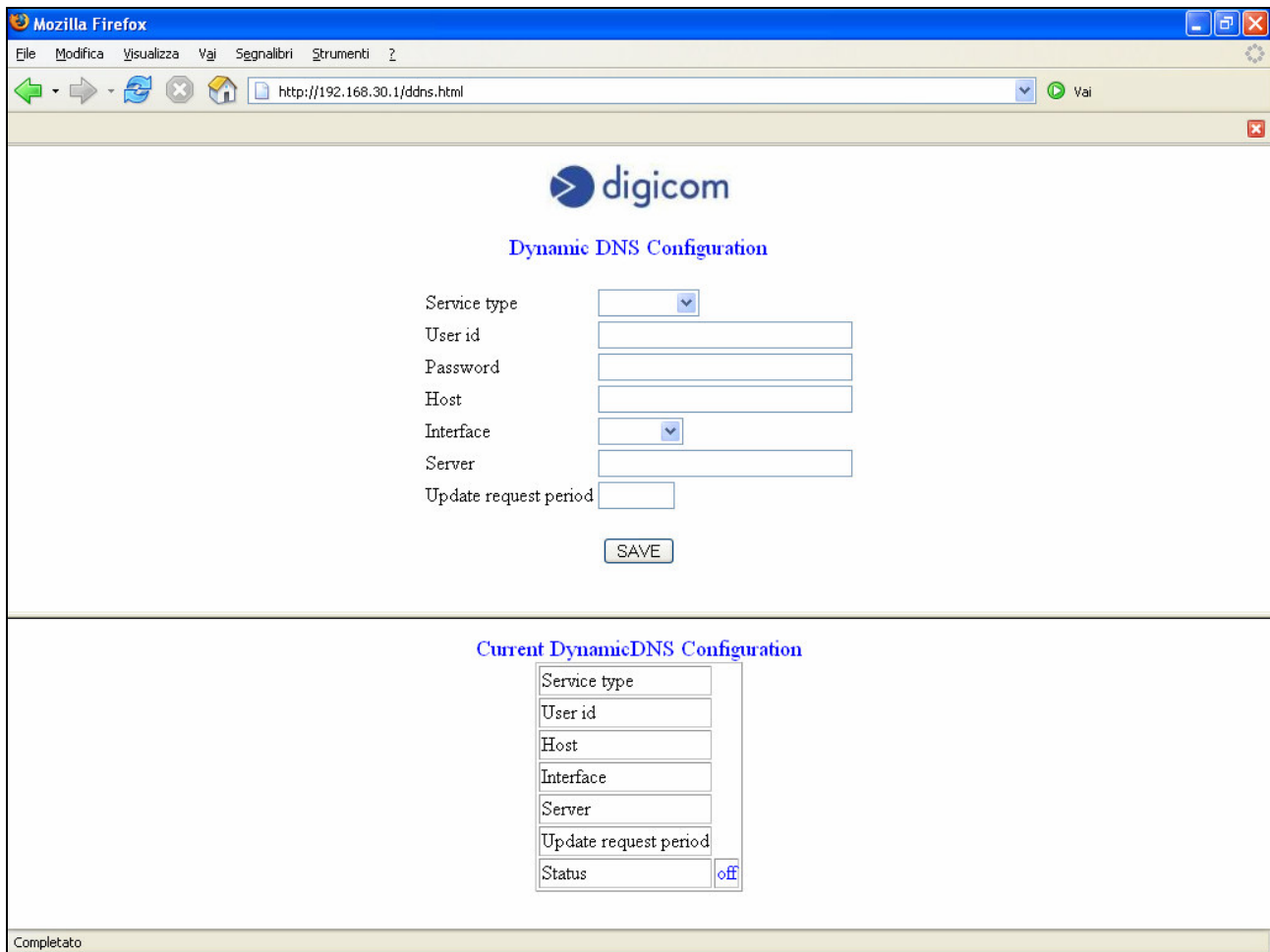
3.3.9 DYNAMIC DNS

If you use an Internet subscription with a dynamic IP address or a GPRS connection, you do not have the chance to offer remote access services because the ISP or phone company assigns a different IP address to the device each time.

To solve this problem, as already described in the previous pages, at each connection the Vega Wireless Camera GPRS notifies the IP address for the current connection by SMS.

Another solution is provided by the services available on the Internet called **Dynamic DNS**, which give the chance to reach the device at any time, with any IP address however registered on the Internet, by using an address such as **yourname.dyndns.org** .

The DDNS services allow to associate a domain name to an IP address dynamically.

