



*Micro server for network surveillance*

## User Manual

Version 2.00



Server Patrol is produced by Area SX- <http://www.areasx.com>

## Congratulation for choosing Server Patrol!

Area SX srl thanks You for the preference you gave us by choosing a Server Patrol device and is always available for any commercial or technical information.

## Contacts

Updated information about SMS Machine devices and latest software release are available on our Web Site at the address <http://www.areasx.com>.



<http://www.areasx.com>

It's also possible to contact us at the following:

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## Warnings

### *Contents and copyright*

Information belonging to this manual may be changed or updated without any warning.

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Area SX srl will not be considered responsible for eventual damages or losses deriving from this document wrong information.

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### *Safety information*

Server Patrol usage may disturb or damage some nearest electronic equipments operations.

So it is recommended to avoid Server Patrol installation close to:

- Biomedical electronic devices
- Aircraft onboard equipments
- Security devices
- Audio, radio and television systems

A complete Dual Band GSM Modem is part of Server Patrol.

This device has the same technical characteristics as normal Dual Band cellular phone, so it is recommended the same usage precautions.

In particular it is recommended not to use Server Patrol wherever it is explicitly forbidden the use of cellular phone or generic telecommunication equipment.

## Introduction to this manual

This manual is intended for users who have to manage with Server Patrol and they need basic knowledge of computer science, in particular TCP/IP network. In order to help users, a synthetic glossary follows.

Updated versions of this manual, new software and firmware release and news about Server Patrol devices may be found on web site at the address <http://www.areasx.com>.

## Glossary

This is a not exhaustive list of the acronyms and the technical terms used throughout this handbook.

**CLIENT** it is a computer/machine able to make request on a TCP/IP network.

**DNS** (Domain Name Server) It is a server that resolves domain names (e.g. [www.areasx.com](http://www.areasx.com)) into related IP address.

**EMAIL** (Electronic Mail) It is the way of transmitting mails over IP network.

**ETHERNET** it is a kind of network and it identifies data transmission mode over cables.

**GSM** (Global Systems for Mobile telecommunications) it is the public mobile phone network based on digital mode voice transmission.

**HTTP** (Hyper Text Transfer Protocol) it is the protocol used over Internet for Web pages transmission.

**LAN** (Local Area Network) it is a computers local network.

**PIN** (Personal Identification Number) it is the four number security code used to protect the access to SIM card

**POP3** (Post Office Protocol version 3) It is the protocol used by E-mail client to check for new incoming messages and download them.

**SIM** (Subscriber Identity Module) It is the smart card, needed by GSM mobile phone, that contains all owner information.

**SERVER** It is computer/machine able to receive incoming request on TCP/IP network.

**SMS** (Short Message Service) it is the kind of message you may send and receive with a GSM mobile phone.

**SMTP** (Simple Mail Transfer Protocol) it is the protocol used for E-mail message transmission.

**TCP/IP** (Transfer Control Protocol/Internet Protocol) it is the protocol stack used over Internet for data transmission.

## Table of contents

<b>Congratulation for choosing Server Patrol!</b>	<b>3</b>
<b>Contacts</b>	<b>3</b>
<b>Warnings</b>	<b>4</b>
Contents and copyright	4
Safety information	4
<b>Introduction to this manual</b>	<b>5</b>
<b>Glossary</b>	<b>5</b>
<b>Product description</b>	<b>8</b>
<b>Technical characteristics</b>	<b>9</b>
Inner devices	9
Dimensions	9
Electrical characteristics	9
Performances	9
<b>Server Patrol installation</b>	<b>10</b>
Package description	10
Installation requirements	10
SIM card insertion	10
<b>Connections</b>	<b>12</b>
Rear panel	12
GSM antenna connection	12
Power supply connection	13
Ethernet network connection	13
Temperature and humidity sensor connection	14
<b>Server Patrol ignition</b>	<b>15</b>
Front panel LEDs meaning	15
GSM yellow LED	15
PWR green LED	15
ERR red LED	15
L 1 green LED	15
L 2 green LED	15
Front LEDs signalling codes	16
<b>Server Patrol configuration</b>	<b>17</b>
Network configuration	17
<b>Configuration utility</b>	<b>18</b>
Configuration functions	19
Network	19
IP address	19
Netmask	19
Gateway	19
DNS	20
SMTP Server	20
New password – Repeat password	20
Contacts	20
GSM number 1 – 6	20
Email address 1 – 6	20
General	20
System identification	20
Service centre number	20
Alarm Email 'from' field	20
Notifications number	20
Temperature check time interval	21
Upper and lower temperature alarm thresholds	21
Servers check time interval	21
Connection attempts before sending alarms	21
Server	21

