GSM Modem Manual

ClimaCheck

BGS2 GPRS Modem
ER75i Router
ETM450 Router

2016-05-04

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1 Selection of Operator - SIM card for Data transfer

ClimaCheck and/or ClimaCheck distributors can supply SIM cards for most markets but due to the operators pricing policies the roaming fees are often resulting in significantly higher rates so local contracts can be cost-effective in some cases.

Requirement on SIM:
It must be configured and activated for GSM data communication which often require some kind of "activation" by the operator even if the contract as such is including data capability.

Typical amount of data for a standard system is 5-10 Mb of data per month depending on number of channels and interval between data scans. Default is 1 minute when compressor is operating and 5 minutes when compressor is off. To select operator with experience of data transfer Machine to Machine (M2M) is recommended. Operators are using different settings in their network and it is recommended to whenever possible use networks that offers **public IPs** to the connected devices (many networks has a firewall disabling access from the outside). A Public IP means that the ClimaCheck PA Pro can be contacted for configuration via Internet. The IP does not need to be a fixed IP as the ClimaCheck on-line server monitors incoming traffics IP number. The sending IP is displayed on the "Home page" for each system. If a SIM is set up to be behind the operators firewall data can be sent out but configuration would have to be done with a locally connected PC or through dial up connection, which is quite slow.

1.1 Setting up M2M communication

Experience shows that Machine to Machine (M2M) communication can be challenging to set up the first time with a new operator.

Most operators are totally focused on the mobile telephone market. Even though smart phones use data communication of the same type as in the M2M communication used by the ClimaCheck Performance Analyser, it has proven that it's difficult to get the correct configuration and information required.

We therefor strongly advice first time set up with SIM from a new operator to be done prior to going on-site to ensure functionality and avoid loss of time and unnecessary travels.

Tests should preferably be done with the equipment to be used on site but the functionality of a SIM and correct configuration can be tested with any ClimaCheck PA Pro and modem. By checking that data is actually received on the ClimaCheck on-line server functionality can be validated minimizing wasted time on site and return trips.

The information requested and how to enter it is described in **3.2 Entering APN and ISP phone number** that should be required. Typically this is the "APN" address unique for each operator (this is included in the configurations a mobile phone get when you first connect it to your operator).

This said the communication will not work if:

1. The SIM card is not properly activated for data communication
2. The PIN code is not removed from the SIM card before it is entered into the modem
3. The Init string for modem is not sent from the PA Pro when UDP communication is activated (only required with standard modem e.g. when router modem is not used).

Connections:

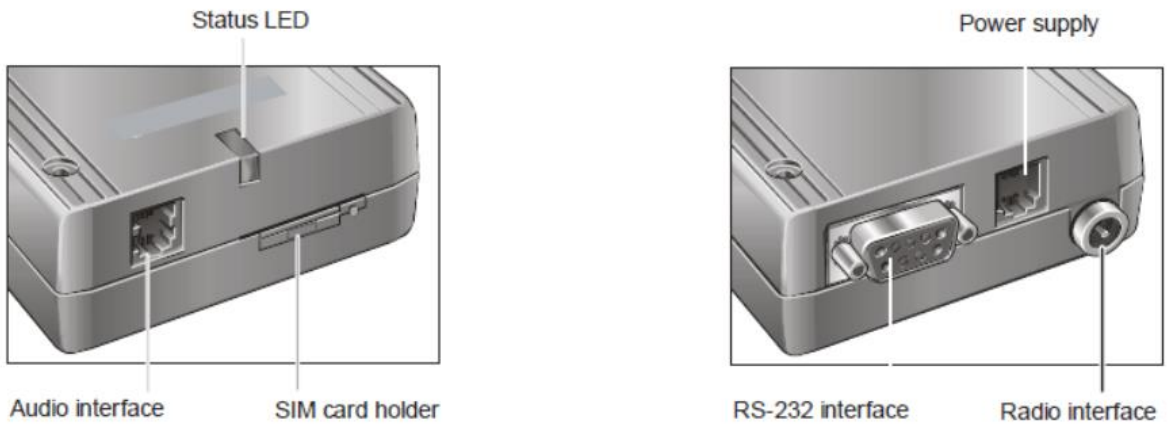


Figure 1, ClimaCheck standard modem when one Performance Analyser PA Pro II is used or master slave operation with two.

2 Choosing the best way to connect

There are several ways to use the modem to transfer data and you should choose one or several that corresponds to your need. This section presents an overview of each method and where to find the relevant configuration instructions. After having made the relevant configurations, refer to section 4 for how to connect the modem hardware.

All methods require you to have a working SIM card with the PIN code disabled.

2.1 Sending by GPRS to the ClimaCheck Server

This is the recommended mode of operation.
For a wide range of applications the most convenient way to transfer data is by sending them to the ClimaCheck server. You can then log on to **online.climacheck.com** from anywhere to have instant access to your measurements. Tools for displaying the data in tables and graphs are available and you can also download it for further processing.

You will need a subscription for our web service to make use of this method.

Read more in section 3.

2.2 Temporary Connection by Modem Call-Up

An alternate way to retrieve data is by calling the wireless modem from a normal modem connected to your computer. You can then start logging data as if you were connected locally or download the contents of the PA Pro internal database. A dialled up connection is comparably slow and downloading the database takes a considerable time.

Even when sending data to the ClimaCheck server it is useful to use the call-up function if you need to change a setting on the PA Pro.

Read more in section 8.

2.3 Sending Data by E-mail

This method is listed when accessing the web interface of the ClimaCheck unit, but is currently not supported.

3 Configuring the PA Pro for sending by GPRS

This section explains how to configure your PA Pro unit to send data by GPRS connection to our server. You can then log in from any location to access your data. This requires a subscription from ClimaCheck or one of our partners.

3.1 Connecting to the configuration interface

In order to configure the PA Pro you must open its web based interface:

- Connect your computer to the PA Pro with a "crossed" network cable.
- Wait for the PA Pro to establish a connection with your computer.
- Open a web browser and enter the units IP-address (default **169.254.1.1**).
- Enter the user name and password (default "**config**" and "**ef56**").

3.2 Entering APN and ISP phone number

To enable the PA Pro to send data by GPRS you need to enter the APN provided by the supplier of your SIM card.

- Choose **Settings -> Communication -> Modem/PPP**
- In the **Modem setup string** find the text **"APN for used operator"** last in the string. Citation mark should remain around the APN. See table below.
- If a username and password is required this should be entered under **Login -> Modem**.
- Replace this text with the provided APN, leaving the quotation marks in place.
- In some cases your PA Pro unit comes with a preconfigured APN. If you need to change it just replace what is inside the quotation marks at the end of the string.
- Click **Update** to confirm your changes.

