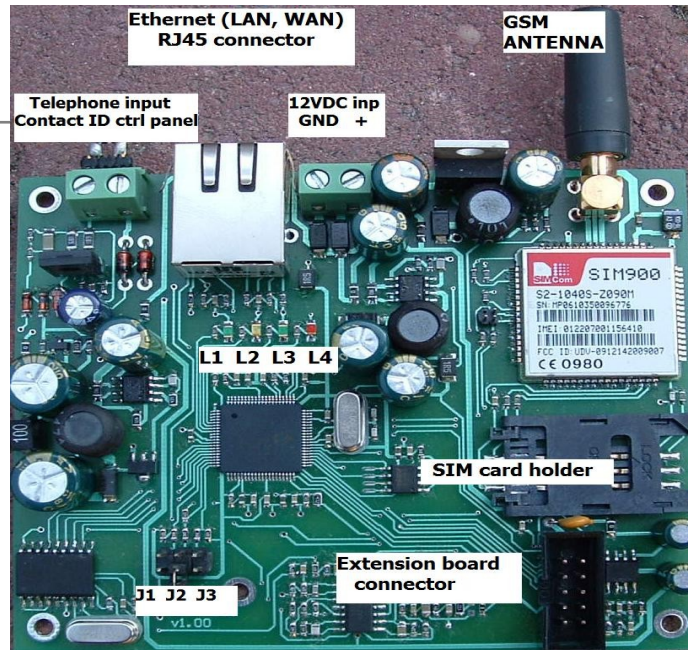


SPG 1000

Multi functional TCIP/GPRS Security transmission module

The module can take any conventional Ademco Contact ID security control panel and transfer it into SIA IP DC9 protocol either in 128 bit encrypted or not encrypted format. The SPG 1000 is a „motherboard” for the SPG 84 8 zone input, 4 zone control/output security control panel which is a small independent security panel.

SPG 1000 controls ethernet and GPRS channels and is capable of sending e-mail and SMS messages.



Features:

- SIA IP DC9 protocol (SIA TCP/UDP/Encrypted, Closed socket)
- 24 hour connection with the server (min.test signal interval is 10 sec)
- DHCP / Fix IP
- Two server reporting as backup, DYN DNS server
- Web user and installer interface for programming or control
- Remote access through Ethernet network.
- Firmware upgrade
- 8/4 input/ output, Dallas iButton arming security plug on module
- Industrial data transmission through contacts or RS232 port
- E-mail and SMS sending
- SMS commanding
- Full functional 8 zone security control panel with SPG 84 expansion board (optional)

1.0. Hardware description

1.1. Main parts:

- 1 Fixing holes
- 2 Wire terminals
- 3 Jumpers
- 4 L1,L2, L3, L4 Control LEDs
- 5 Expansion board socket
- 6 GPRS control LEDs
- 7 SIM-holder
- 8 Ethernet socket

Fixing Holes:

There are 4 pcs of fixing holes.

Wire terminals:

GND Ground
 +IN 12 VDC power
 Telephone Input of the control panel

Jumpers:

Factory reset jumpers will re set the following parameters:

- Administrator password: admin
- IP address : 192.168.254.253
- Netmask: 255.255.255.0
- Gateway: 0.0.0.0
- HTTPd port: 8080

Reset:

- 1 Remove power
- 2 Connect pins with the provided shortcut jumper
- 3 Apply power
- 4 Remove jumper

J1 Not used
 J2 Automatic firmware download through Internet
 J3 Factory reset

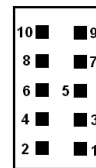
If J2 and J3 both closed than the latest firmware will be reloaded.

Control LEDs:

L1 GSM STATUS
 double flash – GSM is powered
 SIM/ or other fault- 0.5s On /0.5s Off
 If LED does not light – GSM is not ready (for example no GSM signal)

Module is on the GSM network but it can send only SMS – blink in every 4second
 Normal status- Blink in 1s
 SMS sending- blinks in 0,1 s
 SMS receiving – long light
 GPRS connected- double flash
 L2 General fault
 L3 Communication fault
 L4 Communication fault with the security control panel

Extension board connector:



- 1 GND
- 2 12V
- 7 RX TTL 3,3 V serial port
- 8 TX TTL 3.3V serial port

Warning!