In order to use these services you must fill-in a free or pay registration on the web page of the servers providing these services. One of the most famous servers renowned for the Dynamic DNS management is DYNDNS (www.dyndns.org).

Service type: select the server you want to manage the Dynamic DNS.

User id: in this field you must enter the User Id for the registration to the DDNS Server.

Password: in this field you must enter the Password for the registration to the DDNS Server.

Host: in this field you must enter the domain name registered to the DDNS Server.

Interface: select the interface for the Dynamic DNS service.

LAN   The camera will notify the DDNS Server with the IP address assigned by the LAN port. This option can be selected both on the Vega Wireless Camera WLAN and the Vega Wireless Camera GPRS.

Wi-Fi   The Vega Wireless Camera WLAN will notify the DDNS Server with the IP address assigned by the WLAN port. This option is not available with the Vega Wireless Camera GPRS.

GPRS   The Vega Wireless Camera GPRS will notify the DDNS Server with the IP address assigned by the phone company in the GPRS connection This option is not available with the Vega Wireless Camera WLAN.

Server: enter the address of the Server offering the Dynamic DNS service.

Update request period: enter the time frequency (expressed in seconds) for the IP address notification to the Server offering the Dynamic DNS service. Only values between 10 and 999999 seconds are accepted. With a GPRS Interface we suggest to set the value on 20.

Status: in this field you can check the status of the registration to the Server offering the Dynamic DNS service.

Off   Disabled service.

Unreachable   Deactivated interface (e.g. deactivated GPRS Internet connection or LAN wireless link).

Updated   Registration to the Server properly performed.

"msg"   General messages received directly from the Dynamic DNS Server.

3.3.10 ALARM

In this window you may view the images saved by the Vega Wireless Camera on alarm detection.
In the SMS message sent by the Vega Wireless Camera GPRS you can find the direct link to this page, to save time and view the images concerning the alarm event immediately:
http://217.201.196.19/mnt/flash/config/alarm.html .
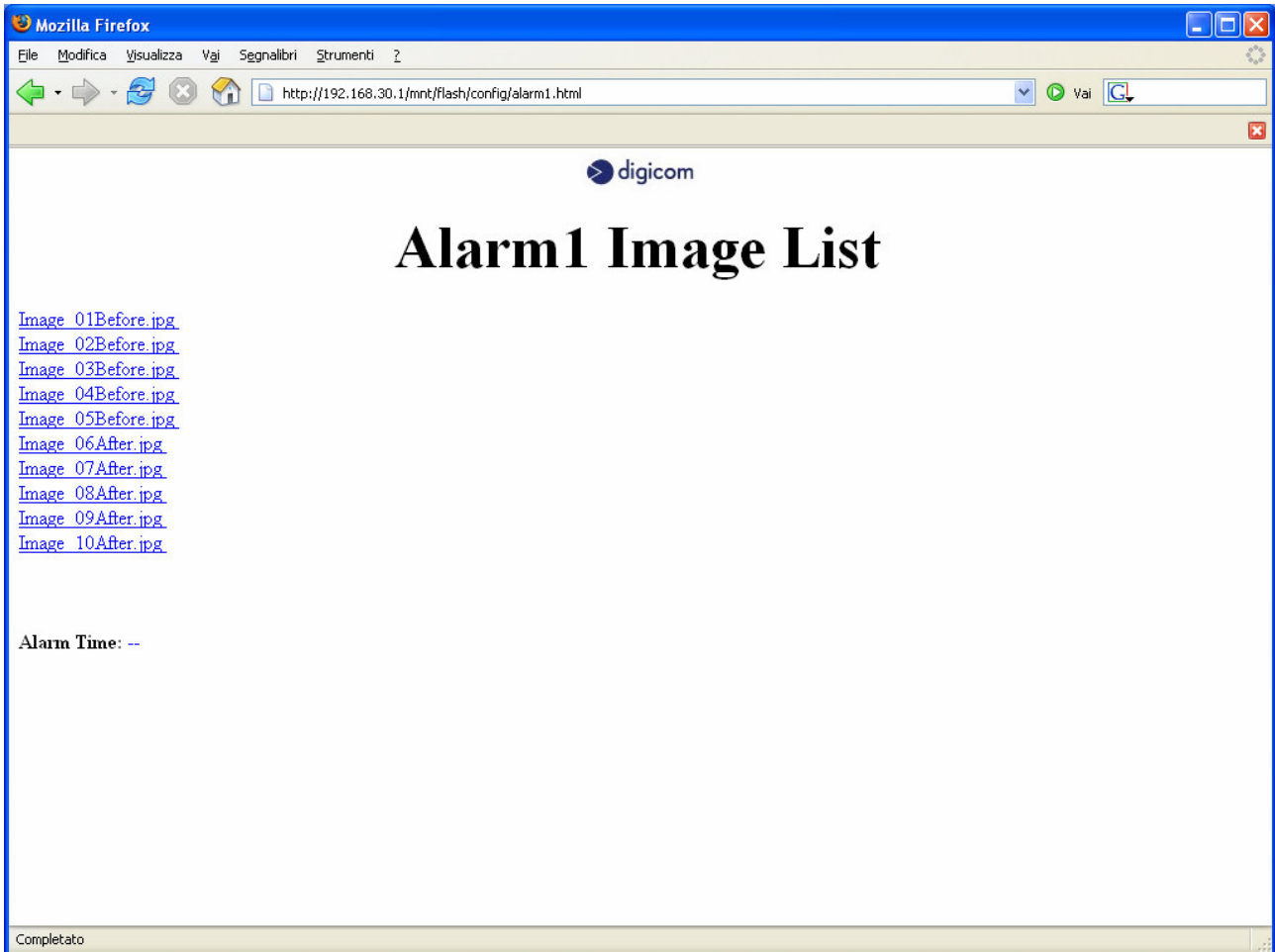
WARNING: the internal memory of the Vega Wireless Camera is 2 MByte. The total number of images that can be saved depends on the image quality and the selected resolution. The Vega Wireless Camera GPRS alerts on the reached memory limit with the message MEMORY FULL contained in the alarm detection SMS. Once this message has been received, the user must view and remove the images stored in memory before proceeding with the camera. The image removal can be performed by selecting the Reset Alarm item in the System page, or by sending the SMS message DELETE to the Vega Wireless Camera GPRS by an enabled user whose number has been inserted in the GPRS page.