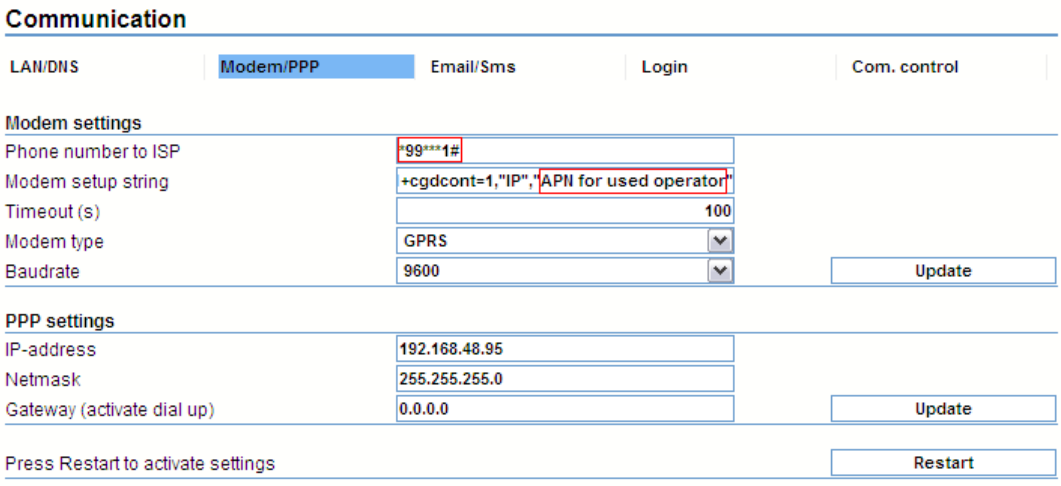


Figure 2

In older versions of the PA Pro standard configuration the **Phone number to ISP** field is blank. If that is the case enter ***99***1#** and click **Update**.

You will need to press **Restart** to enable the new settings, but you only need to do this once after finishing all configuration. You can also restart your PA Pro by turning on and off the power.

APN for a number of operators:

NextM2M	fixedipaccess (Standard for ClimaCheck SIM)
Telia	online.telia.se
Maingate	maingate.telia.se
Maingate VPN	maingatelan.telia.se
Maingate Roaming	apn.maingate.se
Telenor	internet.telenor.se
O2 UK	mobile.o2.co.uk

3.3 Changing the Database Sample Interval

When using your PA Pro connected directly to a laptop five seconds between each sampling of data is the standard value. When connecting by GPRS the sample rate is set in the logger and usually to a lower value not to cause an unnecessary high data traffic cost. The settings for the internal logger and data transfer are independent.

- Choose **Settings -> Advanced -> Databases -> DB1 Short Time**.
- Set **Time base 1** to the sample interval you want when the compressor is not running. We recommend **5 minutes** for most situations.
- Set **Time base 2** to the sample interval you want when the compressor is running. We recommend **1 minute** for most situations.
- Click **Update** to confirm your changes.

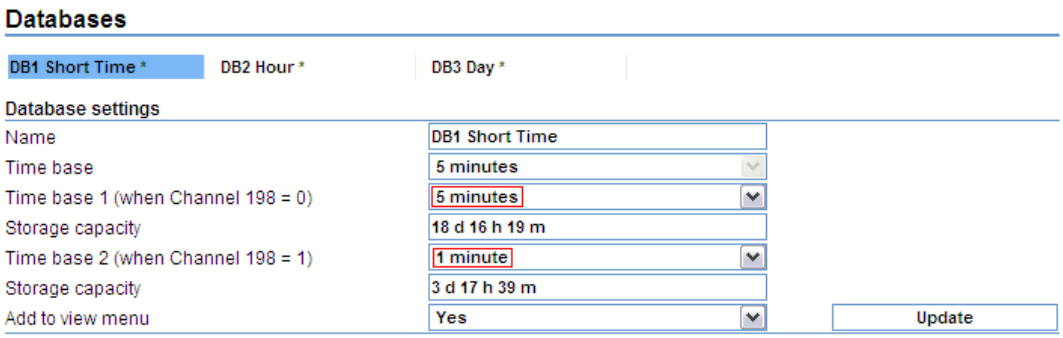


Figure 3

In older versions of the PA Pro standard configuration there is no option to set a different sample interval for when the compressor is not running. In this case just use the standard **Time base** setting.

3.4 Changing Database UDP settings

The **Database UDP** section contains information that allows the PA Pro to connect to our server.

- Choose **Settings -> Advanced -> Database UDP**.
- Set **ID** to the identifier for your account. It is provided to you by ClimaCheck or one of our partners and always contains **six letters or digits**.

- Check the **UDP send active** box to start sending data. Uncheck the box if you want to disable the sending of data.
- Click **Update** to confirm your changes.

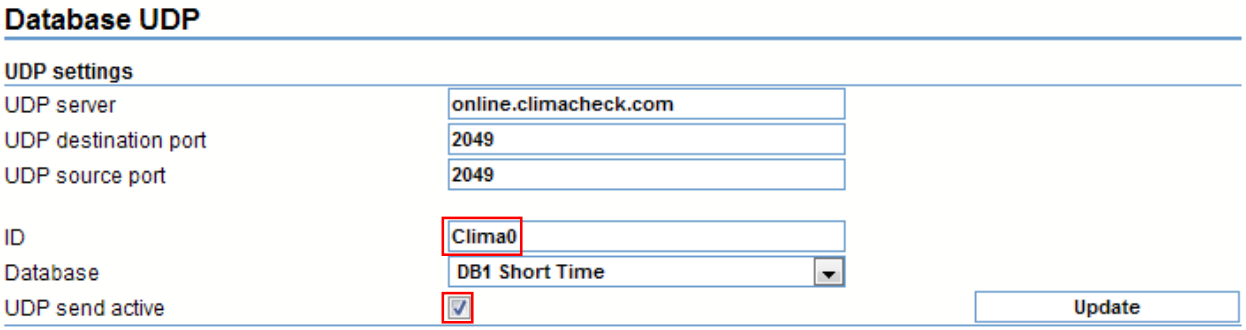


Figure 4

3.5 Setting Gateway

The last step to enable sending of data is to set the Gateway in the Modem/PPP section.

- Choose **Settings -> Connection -> Modem/PPP**.
- Copy the number from the **IP-address** field to the **Gateway** field. The default IP-address/Gateway is **192.168.48.95**.
- If you want to disable sending change **Gateway** back to **0.0.0.0**
- Click **Update** to confirm your changes.
- Click **Restart** to restart with the new settings enabled.

The PA Pro will now use the connected modem to send data to the server using GPRS and UDP.