Most of these connectors are direct connected to processor. Improper use and connection will VOID warranty.

SIM Card Holder:

Inserting or changing SIM cards is only allowed if the module is disconnected from the power.

Ethernet connector:

A standard RJ45 connector is to be used to connect to the local network. Connect it only when the module is not powered, this way the module will get IP address by the DHCP server. If there is no IP address service available, the module will use the factory default address. (192.168.254.253)

1.2. Other connectors:

RS232

SPG modules are available for serial communication for more information please contact your dealer or the manufacturer.

2.0. Specification:

Power supply:	12-16 VDC
Stand by current consumption:	80 mA
Max. current consumption:	150 mA
Size LxWxH:	85 x100x20mm
Screw terminal sizes:	Ø2,5 mm
Ethernet connector	Standard RJ45
Communication:	128 bit encrypted
Factory setting:	
Network mode:	Static IP
Factory IP-address:	192.168.254.253
Port :	8080
User name :	Admin
Password :	Admin

3.0. Status web browser

The web page of the panel could be found on the IP address as previously set.

Administrator password:

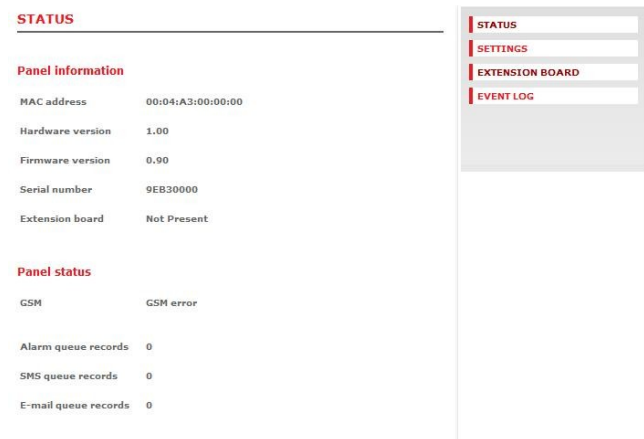
The entry name and password could be changed here.
Max 15 character could be used.

Factory default: Admin, Password: Admin

Warning:

In case of forgetting the password only reset jumper will reset the factory setting.

3.1. „Status” page:



Panel Informations:

- **MAC address:**
Ethernet identification address, can not be changed.
- **Hardware Version**
Hardware revision nr.
- **Firmware Version**
The current firmware serial nr running in the module.

- **Serial Number**

Manufacturing serial number of the module

- **Extension board**

Status of the modules connected onto the External connector.

Panel Status:

- **GSM Status:**

Displays the status of the panel connected to the GSM network.

- **Alarm queue:**

Unsent events on the IP network

- **SMS queue:**

Unsent text messages on the GSM network

- **Email queue:**

Unsent e-mails.

Programming:

3.2.

After enter the panel by its pre-set User and Password, you may change factory default settings.

SPG CONFIGURATION

Network settings

MAC address	00:04:A3:00:00:00
Mode	Static IP
IP address	192.168.1.135
Netmask	255.255.255.0
Gateway	192.168.1.10
Primary DNS	192.168.1.10
Secondary DNS	0.0.0.0
HTTPd port	8080
Network test interval	30
	20..240 [sec]

- **MAC address**

MAC address can not be changed. Its always fix.

- **Mode:**

Network connection mode could be changed here
– Static IP address
– Dynamic Address.

Factory Default Static

Remark:

If you use dynamic IP, its still advised to use one fix IP in case if DHCP service would be not available. In this case the module will change to Fix IP address.

- **IP address:**

This is the several IP. This address is used for remote

programming or remote controlling.

Factory Default 192.168.254.253

- **Netmask:**

It is for to be able to distinguish between IP address and identification parts for IP packet receivers.

Factory Default: Empty

- **Gateway:**

This is a device which is in connection with more TCP/IP network. It is for routing and forwarding different IP packets between these networks. For example a router address within the network is designated to gateway.