Control table to configure .....	21
Server Label, Server Address, Port, Expected Response .....	21
Status.....	22
Test Config .....	22
Send a test SMS.....	22
Send a test E-Mail .....	22
Logout.....	22
<b>Server Patrol control via SMS .....</b>	<b>23</b>
Commands list.....	23
<b>HTML control panel .....</b>	<b>25</b>
<b>Factory configuration restoring .....</b>	<b>27</b>

## Product description

Server Patrol is a network surveillance and monitoring device and that is very useful for those people who need to have under control their network service 24 hours a day. In fact Server Patrol can control up to 128 TCP/IP connections (or TCP/IP services) and measure environment temperature and humidity. If alarm conditions are revealed, it can send alert messages, via SMS or Email or both simultaneously, to a configurable group of address.



*Server Patrol – front view*

Server Patrol encloses on board:

- a Dual Band GSM modem, capable of receiving and sending SMS messages over GSM network, for this reason Server Patrol needs an ordinary SIM card, belonging to any mobile operator, to send alarm messages via SMS
- a network processor with Ethernet connection, capable of internetworking with TCP/IP based applications, using the most spread communication protocols.



## Technical characteristics

### *Inner devices*

#### **Dual band GSM modem EGSM900 and GSM1800**

- Output power class 4 (2W) for EGSM900
- Output power class 1 (1W) for GSM1800

#### **Network processor**

- Ethernet connection 10Mbit with RJ45

#### **Termohygrometric sensor**

- Temperature range: -40° - 100° +/-0.5°
- Humidity range: 0-100% UR +/-3.5%

### *Dimensions*

- Height: 40mm
- Weight: 115mm
- Length: 175mm (without connectors)

### *Electrical characteristics*

- Extended voltage power supply 9 – 15V AC and DC
- Average consumption 18W
- Operating temperature: 0 – 55 °C

#### **Power adapter**

- Input voltage 220 Volt AC 50Hz
- Output voltage 12 Volt DC 500mA

### *Performances*

- Transmission top speed 300 SMS per hour
- Reception top speed 300 SMS per hour

## Server Patrol installation

### *Package description*

Server Patrol is delivered inside its cardboard box, well protected from mechanical shocks that may occur during transport.

Once you opened the package, you will find the following:

1. A Server Patrol
2. A CD containing the configuration tool and user documentation
3. A GSM antenna
4. A 12V power adapter
5. A temperature and humidity sensor

Each component has been accurately checked before delivering Server Patrol, please avoid using third party components that may damage its inner devices!

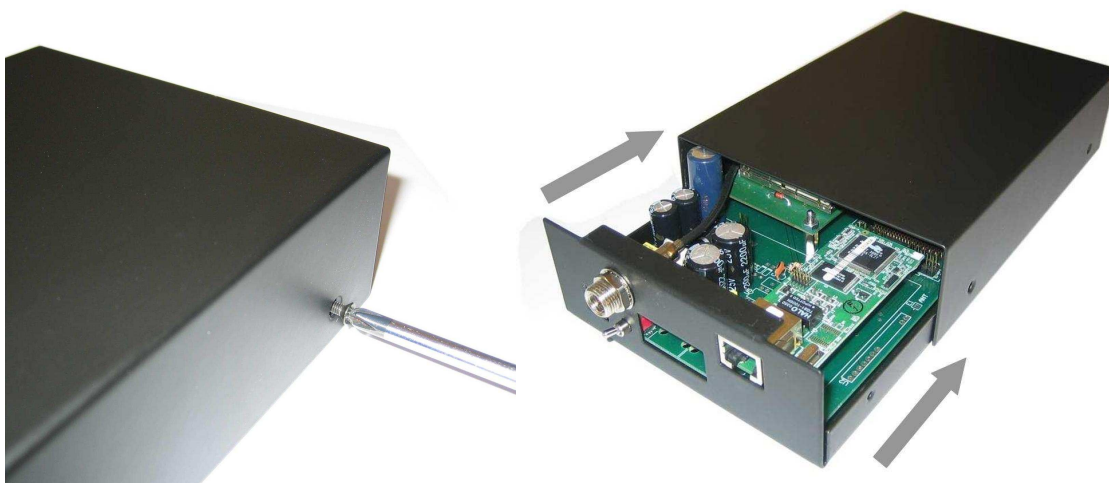
### *Installation requirements*

To succeed in Server Patrol installation, you need:

1. **A SIM card** belonging to any mobile operator, both prepaid or not. Before inserting the SIM card into Server Patrol, you should try it with an ordinary mobile phone to verify that it is able to send and receive SMS and PIN is disabled. You have also to cancel the mobile operator Service Centre number from the SIM: you will choose it during configuration. Please refer to the mobile phone documentation to complete these operations.
2. **A good GSM field level.** Before inserting the SIM card into Server Patrol, you should use it with an ordinary mobile phone to verify that there is a good GSM field level where you will place the antenna.
3. **Ethernet connection.** Server Patrol has a 10Mbit Ethernet socket to be connected on your LAN by an Hub/Switch. Please be sure that the Hub/Switch socket is 10Mbit or 10/100Mbit. Beyond physical connection to your network, you need some information about it (IP addresses, Netmask, Gateway, DNS Server) to configure Server Patrol. So you may need to refer to your network administrator to collect this kind of information.
4. A 220 VAC power supply.

### *SIM card insertion*

To protect SIM card by accidental extraction from the modem during operation, its socket is inside Server Patrol aluminium case. So to reach SIM card socket, unlock the four screws using a crossed screwdriver and make the case cover slide ahead as you can see in the next figure.



*Case cover opening*

Once you opened the case, find the GSM modem and insert the SIM card in its socket as showed by the sketch on the modem itself and in the next figure. Push the SIM card to the bottom of its socket until you will feel a little leap which means it is locked.



*SIM card insertion*

When it is necessary to unlock the SIM and release it, you need to slightly push on its edge in the same direction of insertion. An inner spring will push the SIM card outside enough to grab it.

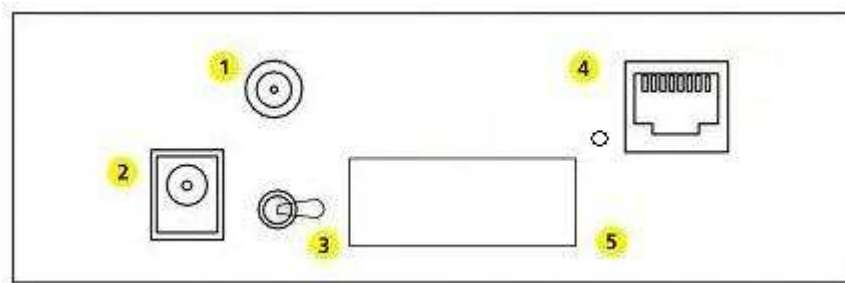
To close the case, make its cover slide backward paying attention to the signalling LEDs: they must be correctly aligned to their front panel holes. Now you need to lock the case with the provided four screws.

## Connections

### Rear panel

Next figure shows a sketch of Server Patrol rear panel. Here the description:

- **FME socket for GSM antenna.** In order to protect GSM modem from damage, avoid carefully to turn on Server Patrol without having already connected antenna cable to this socket.
- **Power supply.** Use only the provided power adapter to protect Server Patrol inner device from damage due to third party component.
- **Power switch**
- **Ethernet RJ45 socket** for LAN connection, pin hole for link LEDs status checking
- **Temperature and humidity sensor socket**



*Server Patrol rear panel*

### GSM antenna connection

For antenna connection, insert the FME connector into the socket on Server Patrol rear panel as previously described. This connector has a threaded metal ring that has to be screwed till the end without forcing.



*GSM antenna connection*

**Attention!!** Avoid absolutely to turn on Server Patrol without having already connected the antenna. Otherwise irreparable damage may occur to the inner GSM modem.

### ***Power supply connection***

Insert the power adapter connector on Server Patrol rear panel, then plug it into a power supply socket. Turn on the switch and check if the green LED (PWR) on front panel is correctly lit.



*Power supply connection*

### ***Ethernet network connection***

Use an ordinary UTP cable with RJ45 plug to connect Server Patrol to a network Hub/Switch. Be sure that Hub/Switch socket supports 10Mbit Ethernet devices. After turning on Server Patrol check if the link LED next the Ethernet socket is correctly lit. You can see it through the pin hole next the socket on the rear panel.