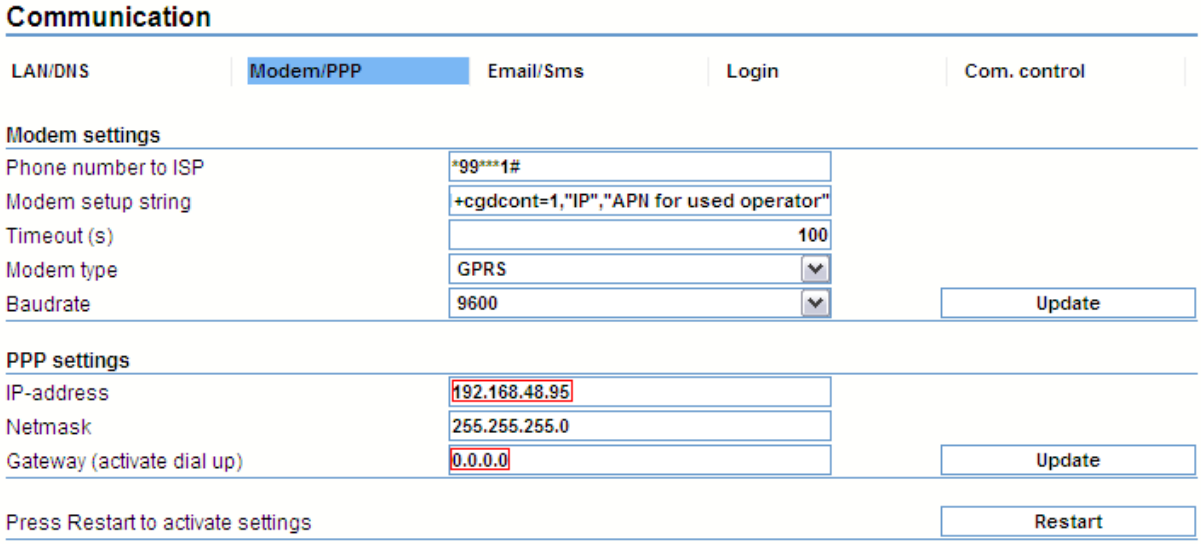


Figure 5

Important!

If the PA Pro has been configured with a Gateway setting other than 0.0.0.0 on the LAN/DNS tab to communicate over a local network, the Modem connection will not work

despite being setup on the Modem/PPP tab. To restore connectivity over GPRS-modem set the Gateway to 0.0.0.0
When Gateway is enabled (set to something other than 0.0.0.0), you can in many cases only connect to the PA Pro with a direct cable connection while not being connected to any other networks. It will not work connecting via a router or while simultaneously being connected to a wireless network. In this case to restore the standard connectivity you need to disable Gateway by setting it to 0.0.0.0, clicking Update and Restart.

4 Connecting and starting the modem

You should make all the required setting changes before starting the modem. When ready to connecting it follow these steps:

- Make sure your SIM card do not have a PIN code locking it.
- Insert the SIM card in the modem. Eject holder by pushing the small round button with a pointy object like a pencil or small screw driver.
- Connect the antenna to the modem and the modem to the PA Pro using a serial cable.
- Turn off the PA Pro.
- Turn on the modem by connecting it to the mains.
- Wait 30 seconds for the modem to go trough its start sequence. It should now display a short blink every three seconds.
- Turn on the PA Pro and wait for it to start as normal.
- PA Pro and the modem should now be ready. If connected by GPRS you will see double blinks and a longer steady blink when it is sending, but if the time between samples is long they can be hard to spot. If the modem is waiting for a call there will only be single blinks.

4.1 Changing the Database Sample Interval

When using your PA Pro connected directly to a laptop five seconds between each sampling of data is the standard value. When connecting by GPRS the sample rate is set in the logger and usually to a lower value not to cause an unnecessary high data traffic cost. The settings for the internal logger and data transfer are independent.

Read section 3.1 and 3.3 to learn how to connect to the PA Pro and change the sampling interval.

The set-up of modem configuration includes interaction of several different systems requiring a systematic approach to set-up and trouble shooting.

The ClimaCheck PA Pro will initiate modem first time it has data to send - default 5 minutes if no compressor power is measured – 1 minute if power is measured - this time can be shortened by setting a shorter time in the settings (see 3.3 Changing the Database Sample Interval).

After connection of Modem to ClimaCheck PA Pro and initiating communication as described in this manual data should be coming to the server.

4.2 LED status on Cinterion terminal

LED mode	Operating status of ClimaCheck standard modem (Cinterion GPRS Terminal)
Permanently off	The Terminal is in one of the following modes: • POWER DOWN mode • ALARM mode • NON-CYCLIC SLEEP mode • CYCLIC SLEEP mode with no temporary wake-up event1 in progress.
600 ms on / 600 ms off	**Limited Network Service: No SIM card inserted or no PIN entered, or network search in progress, or ongoing user authentication, or network login in progress.** **Check – Simcard and that PIN is not activated**
75 ms on / 3 s off	IDLE mode: The mobile is logged on to the network (monitoring control channels and user interactions). No call in progress. **Data sending not correctly activated from ClimaCheck PA Pro** **No available GPRS network – SIM not activated for data traffic**
Double blink e.g. 75 ms on / 75 ms off / 75 ms on / 3 s off	**One or more GPRS contexts activated.** **Required status to send data.**
500 ms on / 25 ms off	Packet switched data transfer in progress.
Permanently on	Depending on type of call: *Voice call:* Connected to remote party. *CSD call:* Connected to remote party or exchange of parameters while setting up or disconnecting a call.

Figure 6

Unless there is steady blink every three seconds after the modem has been connected ClimaCheck PA Pro will not be able to initiate data communication e.g. there is a general problem with the connection to the operators network this must be fixed before data communication over GPRS can be initiated.

Check that PIN is not used by inserting SIM in a mobile.

If there is single blink there is a connection to the operator but data sending is not active. Insert SIM in a mobile and test if you can "surf" on internet. If so - Check APN under settings for Mobile Network to ensure the right APN is used.

Log in and check if PA Pro has an active UDP send alarm.

4.3 Trouble shooting of data communication over GPRS modem

If the modem does not send data or behaves unexpected, try the following:

1. As modem and logger are dependent on the correct initiation sequence it is worth to restart modem and logger before trouble shooting start. Modem must be ready when PA Pro send initiation string. As modem start faster than PA pro they can be started at the same time i.e. by shutting down the power to both units.
2. Check LED status of modem (see Figure 4) unless this is in steady blink or double blink mode modem/SIM is not ready. This needs to be fixed before proceeding with further trouble shooting.

- Check reception, this can be checked with a phone with the same operators SIM or by placing the modems SIM in a mobile phone.
  - If poor GSM coverage in the area. Try relocating the antenna. Extensions can be used both on the RS232 communication cable between modem to ClimaCheck PA Pro (up to 25 m is tested with good result) and between Modem and antenna (10 m good quality antenna extensions has been tested and do not give unacceptable reduction of signal).
- Check SIM if PIN code is required, one way of doing this is to place SIM in a mobile to check that there is no PIN and if so remove it.
- Check if APN and password are correct, one way is to put the SIM in a mobile phone and download settings that can be read in mobile phones settings for the network.
- Ensure that SIM is activated.

  If SIM is not activated properly the modem will not connect.

If the modem is connected to the network with steady flash or double flash every 3 sec, but no data is transmitted it means that the modem is connected to the network but is not in data transmission mode. This can be caused by SIM contract not properly activated for data or that the PA Pro has not initiated the data send mode. Many operators require activation of SIM-cards that are intended for data communication.

3. Check LED on the ClimaCheck PA Pro for communication with modem on RS232 flashing. If this is not flashing while modem is connected to a network.
   - Check cable (standard serial cable).

If Led on RS232 communication is flashing but no data is received on server or PA Pro indicate data send error check set-up in PA Pro.

