ECOTEL® VTMpro

VIERLING

Manual

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Table of Contents

1. Definition 5
2. Quick Start 6
   2.1 Components 6
   2.2 ECOTEL® VTMpro front view 6
   2.3 ECOTEL® VTMpro back view 7
   2.4 Pinning of connectors 7
      2.4.1 Ethernet for LAN and VoIP 7
      2.4.2 E1/T1 8
   2.5 Interpreting of board connectors and status LEDs 9
      2.5.1 Mainboard 9
      2.5.2 E1/T1 9
      2.5.3 VoIP 10
      2.5.4 GSM-Card 10
   2.6 Getting started 11
3. Introduction 12
   3.1 General 12
   3.2 Controlling the ECOTEL® VTMpro local and LINUX environment 12
   3.3 Controlling the ECOTEL® VTMpro from WINDOWS environment 12
4. Softwareinstallation 13
5. ServiceGear – ECOTEL® VTMpro administration 14
6. Setup network interface 16
   6.1 Default Configuration 16
   6.2 Changing network configuration 16
7. Connect to Remote Gateway 19
8. ServiceGear - Gateway 20
   8.1 Statusline 20
      8.1.1 File 20
      8.1.2 Gateway 20
      8.1.3 Channels 21
      8.1.4 Routing 21
      8.1.5 Call Generator 21
      8.1.6 Help 21
   8.2 Horizontal Icon Bar 22
   8.3 Vertical Icon Bar 22
9. Gateway 24
   9.1 Gateway 24
   9.2 Configuration 25
   9.3 License 25
10. Channels 26
   10.1 Email 27
      10.1.1 General 27
      10.1.2 Details 27
      10.1.3 Usage Step by step 28
   10.2 VoIP 30
      10.2.1 Information 32
      10.2.2 License Key 32
      10.2.3 Board Configuration 32
      10.2.4 VoIP Configuration 33
      10.2.5 Firmware 33

10.3 GSM 33
10.3.1 Board Control Panel 33
10.3.2 Channel Control Panel 37
10.4 ISDN 43
10.4.1 Information 43
10.4.2 Configuration 44
10.5 Simcontrol 45
10.5.1 Overview 45
10.5.2 Functions in detail 45
10.6 SMC Sim Management Center 46
10.6.1 General 46
10.6.2 Local SIMs 47
10.6.3 SIM Groups 50
11. Routing 53
11.1 Establishing a new routing step by step 53
11.2 Routing features in detail 54
11.2.1 Philosophy 54
11.2.2 Routings 54
11.2.3 Port Routing List 55
12. Call Generator 65
12.1 Overview 65
12.2 Functions in details 67
12.2.1 Horizontal Icon bar 67
12.2.2 Elements from main view 67
13. Statistics 68
14. Connections 70
14.1 Connections view 70
14.2 Logfiles and configuration 71
15. Online Trace 72
16. Layer 2&3 Trace 73
16.1 Offline trace and settings 73
16.1.1 Trace Mask 73
16.1.2 Offline Trace 74
16.2 Online trace 74
17. CDR – Call Data Records 75
17.1 General 75
17.2 Format 75
18. Tools 76
18.1 Secure Shell-Tool-PuTTY 76
18.2 Secure Copy-Tool-PSCP 76

1. Definition

ECOTEL® VTMpro is a multichannel gateway from the VIERLING gateway family that provides the connection between fixed and mobile network of up to 32 channels. It supports 4 ports with 30 channels ISDN PRI E1/T1, 4 ports with 2 channels ISDN 4xBRI E1/T1, 1 Port/30 channels VoIP/H.323 interface at the fixed and up to 32 channels GSM 850/1900 and/or GSM 900//1800 MHz at the mobile network interface. The **ECOTEL® VTMpro** has a sophisticated routing software that can be controlled local or remote by a graphical user interface. The gateway provides furthermore versatile statistics, trace and monitorfunctions. Call data files for billing can also be created and saved.