*Network connection*

### ***Temperature and humidity sensor connection***

On Server Patron rear panel there is also a socket for temperature and humidity sensor connection. Insert the sensor plastic plug into its socket until you feel a little leap.



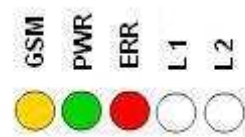
*Temperature and humidity sensor*

## Server Patrol ignition

Once all the connections are realized as previously described, you may turn on Server Patrol using the switch on the rear panel.

On front panel you would be able to see signalling LEDs as the following:

- **GSM LED** (yellow) Blinking
- **PWR LED** (green) Turned on
- **ERR LED** (red) Turned on
- **L 1 and L 2 LED** (green) Turned off



After about 60 seconds, ERR red LED would have to turn off showing modem registration over GSM network. If it doesn't happen, check the LEDs L1 and L2 status and verify the signalling meaning reading next section.

### *Front panel LEDs meaning*

#### **GSM yellow LED**

This LED shows GSM modem operation. A fast blinking means that the modem is attempting to register over GSM network. When blinking becomes slower, it means modem is registered and Server Patrol is ready to work.

#### **PWR green LED**

This LED shows a correct power supply status.

#### **ERR red LED**

This LED is on when you have just turned on Server Patrol until the modem is registered over GSM network, then it turns off. It is also on when Server Patrol microprocessor encounters an error (see next table for LEDs meaning).

#### **L 1 green LED**

Generic signalling LED (see next table for LEDs meaning)

#### **L 2 green LED**

Generic signalling LED (see next table for LEDs meaning)



## Front LEDs signalling codes

In this table is summarized the meaning of the front LEDs signalling codes.

LEDs status	Revealed problem	Possible solutions
ERR: off L1: off L2: off	Normal operation, no alarm in progress	
ERR: off L1: on L2: (meaningless)	Alarm buffer is full. Each new alarm will not be notified	Server Patrol cannot send alarm notification SMS. Check the GSM Service Centre number configuration
ERR: off L1: (meaningless) L2: on	Alarms in progress	
ERR: on L1: on L2: on	SIM missing or not working or PIN required	Check having inserted the SIM, having disabled the PIN request and that SIM card is working correctly
ERR: on L1: off L2: off	GSM modem is not working correctly (not registered, registration in progress)	Wait for modem registration, check that SIM card is qualified on GSM network
ERR: blinking (4 times) L1: blinking (4 times) L2: (meaningless)	SMS transmission refused by the modem	Check the GSM Service Centre number configuration
ERR: on L1: (meaningless) L2: on	GSM Service Centre number not configured	Configure GSM Service Centre number using configuration utility
ERR: blinking L1: (meaningless) L2: (meaningless)	Low GSM field level	Move Server Patrol in a place where GSM field level is higher (for the chosen SIM card mobile operator)



## Server Patrol configuration

### Network configuration

First of all, you need to configure Server Patrol with right IP address and netmask in order to connect it to your network.

Server Patrol has a default network configuration with IP address **192.168.0.101** and netmask **255.255.0.0**.

There are two way to configure Server Patrol: via Ethernet or via SMS.

#### 1. Via Ethernet configuration

Be sure that Server Patrol is connected to your LAN through an 10/100Mbit Hub/Switch and your PC IP address is between 192.168.0.1 and 192.168.0.254, except obviously 192.168.0.101, and netmask is 255.255.0.0. Server Patrol doesn't work on HUB/SWITCH without 10Mb or 10/100Mbit sockets.

You may connect your PC and Server Patrol not only through an Hub/Switch, but also directly with a network crossed cable (CROSS-OVER).

Once your PC is under this condition, you would have to reach Server Patrol by a simple *ping* towards its default address 192.168.0.101.

To execute a *ping* towards Server Patrol, you have to launch a DOS command prompt and type:

**C:>ping 192.168.0.101**

If the *ping* answer is correct, you may launch the configuration tool PatrolConfig and configure network parameters device as you need.

#### 2. Via SMS configuration

Be sure that Server Patrol is correctly working and that **ERR** red LED is off (it means the modem is registered on GSM network). Using an ordinary mobile phone, send the following SMS message to Server Patrol (i.e. to the SIM card inside the modem):

**PWD:SMS1234:IP:xxx.xxx.xxx.xxx:NETMASK:yyy.yyy.yyy.yyy**

where xxx.xxx.xxx.xxx is the IP address and yyy.yyy.yyy.yyy is the netmask you want to assign to Server Patrol. Wait sometimes (from few seconds up to some minutes) to let GSM network deliver the SMS message to Server Patrol. From this moment on, Server Patrol is ready to work on the network.