4. Check configuration step by step as described in chapter 3.

5 Router Modems

ClimaCheck work with several router modems and they present signal strength as -dBm

5.1 Signal Strength

The signal strength is indicated by a LED on the front of the modem, as a dBm value on the Home page of the web interface or as a RSSI value (0-31) in the NETINFO SMS sent from the unit.

Description	RSSI (Sig in SMS)	dBm
Poor or no signal	Signal<10	Signal<-93
Low	10<Signal<15	-93<Signal<-83
Medium	15<Signal<20	-83<Signal<-73
High	20<Signal<25	-73<Signal<-63
Excellent	25<Signal	-63<SIgnal

For reliable data transmission a signal strength above 10 (-93 dBm) is required. SMS commands can usually be delivered at the lowest signal strength.

6 ER75i Router-modem

The ER75i router-modem is used, together with a switch, in installations with more than one PA Pro on the same site. The router creates a local area network to witch the PA Pro is connected. This section explains how to setup the ER75i with one or more PA Pro.

Note! Examples and instructions for the ER75i will be for the v2 version but are also valid for the v1 version.

6.1 Connecting to the configuration interface

The configuration of the ER75i router-modem is done in its web based interface.

- Connect directly to its Ethernet port or via a switch with a network cable.
- Open a web browser and enter the units IP-address (default **192.168.1.1** and then changed to **192.168.33.1**)
- Enter the user name and password (default "**root**" and "**root**").

6.2 Configure GPRS-connection

To enable communication over the ER75i it needs to be configured for the specific SIM-card supplier that is used.

- In the menu to the left choose **GPRS** under **Configuration.**
- Enter APN, Climacheck supplied SIM-card in example below.
- Tick the box for "Check PPP connection"
- Enter **online.climacheck.com** in the "Ping IP address" field.
- Set "Ping Intervall" to **600**
- Store settings with the "Apply" button at the bottom of the page. A window will appear saying "Configuration successfully updated". Press "Back".

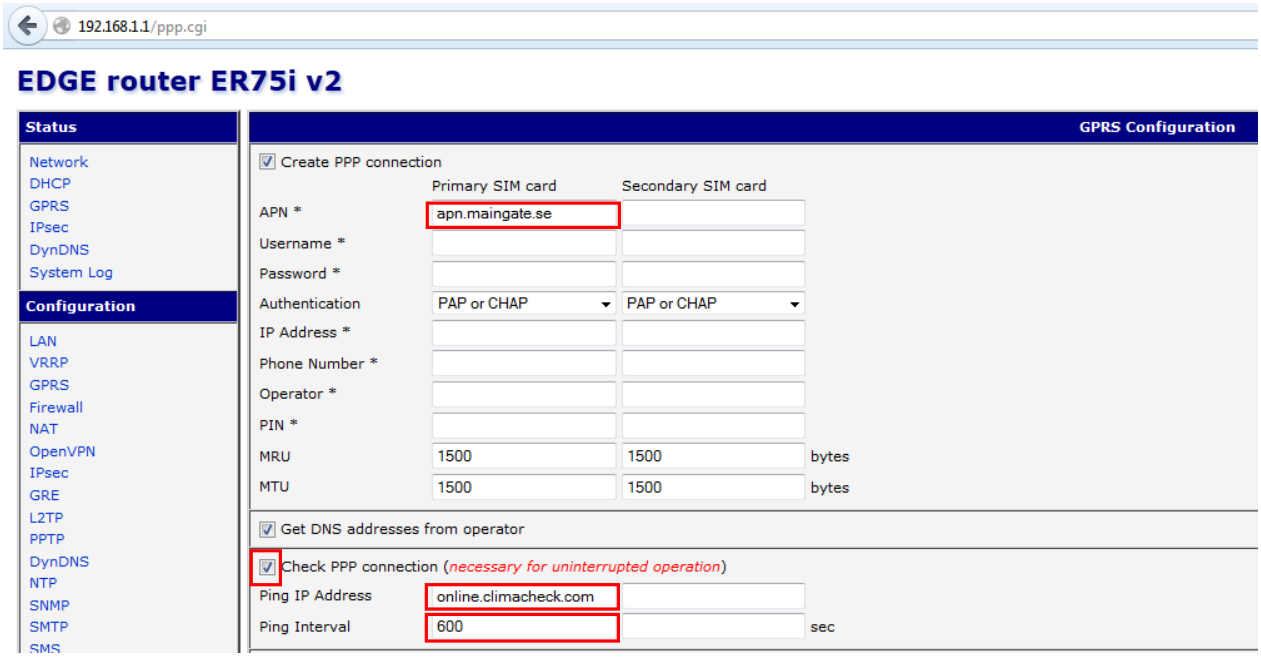


Figure 7

Note! If the SIM-card has PIN-code activated or if the SIM-card supplier requires a username and password for the data-connection this is also entered on the GPRS Configuration page.

6.3 Configure DHCP and IP settings

The PA Pro connected to the ER75i will have static IP-addresses. To avoid computers that are connected to the ER75i network to get the same IP-address as a PA Pro the DHCP-settings are changed as follows. The IP address of the router modem is also changed not to interfere with existing networks.

- Choose LAN under Configuration
- Change IP Address to 192.168.33.1
- Set the IP Pool start to 192.168.33.50
- Set the IP Pool end to 192.168.33.254
- Store settings with the "Apply" button at the bottom of the page.

Note! The router will now change IP number and you may have to deactivate and activate your network card to be able access it on the new IP, 192.168.33.1