2. Quick Start

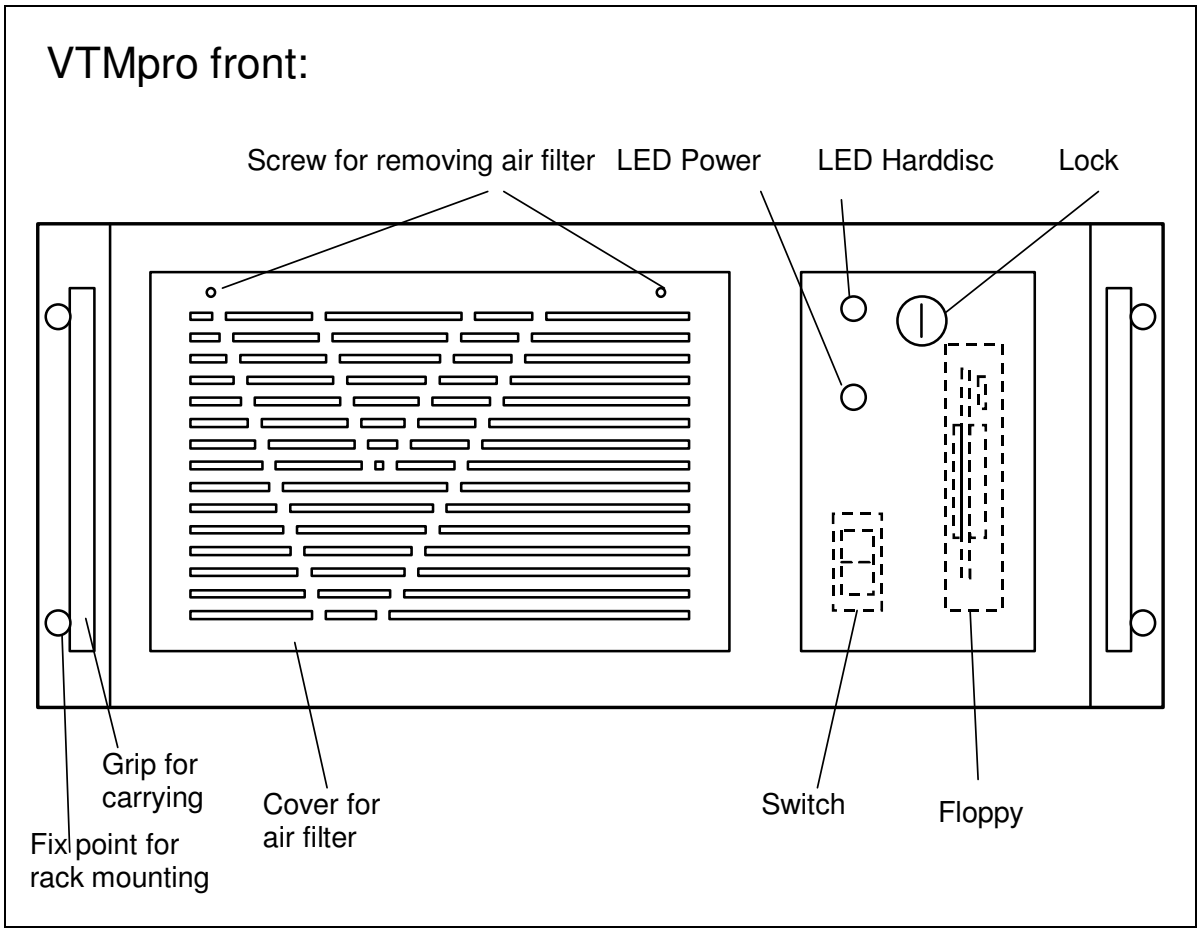
2.1 Components

ECOTEL® VTMpro is optionally equipped with different boards. The boards can be accessed by the back of the housing. The available boards are (detailed description later in the manual):