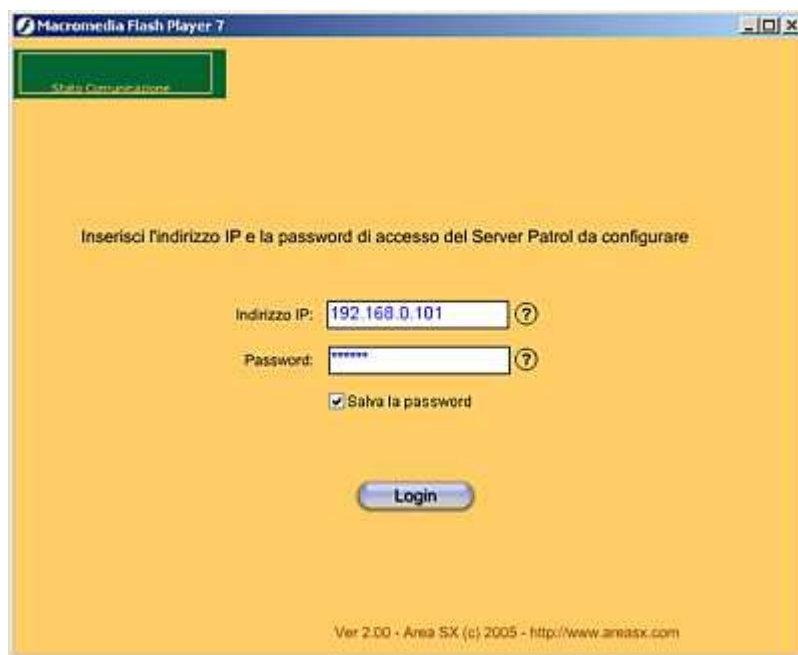
When you write the message, be sure to use the character ':' to divide each field. On the other hand the message is 'case insensitive'. For other information, please refer to next section dedicated to SMS commands.

## Configuration utility

In order to work properly, Server Patrol must be configured with all the monitoring parameter using the configuration tool **PatrolConfig.exe**: it is in **Server Patrol** folder that you will find in the provided CD.

This tool, that runs over Microsoft Windows 95/98/ME/NT/2000 and XP machines, doesn't need any installation and may be also launched directly from the CD.

Once launched, the configuration tool asks for login: you have to type Server Patrol IP address (default 192.168.0.101) and access password (default *SMS1234*).



*PatrolConfig.exe login interface*

Every time a command or a configuration request is executed, a communication information will flash in the left top part of the screen: it shows data transfer attempt to or from Server Patrol. When you use a PatrolConfig command (e.g. configuration data storing), wait until this information stops blinking, that is communication has ended, before execute an other command.

If the login is successful, PatrolConfig let us enter in the configuration functions menu.



*Functions menu*

Starting from this menu, it is possible to enter all Server Patrol configuration and control parameters.

## Configuration functions

Next sections describe the meaning of all the parameters that you may modify during configuration.

Each configuration interface has a button **SEND** to be clicked, to actually load Server Patrol with new parameters. Please note that if this button is not clicked, Server Patrol will not be updated with changes you made.

## Network

This interface allows the configuration of all parameters concerning Server Patrol networking. Be careful in configuring correctly these parameters: in case of mistake, you would not be able to reach Server Patrol on your network anymore. If it happens, you may follow the procedure (described ahead) for factory configuration restoring or configure again the device via SMS.

### IP address

It is the new IP address you eventually want to assign to Server Patrol. In fact, if default IP address **192.168.0.101** doesn't fit to your network, you may choose whichever other address to assign to Server Patrol.

**Attention:** once changed the IP address, configuration tool SMSCONFIG will not be able to reach Server Patrol anymore. So you need to **logout** and **login** once again using the new address.

### Netmask

It is the netmask of the network where you want to use Server Patrol. Default value is 255.255.0.0. As said before, changing the netmask you need to **login** once again.

### Gateway

It is the IP address of a server able to route on the outside network all the packets not addressed to

local network machines. This parameter must be configured only if Server Patrol needs to reach a server outside from the local network (e.g. on the Internet).