3.3.11 LIVE

Click Live from the main menu to view the current shooting status of the camera.
The image displayed refers to the configuration of the previous pages, especially to the settings for the Camera configuration page.
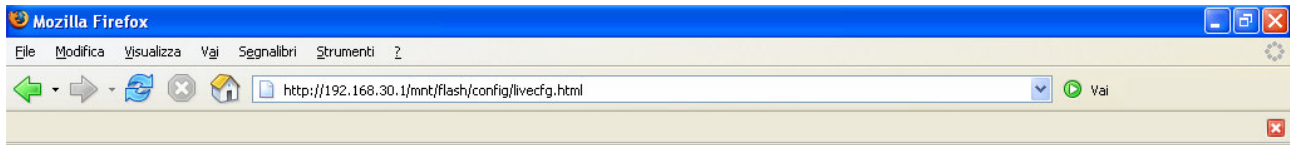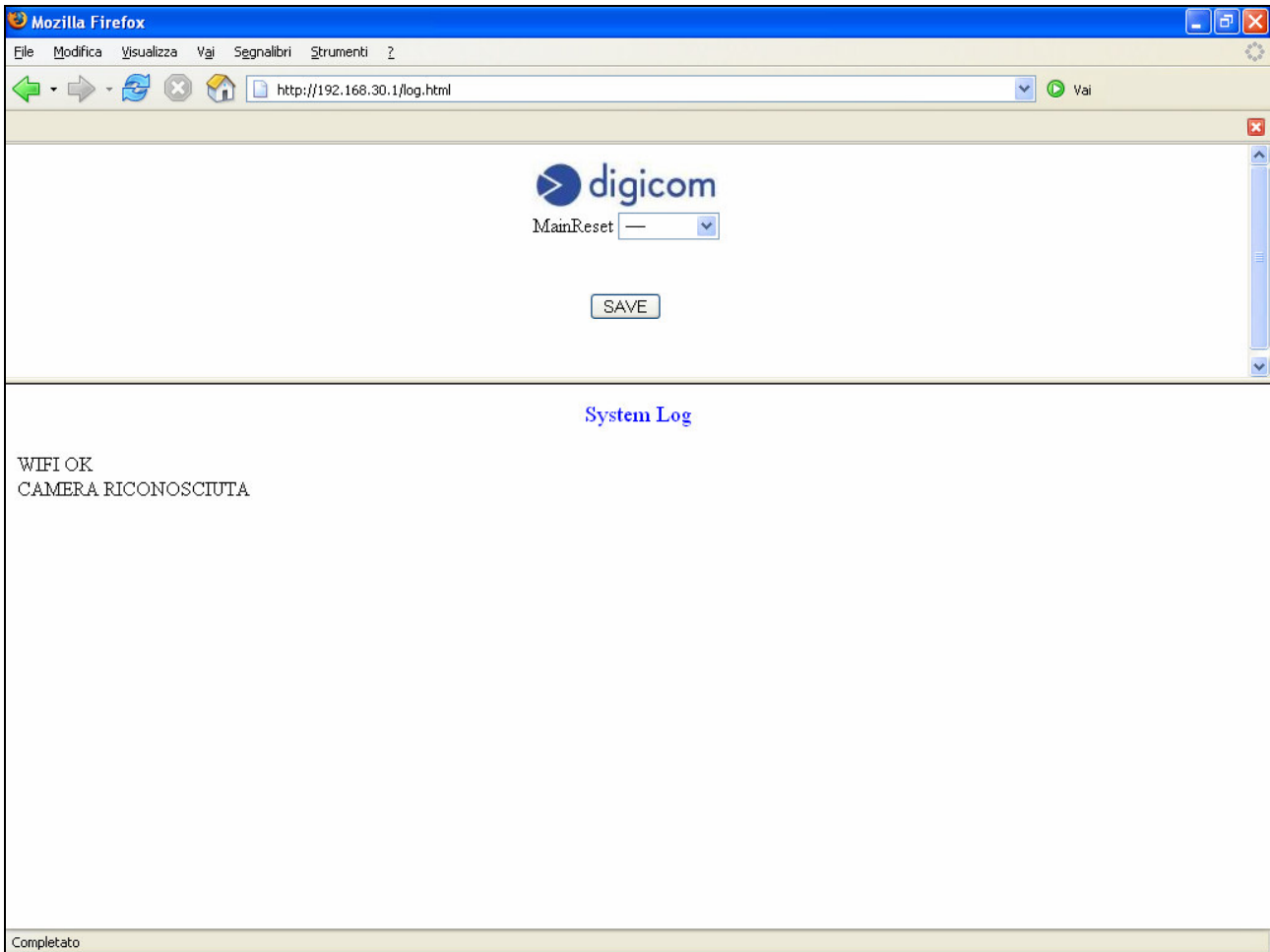
3.3.12 STATUS LOG