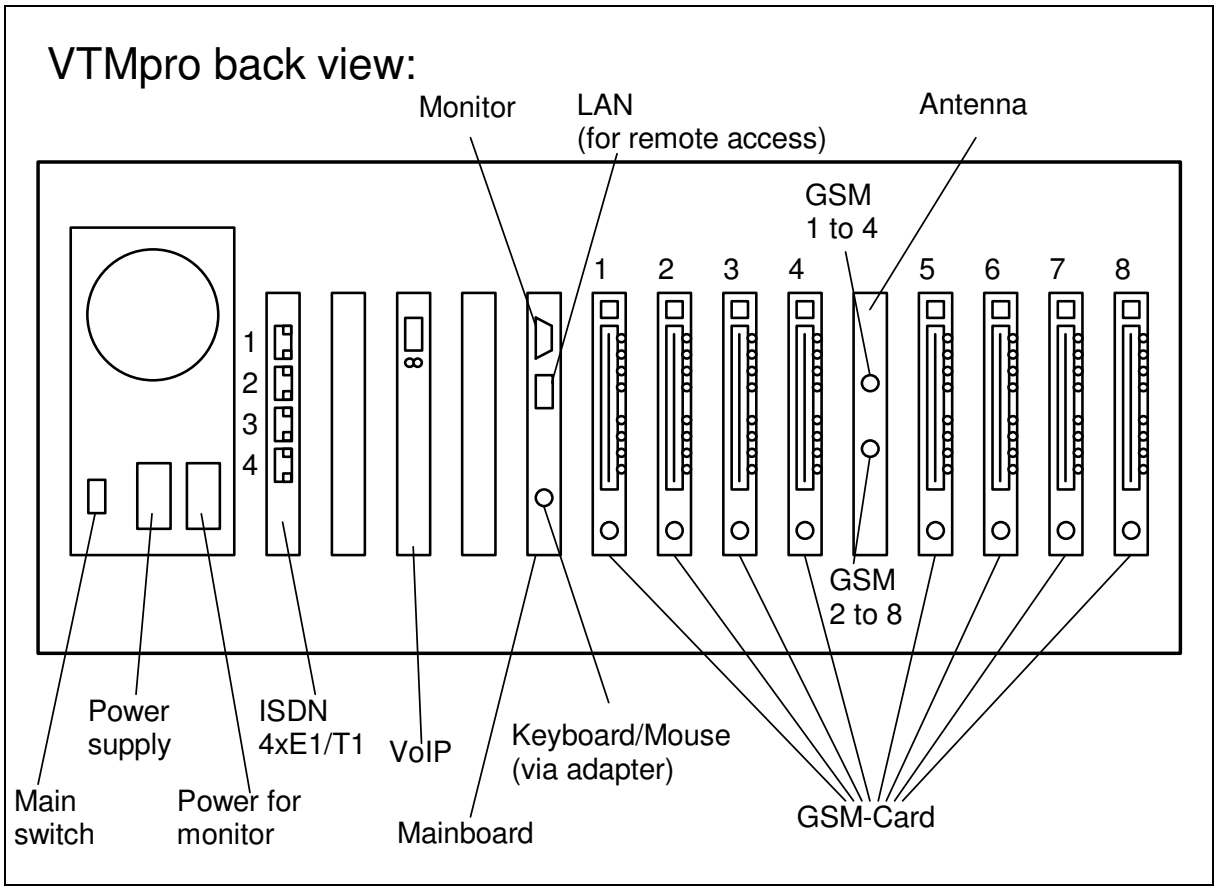
- Mainboard
- VoIP card
- ISDN PRI card
- ISDN BRI card
- GSM card
- Antenna splitter card

The mainboard is mandatory all other boards are optionally. Normally **ECOTEL® VTMpro** is equipped with one of the boards VoIP, ISDN PRI or ISDN BRI and one to eight GSM cards.

2.2 ECOTEL® VTMpro front view



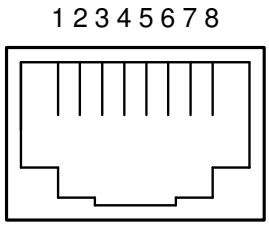
2.3 ECOTEL® VTMpro back view



2.4 Pinning of connectors

2.4.1 Ethernet for LAN and VoIP

Ethernet LAN and VoIP port (RJ-45 socket):

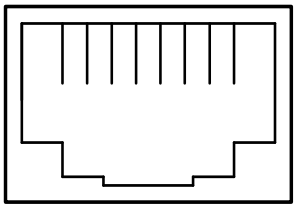


Pin	Signal	Description
1	TX +	Transmit Data
2	TX -	Transmit Data
3	RX +	Receive Data
4	Res	Reserved
5	Res	Reserved
6	RX -	Receive Data
7	Res	Reserved
8	Res	Reserved

2.4.2 E1/T1

Ethernet LAN and VoIP port (RJ-45 socket):