## DNS

It is the IP address of an effective DNS server. This parameter must be configured only if server names are used instead of their IP address.

## SMTP Server

It is the IP address of an effective SMTP server (i.e. a server for E-mail delivering). This parameter is needed only if Server Patrol will send alarms via E-mail.

**Attention:** the specified mail server must be able to relay messages coming from the IP address assigned to Server Patrol. To check it, you may use test alarm sending function (described ahead).

## New password – Repeat password

These two fields have to be filled with the same string, if it is desired to change Server Patrol access password. If you forget this password, you may follow the procedure described ahead for factory configuration restoring.

## Contacts

### GSM number 1 – 6

These are the GSM numbers that will receive alarm SMS messages. Each of these fields may be used or left blank.

### Email address 1 – 6

These are the Email address that will receive alarm SMS messages. Each of these fields may be used or left blank. The E-mail address allowed length is up to 50 characters.

## General

This interface allows the configuration of Server Patrol SIM card parameters and other general system parameters.

### System identification

It is a text string that Server Patrol will use 'to sign' alarm Email and SMS messages. Its length can be up to 30 characters and can not contain special characters as '%', '&', '/', '?', '='.

### Service centre number

It is the Service Centre number for SMS sending and it is different from one mobile operator to another. Clicking on one of the three major mobile operator logo, you will automatically fill this field.

### Alarm Email 'from' field

It is the sending address ('From' field) in alarm Email sent by Server Patrol.

### Notifications number

This number shows many times a single alarm is notified via Email and via SMS. It is possible to stop the notifications of a current alarm using Acknowledge communications (refer to HTML interface and SMS commands section). Even if this number is set to zero, the alarm will be notified once.

## Temperature check time interval

It is the number of minutes between a temperature and humidity check and the following one. At least its value is 1 minute.

## Upper and lower temperature alarm thresholds

In these fields it is possible to set two temperature thresholds in °C: if the environment temperature goes down the lower limit or it exceeds the upper one, Server Patrol will send alarm messages. When it happens, Server Patrol will wait that the temperature comes back in the allowed range by 0.5 °C at least, before sending ceased alarm messages.

If the environment temperature is less then 1.5 °C far from the configured thresholds, on the HTML page a pre-alarm condition will be shown (refer to HTML interface section).

## Servers check time interval

It is the number of minutes between a servers check and the following one. At least its value is 1 minute.

## Connection attempts before sending alarms

It is the number of consecutive failed connections that must happen before Server Patrol sends alarms. In fact it is possible that, for problems due to busy network, some requests may fail even if the server under control is working correctly. If you desire to receive a quick alarm, as soon as one connection attempt fails, set to 1 this parameter.

If one of the allowed attempts fails (i.e. this parameter is larger than 1) on the HTML page a pre-alarm condition will be shown (refer to HTML interface section).

## Server

With this interface it is possible to configure all the servers and the services that Server Patrol must have under control. The list of servers and services to control, is divided in tables each containing 8 elements. Each table may be configured apart from the other ones and there is no specific sequence to follow.

## Control table to configure

This field allows to choose the control table to configure. Once the choice is made, it is necessary click on **“Load Table”** button to make the configuration tool retrieve current parameters from Server Patrol.

## Server Label, Server Address, Port, Expected Response

In these fields it is possible to specify all the server parameters to be controlled. Each of the eight rows may be equally used or left blank.

Configure Label field with a text string to easy identify the server or the service (e.g. “Area SX Web Server”, “Ping to router”).

Configure Address field with the IP address or name of the server to be controlled. In the case the server is not on the same Server Patrol network, you must be sure that Gateway parameter (refer to Network section) is correctly configured. In the same way, if you use server name instead of its IP address, you must be sure that DNS parameter (refer to Network section) is correctly configured.

For each address it is possible to specify also a Port number. If this field is left blank or set to 0, Server Patrol will execute only a PING ICMP request. If a port number different from 0 is specified, Server Patrol will attempt to establish a TCP/IP connection verifying this way the service availability on this port.

Expected Response parameter can be left blank (in this case Server Patrol will check only that a

response comes back from the network) or can be specified. In this case Server Patrol will check that the received response contains the configured text string. Note that this field parameter is used only if a port value different from zero is set.