Factory Default : Empty

- **Nameserver (primary):**

This is a name server the server of the service provider. Write the provider server address into this field. (A router could be also a name server)

Factory Default: Empty

- **Nameserver (secondary):**

This is a name server the server of the service provider. Write the provider server address into this field. (A router could be also a name server)

Factory Default: Empty

Warning:

Secondary name server should be accessible server since if the panel is connected by GPRS, it can not use the router on the same network as name server

- **HTTPd port:**

The config website port nr

Factory Default 8080

- **Test signal interval:**

The panel sends test signals to the servers in this given time periods.

Factory Default 20

Supervisory connection:

You may set the communication routes of the panel. SPG is able to send alarm signal in a multiply sequential paths, IP communication could be to two different server.

Supervisory connections

Server Host Name/IP	91.82.255.200
Server port	22000
Server #2 Host Name/IP	
Server #2 port	0
Protocol	TCP ▾
Encrypt	AES-128 encrypt ▾
AES key	0102030405060708090A0B0C0D0E0F00
Account ID	11
DC-09 Prefix	

E-mail settings

E-mail sending enabled	Enabled ▾
From address	
SMTP server	
SMTP port	0
Perform authentication	Disabled ▾
Username	
Password	

- **Server Host Name/IP:**

The server location of the central monitoring station. You may fill IP address or HOST name.

Factory Default 0:0:0:0

- **Server Port number:**

The port number of the central monitoring server.

Factory Default 0

- **#2 Server Host Name/IP:**

Secondary server location of the central monitoring station. You may fill IP address or HOST name.

Factory Default 0:0:0:0

- **#2 Server Port number:**

Secondary port number of the central monitoring server.T

Factory Default 0

- **Protocol:**

The required protocols could be selected here with the central monitoring server.

- SIA IP TC2700 (TCP, not encrypted, Close-socket)
- SIA IP UD2700 (UDP, not encrypted, Close-socket)
- SIA IP encrypted TC2700 (TCP, encrypted, Close- soc.)
- SIA IP encrypted UD2700 (UDP, encrypted, Close-soc.)

- **AES key:**

The encryption key should be added here which is given by the central monitoring station..

Factory Default: Empty

- **Account ID:**

SIA account id

Factory Default: Empty

- **Prefix:**

This is provided by the central monitoring station.

Factory Default: Empty

- **Time Zone:**

The module has a built in clock synchronization. Select the time zone where the panel is installed. A modul connects the „Timeserver” periodically to adjust timing. Important ! Synchronization could only be done if ethernet connection is available, and DNS server is set properly.

Factory Default GMT+00:00

- **Email:**

The module can send e-mail messages to pre-set addresses. Here you can adjust globally the e-mail reporting. Specific settings should be done at the expansion board programming section.

- **Email:**

Enabling or disabling any e-mail communication.

Factory Default: Disabled

- **From:**

The address of the module e.mail address.

Factory Default Empty

- **SMTP Server:**

The mail server smpt name (provided by Internet service providers.

Factory Default Empty

- **SMTP Port:**

Provided by Internet service provider.

Factory Default Empty

- **Authentication:**

If your Internet provider requires authentication you should set this accordingly.

Factory Default: Disabled

- **Username:**

Username is necessary to access mail server

.Factory Default Empty

- **Password:**

Password is necessary to access the mail server.

Factory Default Empty

- **GPRS settings:**

Wireless GSM communication settings could be made here.

GPRS settings

APN	net
APN Username	/keep blank if not in use/
APN Password	/keep blank if not in use/
*Primary DNS	
*Secondary DNS	
*Network test interval	120 20..240 [sec]
Balance optimization	None

- **Access point name (APN):**

Provided by the GSM provider

Factory Default: Empty

- **Username:**

Provided by the GSM provider

Factory Default: Empty

- **Password:**

Provided by the GSM provider

Factory Default: Empty

- **Nameserver (primary):**

Provided by the GSM provider. Many provider does not require any setting.

Factory Default: Empty

- **Nameserver (secondary):**

Provided by the GSM provider. Many provider does not require any setting.

Factory Default: Empty

- **Network test signal interval:**

Test signal interval only for GPRS transmission. From 60 sec.