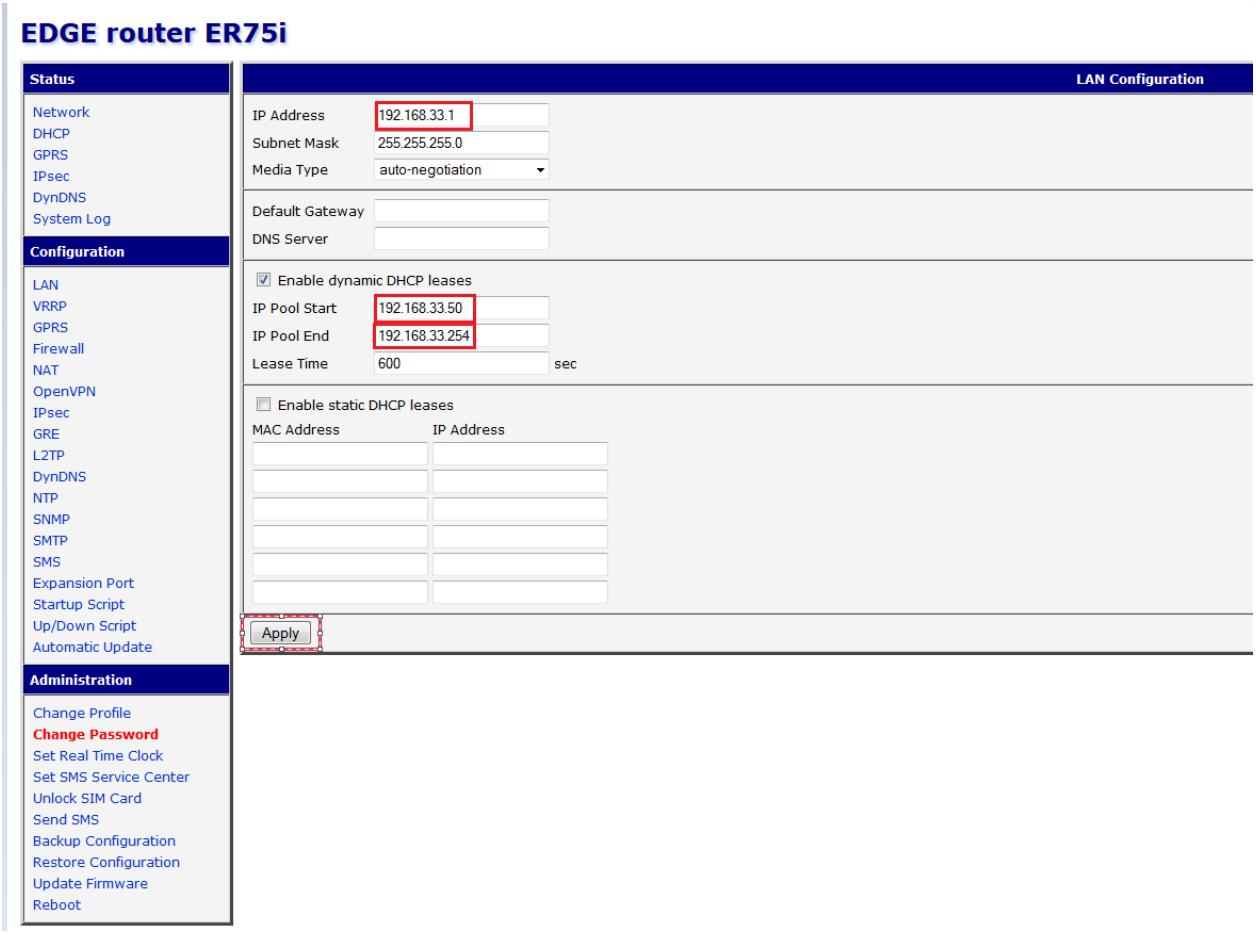


Figure 8

6.4 Configure NAT-settings

A SIM-card used in the ER75i will only have one IP-address connected to it. To be able to connect to several different PA Pro behind the ER75i a connection between different public ports accessible from the outside and IP numbers on the ER75i LAN is added.

- Choose NAT under Configuration
- Set "Public Port" to **81**
- Set "Private Port" to **80**
- Set "Server IP Address" to **192.168.33.2**
- Store settings with the "Apply" button at the bottom of the page. A window will appear saying "Configuration successfully updated". Press "Back".

Communication that is requested on port 81 on the public IP number will now be routed to the PA Pro with IP number 192.168.33.2.

The LAN IP used must be entered as a fixed IP in each PA Pro.
If more PA Pro units are connected each PA Pro needs a public port routed to its IP number in the same way as shown above. In the figure below 2 PA Pro units are connected to the ER75i LAN.

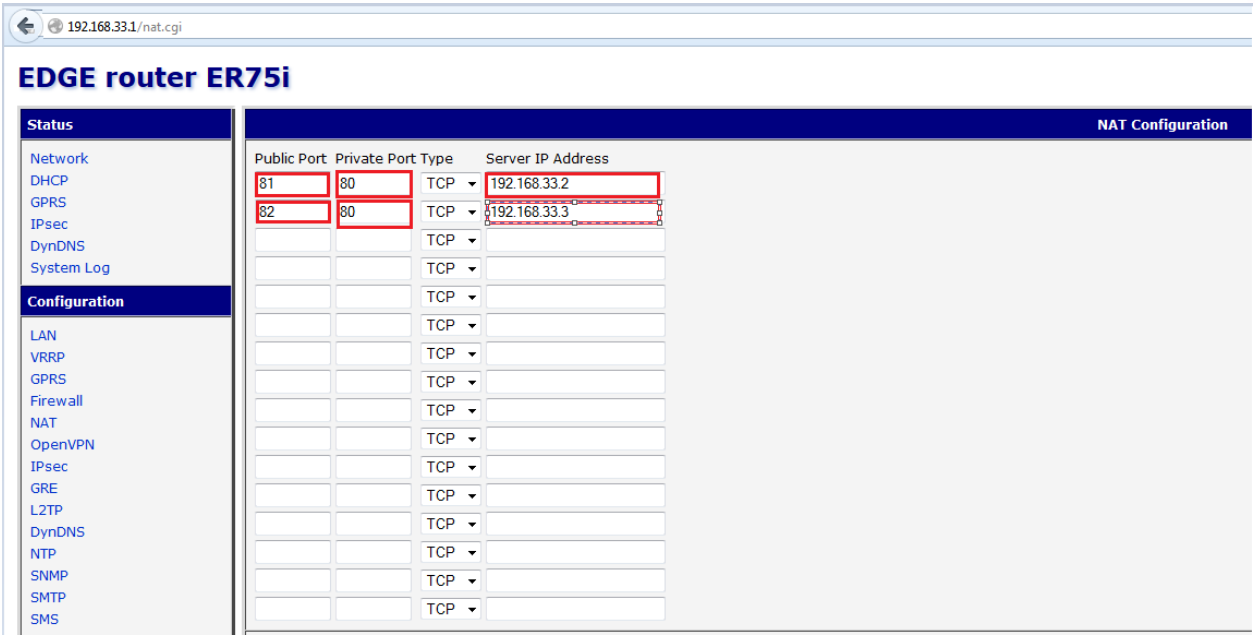


Figure 9

The configuration of the ER75i is now complete. The PA Pro units now need to be configured to send their data over the ER75i LAN according to the table below. For instructions on how to configure the PA Pro, see the Hardware Manual.

	IP Address	Netmask	Gateway	DNS Server 3
PA Pro 1	192.168.33.2	255.255.255.0	192.168.33.1	192.168.33.1
PA Pro 2	192.168.33.3	255.255.255.0	192.168.33.1	192.168.33.1

7 ETM 450 Router modem

The ETM 450 router-modem is used, together with a switch, in installations with more than one PA Pro on the same site. The router creates a local area network to witch the PA Pro is connected. This section explains how to setup the ER75i with one or more PA Pro.

7.1 Connecting to the configuration interface

The configuration of the ETM450 router-modem is done in its web based interface.

- Connect directly to its Ethernet port or via a switch with a network cable.
- Open a web browser and enter https:// followed by the units IP-address (default **https://192.168.0.1** and then changed to **https://192.168.33.1**)
- Enter the user name and password (default "**admin**" and "**admin**").

Note! When accessing the router modem you may get a warning saying "There is a problem with this website´s security certificate". Choose "Continue to this website"

7.2 Configure WAN connection

To enable communication over the ETM450 it needs to be configured for the specific SIM-card supplier that is used.

- In the Menu go to **Network** and **WAN**
- Enter APN, ClimaCheck supplied SIM-card in example below.
- If your SIM-card use a PIN-code choose enable and enter it.