## Status

This interface shows all the information about Server Patrol current operation status:

- GSM field level
- Last error occurred on GSM modem
- The number of current server alarms
- The number of current temperatures alarms
- Total number of notified alarms since Server Patron has been turned on
- Measured temperature
- Firmware version

## Test Config

From this panel it is possible to execute Server Patrol alarm tests, both via Email and via SMS. This operation is useful to understand if configuration parameters have been correctly set.

### Send a test SMS

When you click on this button, you will cause a test SMS sending to the GSM numbers configured as previously described (refer to Contacts section).

If the SMS sending fails, the causes may be: wrong Service Centre number configuration (refer to General section), modem not registered on GSM network, not sufficient GSM field level (for chosen SIM card mobile operator).

### Send a test E-Mail

When you click on this button, you will cause a test Email sending to the Email addresses configured as previously described (refer to Contacts section).

If the Email sending fails, the causes may be: wrong SMTP server configuration (refer to Network section) or this server doesn't allow Email relay. In fact SMTP servers generally don't allow Email relay if these messages don't come from "authorized" IP address. So you need to be sure that the SMTP server you want to use, supports relay of Email coming from Server Patrol IP address.

**Attention:** for the current firmware version, it is not possible to use for Email relay, SMTP servers that require user authentication (e.g. "POP before SMTP" or SMTP Authentication).

## Logout

It is the configuration utility exit, the login interface will be shown.

## Server Patrol control via SMS

Some of Server Patrol functions are available also via SMS, just sending particular SMS message to Server Patrol (i.e. to the SIM card inside the modem).

SMS messages are case insensitive and can contain more than one command (except where only one command is specified). Each command and each value must be divided by ':' character and the 'Password' parameter must be always present, otherwise the message will be discarded. In the same way the message will be discarded if it comes from a not identifiable GSM number (e.g. short number messages used by mobile operators).

An example of correctly written message follows:

**PWD:value:COMMAND1:VALUE:COMMAND2:COMMAND3:VALUE**

### Commands list

- **PWD:** to send Server Patrol access password
  - **Format:** *PWD: current\_value*
  - **Response:** "Wrong Password" in case of unsuccessful password check. In case of success, response depends on the request commands
  - **Description:** this command must be present in each SMS message otherwise it will be discarded by Server Patrol without any response. In case of wrong password, as said before, Server Patrol answers with an error SMS message and commands are not executed
- **IP:** to send and assign a new IP address to Server Patrol
  - **Format:** *IP:xxx.xxx.xxx.xxx*
  - **Response:** response to this command is "*Ip Set*". Since there is no check on the IP address value, no unsuccessful response is expected
  - **Description:** since this command change Server Patrol address and no check is executed on this parameter value, pay attention when you use this command. However in case of wrong configuration, it is always possible to restore factory configuration using the procedure described ahead
- **NETMASK:** to send and assign a new netmask address to Server Patrol
  - **Format:** *NETMASK:xxx.xxx.xxx.xxx*
  - **Response:** response to this command is "*Netmask Set*". Since there is no check on the IP address value, no unsuccessful response is expected
  - **Description:** since this command change Server Patrol netmask and no check is executed on this parameter value, pay attention when you use this command. However in case of wrong configuration, it is always possible to restore factory configuration using the procedure described ahead
- **STATO:** to request current Server Patrol operation status
  - **Format:** *STATO*
  - **Response:** SMS message containing Server Patrol operating status. Included parameters are: device id, number of current server alarms, temperature alarm status and current temperature value, current humidity value
  - **Description:** this command allows to have a synthetic operating status of Server Patrol. In the response message the most meaningful parameters and their current values are listed
- **ACK:** to send an alarm acknowledgement to Server Patrol

- **Format:** *ACK:alarmid*
- **Response:** successful response to this command is "*Acknowledge executed on alarmid*" and the unsuccessful one is "*Alarm Id not found*"
- **Description:** this command allows to stop alarm notifications after the first ones (when notifications number have been configured with a value larger than 1). *alarmid* parameter identifies the specific alarm notifications to stop and its value appears inside notifications themselves. The same acknowledgement operation can be executed from the HTML panel described in next section.



## HTML control panel

HTML control panel allows an immediate view on servers status, just using an ordinary Web browser (e.g. Internet Explorer).

To access to this control panel, you need only to make an HTTP request with your browser, toward the IP address of the Server Patrol that you want to check. For example if you are using the default IP address, just type <http://192.168.0.101/> in your browser.