Factory Default 0

- **Balance optimization:**

The panel could optimize the data traffic for time or for data volume, depending on your GSM subscription plan. Time based optimization will result that panel will spend the least amount of time on the GPRS network and will disconnect as soon as reporting is done. Data based optimization means that panel will remain connected to the GPRS network, assuming that more reporting will be done . Data optimisation will mean 10-30 minute disconnection from the GPRS network if there is no reporting needs.

Factory Default : Data optimization

SMS:

SMS global settings could be adjusted in this section.

SMS settings

SMS sending	Enabled ▾
Provider source address	<input type="text"/> <small>/keep blank to use default/</small>
Forward To	None ▾
Forward Unknown SMS	Disabled ▾
Sending limit	50 <small>/max. count per hour per user/</small>
SMS text prefix	Pepe1

- **SMS sending:**

Enabling SMS sending globally.

Factory Default Disabled

- **Provider source address:**

The GSM provider source address should be entered here, from where information is expected and should be forwarded to an other number (For example the balance information for pre-paid GSM services)

Factory Default: Empty

- **Forward to:**

The incoming SMS is forwarded to a pre-set number. Use international form for numbers.

Factory Default: Empty

- **Forward unknown SMS:**

Enables or disables forwarding SMS from an unknown number.

Factory Default : Empty

- **Sending limit:**

Maximum nr of SMS. The counter will reset in every hour. Zero value will result unlimited nr of SMS.

Factory Default 0

- **SMS text prefix:**

This will identify the panel if you expect more panels to send sms to the same number.

Dynamic DNS:

SPG is enabled for Dynamic DNS communication even if it is installed on a non-fix IP address. Generate a DNS on a service provider. In this case both Internet and GPRS connection the module could be remotely accessed.

Dynamic DNS

Use dynamic DNS	Disabled ▾
dynDNS Server	dyndns.org ▾
dynDNS hostname	<input type="text"/>
Username	<input type="text"/>
Password	<input type="text"/>
Last known IP	57.69.144.88

Communication rules

Com path	Ethernet or GPRS ▾
*Web config via GPRS	Disabled ▾

*Not available in this version

Remote users

USER#1	
SMS address	+ <input type="text"/>
E-mail address	<input type="text"/>
Access level	Administrator ▾
Login name	<input type="text"/>
Password	<input type="text"/>

Enable:

Enables the dynamic IP refresh.

Factory Default: Disable

- **DynDns hostname:**

Name you created on DNS server provider.

Factory Default: Empty

- **Username:**

Accessing the DNS service

Factory Default: Empty

- **Password:**

Accessing the DNS service

Factory Default : Empty

- **Last known IP:**

Displays the last known IP address of the SPG

Communication Rules:

Communication rules of the panel are to be set here.

SPG1000 can handle independent communication paths.

Sequence of IP reporting:

2 times Ethernet Nr 1 Server address

2 times Ethernet Nr 2 server address

GPRS 1 server, GPRS 2 server, in case of

successful communication SPG 1000 will

forward all messages at GPRS channel for 3

minutes. New event will trigger the repeat of this

whole sequence.

After unsuccessful communication will result 3 minutes of brake.

If there is only GPRS set as primary and only communication than in case of unsuccessful event communication will be suspended for 15 minutes.

The panel will send SMS containing the Ademco Contact ID information received from the external security panel or from the SPG 84 expansion board if neither Ethernet or GPRS communication path is unavailable.

- **GPRS:**

Setting the primary reporting route of the SPG is GPRS. We suggest to use this only if Ethernet is not available. More reporting routes you have the secure the operation. SPGs web programming page is available through Ethernet connecton only. If you use GPRS only communication only local programming is available for you.

Factory Default :Ethernet or Gprs

Users

- **SMS address:**

The telephone nr of the user where SMS could be sent-

Factory Default: Empty

- **Email address:**

The e-mail address of the user where e-mail could be sent-

Factory Default : Empty

- **Access level:**

Access level of the user

Factory Default: None

- **Login Name:**

Login name for the SPG 1000 web page.

Factory Default Empty

- **Password:**

Login password of the SPG 1000 web page.

Factory Default Empty

Events:

The panel has 250 event memory. This event list is written into the non volatile memore, so if power is removed, event is still stored.