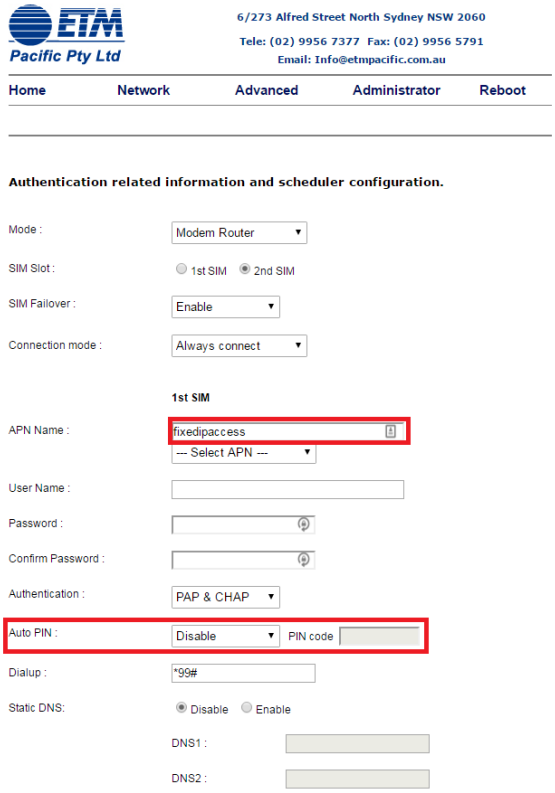


Figure 10

- At the bottom of the page, make sure the "Check LAN Cable" is disabled.
- Choose 24 hours for the "Periodic Reset" function.
- Choose enable for the "Keep Alive" function.
- Enter 299 seconds as interval and 2 as fail count.
- Enter **212.85.69.58** as 1st server and leave 2nd server empty.
- Now press Apply Changes to save and the system will reboot.

Figure 11

7.3 Configure LAN settings

- Got to **Network** and **LAN**
- Set IP Address to 192.168.33.1
- Set Default Gateway to 192.168.33.1
- Set DHCP Client Range to 192.168.33.50 – 192.168.33.250
- Set 1st DNS to 208.67.222.222
- Set 2nd DNS to 208.67.220.220
- Press Apply Changes to save settings.

Note! The router will now change IP number and you may have to deactivate and activate your network card to be able access it on the new IP, 192.168.33.1

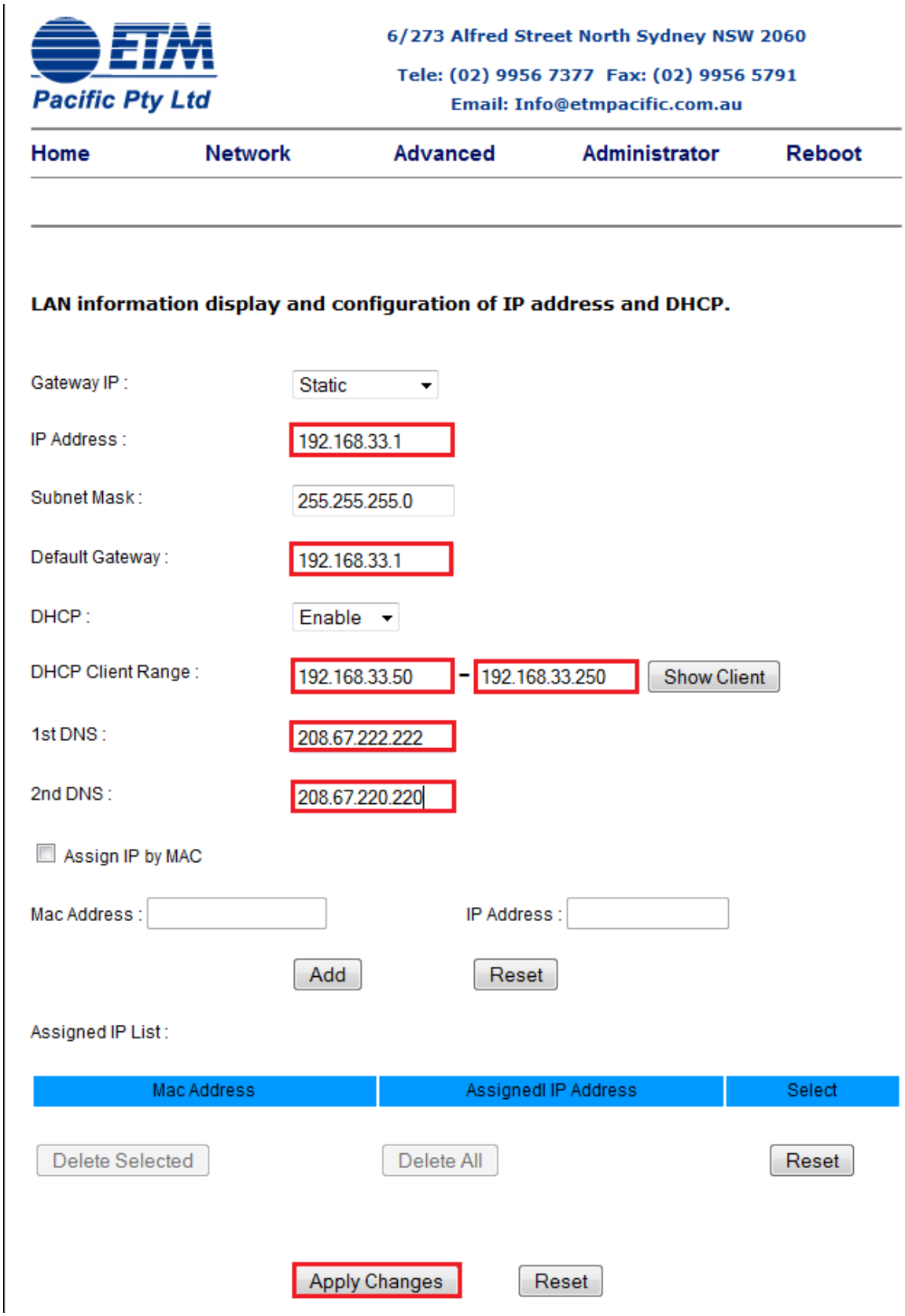

ETM
Pacific Pty Ltd
6/273 Alfred Street North Sydney NSW 2060
Tele: (02) 9956 7377 Fax: (02) 9956 5791
Email: Info@etmpacific.com.au
Home
Network
Advanced
Administrator
Reboot
LAN information display and configuration of IP address and DHCP.
Gateway IP :
Static
IP Address :
192.168.33.1
Subnet Mask :
255.255.255.0
Default Gateway :
192.168.33.1
DHCP :
Enable
DHCP Client Range :
192.168.33.50
192.168.33.250
Show Client
1st DNS :
208.67.222.222
2nd DNS :
208.67.220.220
Assign IP by MAC
Mac Address :
IP Address :
Add
Reset
Assigned IP List :
Mac Address
Assignedl IP Address
Select
Delete Selected
Delete All
Reset
Apply Changes
Reset

Figure 12

7.4 Configure Port forwarding

A SIM-card used in the ETM450 will only have one IP-address connected to it. To be able to connect to several different PA Pro behind the ETM450 a connection between different public ports accessible from the outside and IP numbers on the ETM450 LAN is added.