In this window you can check the status of the Vega Wireless Camera.

4. F.A.Q. (FREQUENTLY ASKED QUESTIONS) AND TROUBLESHOOTING

Q: What algorithm is used to compress the digital image?
A: The Vega Wireless Camera utilizes the JPEG image compression technology providing high quality images for users. JPEG is adopted since it is a standard for image compression and can be applied to various web browser and application software without the need to install extra software.

Q: Can I change the wireless antenna attached to the Vega Wireless Camera?
A: The wireless antenna can be changed for a variety of reasons such as extending the wireless transmission range. The connectors must be male SMA Reverse Polarity connector type.

Q: What is the wireless transmission range for the Vega Wireless Camera?
A: Generally the wireless distance can go up to 100 meters indoors and up to 300 meters outdoors. The range is limited by the number of walls, ceilings, or other objects that the wireless signals must pass through. Typical ranges vary depends on the types of materials and background Radio Frequency (RF) noise in your home or business and the configuration setting of your network environment.

Q: Can the Vega Wireless Camera be used out-doors?
A: The Vega Wireless Camera is not weatherproof. It needs to be equipped with a weatherproof case to be used outdoors.

Q: What network cabling is required for the Vega Wireless Camera?
A: The Vega Wireless Camera uses Category 5 UTP cable allowing 10 Base-T and 100 Base-T networking.

Q: Can the Vega Wireless Camera be setup as a PC-cam on the computer?
A: No, the Vega Wireless Camera is an Internet Camera used only on Ethernet and Fast Ethernet network and supported by wireless transmission.

Q: Can the Vega Wireless Camera be connected on the network if it consists of only private IP addresses?
A: The Vega Wireless Camera can be connected to LAN with private IP addresses.

Q: Why does a series of broad vertical white line appears through out the image?
A: A likely issue is that the CMOS sensor becomes overloaded when the light source is too bright such as direct exposure to sunlight or halogen light. You need to reposition the Vega Wireless Camera into a more shaded area immediately as this will damage the CMOS sensor.

WARNING: Direct exposure to sunlight may cause permanent damage to the CMOS sensor. Therefore do not expose the Vega Wireless Camera's lens directly to sunlight. The Vega Wireless Camera is designed for indoor usage and if your application requires prolonged exposure to sunlight, a sun visor is recommended to protect the Vega Wireless Camera.