If the connection with Server Patrol is successful, a web page that shows configured servers main information, will be displayed. This page will be reloaded automatically every 60 seconds to show operations status updates.

Next figure shows a screenshot of this web page followed by its description.

Tabella numero 1 di 8. Server da 1 a 8

#	Server Label	Server Address	Port	Status	Ack
0	Server 3 HTTP	195.130.249.254	80	✓	✓
1	Server 3 Tomcat	195.130.249.254	8080	✓	✓
2	Server SQL	192.168.0.227	0	✓	✓
3	Mail Server	195.130.249.253	25	✓	✓
4	Area SX Web	www.areasx.com	80	✓	✓
5	Server 1	192.168.0.220	0	✓	✓
6	Area SX Mail	195.130.249.244	25	✓	✓
7	STS Consulting	www.stsconsulting.it	80	✓	✓
Temperatura attuale 23.0 gradi C		Temperatura Bassa		✓	✓
		Temperatura Alta		✓	✓

Operazione completata Internet




HTML control panel

**Server Label:** it is the configured text string to easy identify the server or the service

**Server Address:** it is the IP address of the server under control

**Port:** it is the port under control

**Status:** server status, in next table possible values are shown

	OK – No connection attempt has failed
	PRE-ALARM – At least one connection attempt has failed. This status appears only if the configured number of connection attempts before alarm is larger than 1
	ALARM – The configured number of failed consecutive connection attempts has been reached. The server status is alarm

**Ack:** alarm acknowledgement status. When an alarm is active or when it has ceased, Server Patrol starts to send notifications via SMS and via EMAIL. If the notifications number has been set larger than 1, in this column a text field and an acknowledgment button will appear. If you want to stop notifications sending, fill the text field with the Server Patrol password and click the button.

The same alarm acknowledgement operation can be executed via SMS as shown in previous SMS command section.

A the top of this HTML panel you will find some browsing buttons that allow to show other servers tables or to reload the current page without waiting 60 seconds.

## Factory configuration restoring

Whenever you want, it is possible to restore Server Patrol factory default configuration.

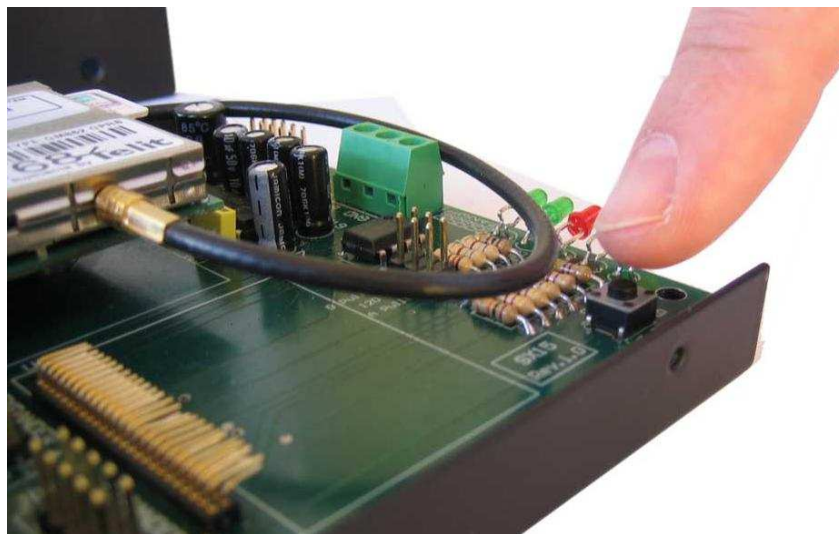
This operation may be useful when it is impossible to access to Server Patrol because, for example, you forgot IP address or password.

In order to complete this operation follow this procedure:

- Turn off Server Patrol
- Remove the case cover
- Find the **BTN1** button, as shown in next figure
- Press this button and keep on pressing it while you turn on Server Patrol again
- Keep on pressing the button and wait until ERR and L1 LEDs are lit at the same time
- Release the button
- Turn off e turn on again Server Patrol

This way Server Patrol will restart with all parameters default configuration, in particular you will access it again using IP address 192.168.0.101 (netmask 255.255.0.0) and password *SMS1234*.

**ATTENTION:** this procedure will cancel ALL the control parameters previously configured. It will be necessary configure completely the machine one more time.



*BTN1 button for factory default configuration restoring*

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