- Go to **Advanced** and **Port Forwarding**
- Set IP Address 192.168.33.2
- Set WAN Port 81 - 81
- Set LAN Port 80 – 80
- Save settings by pressing Apply Changes

Communication that is requested on port 81 on the public IP number will now be routed to the PA Pro with IP number 192.168.33.2.

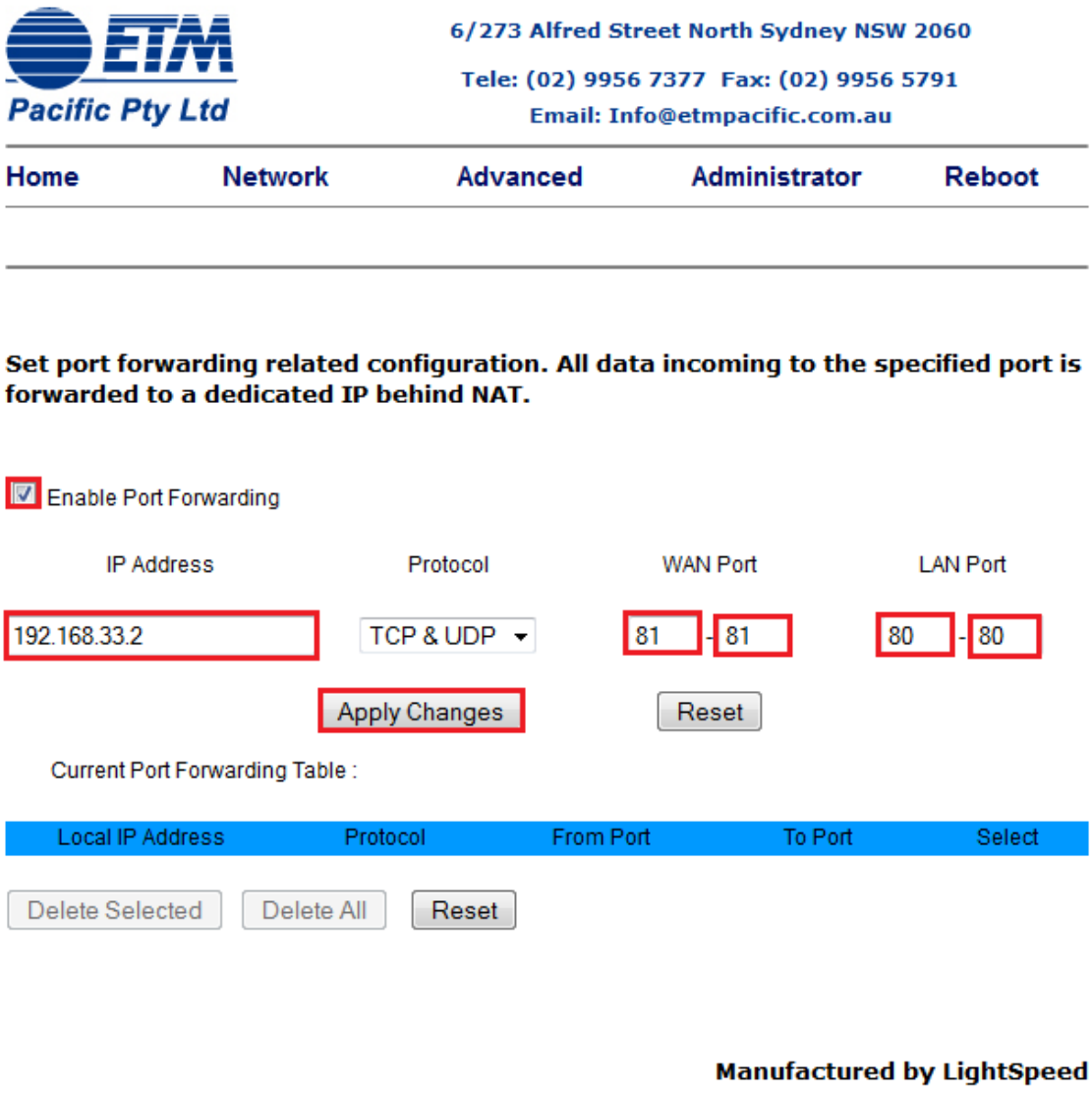


Figure 13

The LAN IP used must be entered as a fixed IP in each PA Pro.
If more PA Pro units are connected each PA Pro needs a public port routed to its IP number in the same way as shown above. In the figure below 2 PA Pro units are connected to the ETM450 LAN.

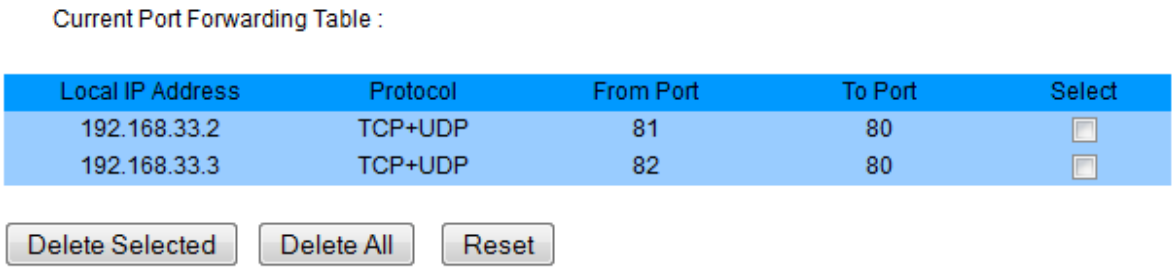


Figure 14

The configuration of the ETM450 is now complete. The PA Pro units need to be configured to send their data over the ETM450 LAN according to the table below. For instructions on how to configure the PA Pro, see the PA Pro Manual.

	IP Address	Netmask	Gateway	DNS Server 3
PA Pro 1	192.168.33.2	255.255.255.0	192.168.33.1	192.168.33.1
PA Pro 2	192.168.33.3	255.255.255.0	192.168.33.1	192.168.33.1

7.5 LED status on the ETM450

The ETM350C/450C has 6-State LED for indicating the current status.

LED	Display	Description
Power	ON	Indicates that power is on
	OFF	Indicates that power is off
Modem	ON	Recognizes the HSPA modem
	OFF	Does not recognize the HSPA modem.
Net	BLINK	When there is data on the wireless mobile network
	OFF	When there is no data on the wireless mobile network
IP	ON	Mobile IP has been acquired from ISP
	OFF	Mobile IP has not been acquired from ISP
SIM	ON	The U-SIM card is ready
	OFF	The U-SIM card is not ready
RSSI	FLASHING	1 quick flash with 4 seconds off for low signal level
	FLASHING	2 quick flash with 4 seconds off for medium level
	FLASHING	3 quick flash with 4 seconds off for high level
	FLASHING	4 quick flashes for 'excellent' signal
	OFF	Poor or no signal