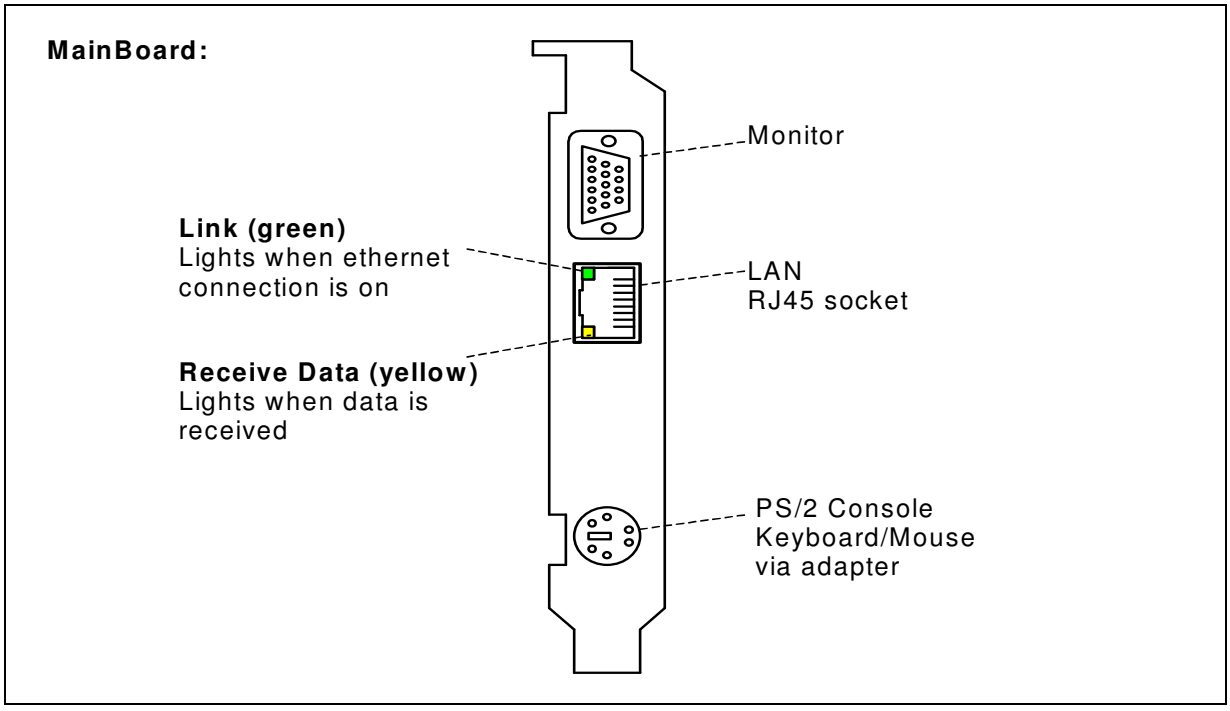
1 2 3 4 5 6 7 8



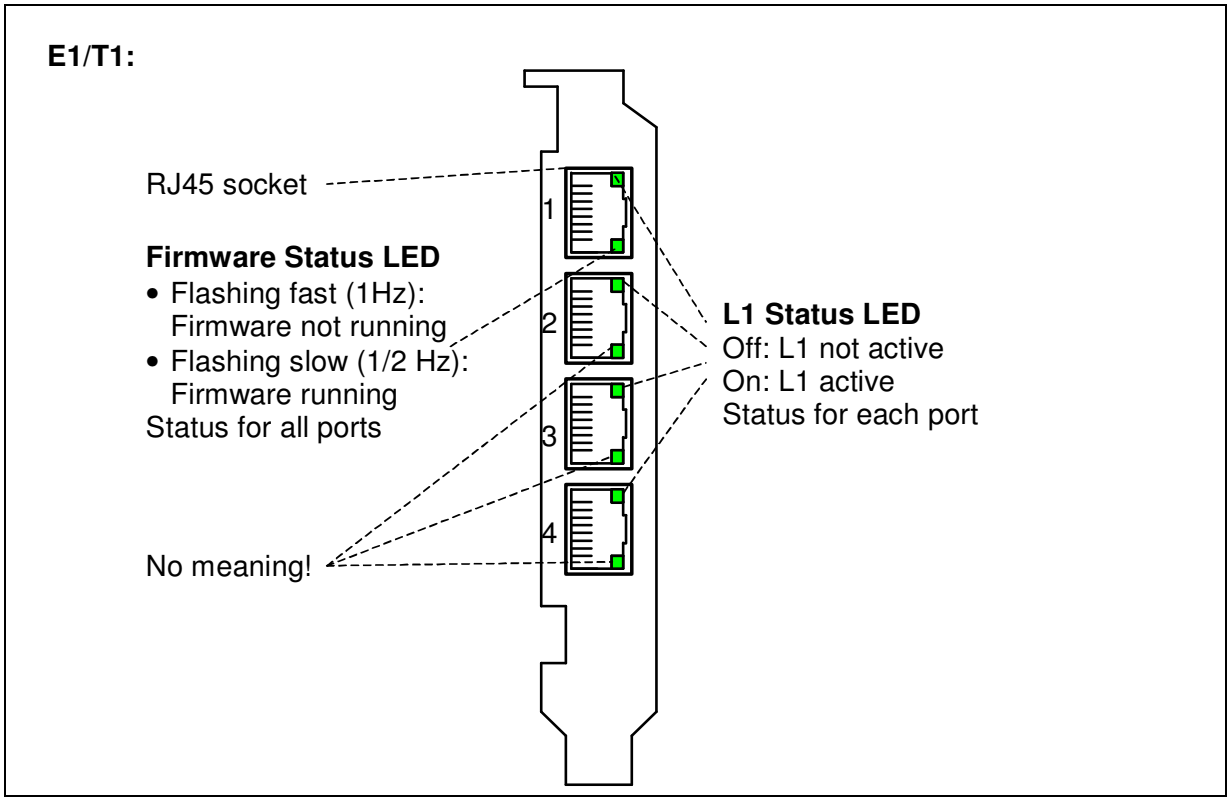
Pin	Signal	Description
1	RX +	Receive Data
2	RX -	Receive Data
3	Res	Reserved
4	TX+	Transmit Data
5	TX-	Transmit Data
6	Res	Reserved
7	Res	Reserved
8	Res	Reserved