Figure 15

7.6 Signal Strength

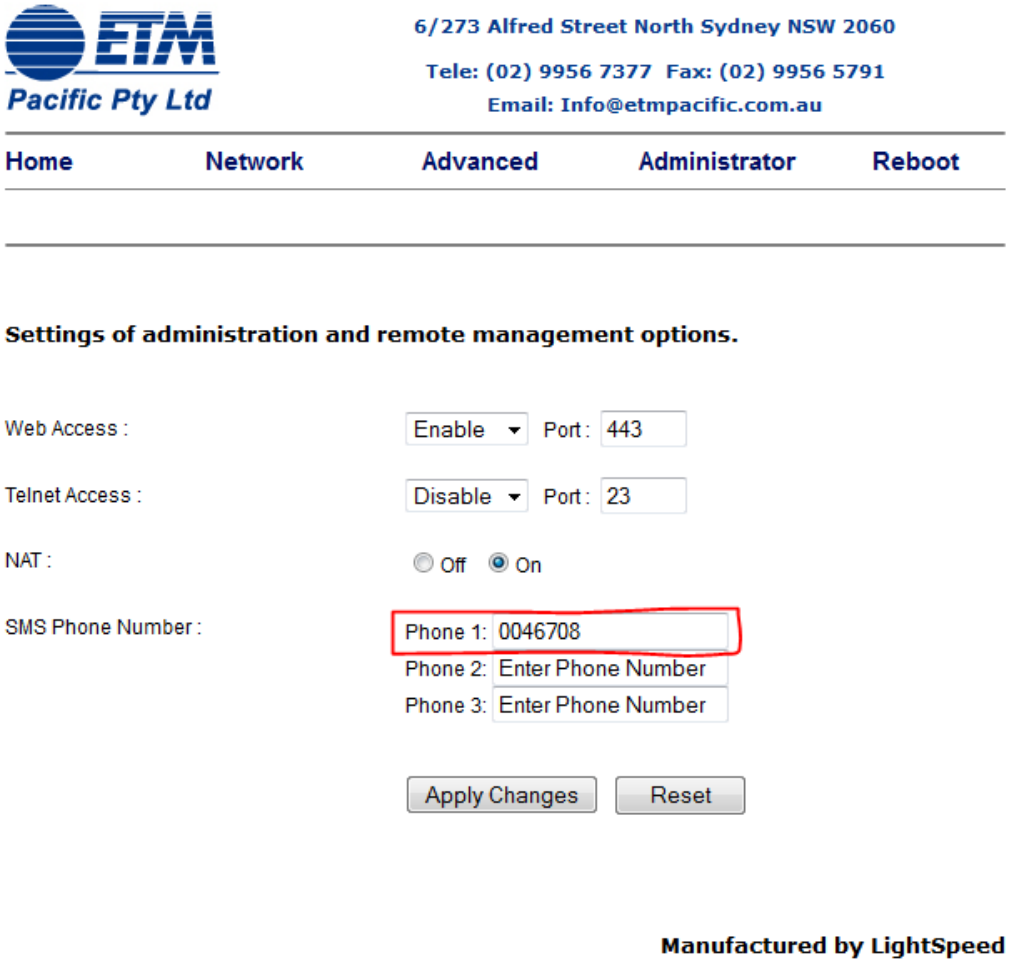
The signal strength is indicated by a LED on the front of the modem, as a dBm value on the Home page of the web interface or as a RSSI value (0-31) in the NETINFO SMS sent from the unit.

Description	RSSI (Sig in SMS)	dBm
Poor or no signal	Signal<10	Signal<-93
Low	10<Signal<15	-93<Signal<-83
Medium	15<Signal<20	-83<Signal<-73
High	20<Signal<25	-73<Signal<-63
Excellent	25<Signal	-63<SIgnal

For reliable data transmission a signal strength above 10 (-93 dBm) is required. SMS commands can usually be delivered at the lowest signal strength.

7.7 SMS Commands

The ETM450 modem can be controlled by different SMS commands. The modem will only respond to SMS from numbers that are in the units phonebook, Administrator -> System.



The following SMS commands can be used:

SMS Command	Action	Typical Response
DSR.REBOOT	When received by the router the unit will respond via SMS then reboot	Router will reboot now. Please wait….
DSR.NETINFO	Unit will respond with network status, IP address	SIM:1, IP:58.104.69.177, APN:internet, ID:user, PW:password, Auth:PAP and CHAP, Sig:15
DSR.SIM=X	Set SIM slot to 1 or 2, where X=1 or 2	If X is already active then it responds: SIM X OK If not the unit responds: SIM X Switched
DSR.SIM=X,APN,ID,PASSWORD, Authentication,Dialup Number	Changes and sets SIM slot and applicable ISP dialup settings	SIM X settings have been changed

8 Connecting to the PA Pro by modem call-up

This section explains how to call a modem equipped PA Pro unit with your own computers modem. You can then start logging as if directly connected or download collected data. This is **only needed** if the data communication is not functioning whereas the Phone = dial up connection works. Data communication is slower over the dial-up line.

- Establish a connection using the remote connection created in section 8.1
- If the logger is activated to send UDP it can be necessary to redial as the first time will set the system in a mode to respond for dial up.

8.1 Creating a remote dial-up connection

You first need to make a new network connection on your PC. This guide is based on Windows XP but it functions in a similar way on Windows Vista and Windows 7.

- Select **Start menu -> Connect to -> Show all connections**
- Select **Create new connection**.
- Choose **Connect to a Network at my Workplace** and **Remote Connection**.
- Give the connection a suitable name.
- Enter the supplied telephone number to the SIM card in your modem. Make sure it is a number that can connect to a calling modem.
- Decide if all users should have this connection or not and if you want a shortcut.
- Your connection is now ready.

Before dialling make sure your computer is set to receive an IP number automatically. If it got a pre-set IP you will need to change that setting before connecting to the PA Pro modem.

You should not enter a user name or password.

8.2 Establishing connection in ClimaCheck

- Start the ClimaCheck software.
- Select the network interface named **"WAN (PPP/SLIP) Interface**" or similar.

- Ignore the error message **"PA Pro not found at 169.254.1.1"**.
- The first time you connect: Choose **Settings->Preferences->Perf. Analys. Pro** and add the IP number **192.168.48.95** under **PA Pros to connect to**.
- Select **Performance Analyser Pro -> No quick check if PA Pro is available**.
- Select **Performance Analyser Pro -> 192.168.48.95**.
- Click **Contact -> Direct** to start using the PA Pro as usual.

8.3 Downloading the database

If you want to download the database choose **Performance Analyser Pro -> Download and Save Logged Data** and select how much data to save. Note that downloading the entire database by modem **may take up to 30 minutes**, not five minutes as stated by ClimaCheck. During this time ClimaCheck will be unresponsive.

To do ClimaCheck calculations on downloaded data go to connect and select PA Pro log file and select your file. Start scanning as if doing a live measurement.

8.4 Trouble shooting of dial up = modem does not answer incoming call.

- Ensure you are using the correct number. Many operators supply SIMS with up to 3 different phone numbers (data, Fax and phone). Dial-up modem to modem can be set.

- If you want to call a modem set up to send by GPRS you may need to first call it and hang up after 2-4 and before it responds to the call. This will make the modem temporarily turn off the GPRS connection and be ready for your connection. Immediately call it again to connect.

- Try disabling all other network connections on your computer. They may interfere with the modem connection.