2.5 Interpreting of board connectors and status LEDs

2.5.1 Mainboard

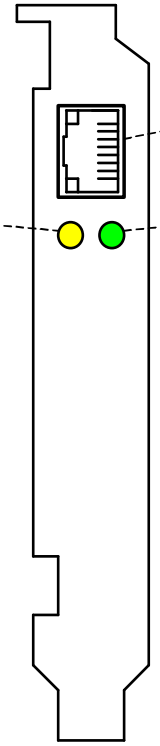


2.5.2 E1/T1



2.5.3 VoIP

VoIP:

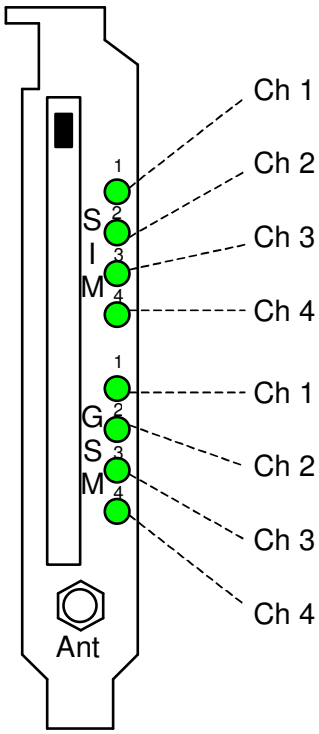


2.5.4 GSM-Card

GSM-Card:

SIM:
Flashing: Registering in progress
On: Registered

GSM:
Flashing: Call establishing
On: Call active



2.6 Getting started

To get the **ECOTEL® VTMpro** started follow this instruction:

- Remove VTMpro from the box
- Plug in the power cable shipped with
- Connect the power cable with power supply: 110-240 Volt/50-60 Hz
- Plug in the adapter for keyboard and mouse.
- Connect a keyboard, mouse and monitor to the adapter. The console can be removed after very basic settings.
- Optionally plug in the ethernet cable in to the RJ45 socket of the main board to control the **ECOTEL® VTMpro** by remote
- Optionally connect the VoIP card with the LAN
- Optionally connect one or more sockets of the E1/T1 card to a switch/pbx or router.
- Connect an antenna to the “Antenna” slot
- Assemble the SIM carrier within the GSM cards with SIMs
- Switch on the main switch at the power supply
- Press the switch below the front cover
- The **ECOTEL® VTMpro** will start up
- Follow the instructions in the “**ECOTEL® VTMpro** Software part
- To switch off press the button under the front cover for at least 5 seconds, or shut it down over the “Start” menu via terminal.

3. Introduction

3.1 General

ECOTEL® VTMpro is a LINUX based gateway for interconnection between fixed and mobile network. The embedded controlling intelligence runs without a face within the LINUX system. The controlling intelligence further in context, also called as gateway, routing engine or LCR, has a network interface for remote controlling. There is a GUI available using this interface. The GUI has two compilations: One for LINUX and one for WINDOWS. The LINUX version is also installed on the **ECOTEL® VTMpro** and can be started there to control the local gateway or the gateway from a different **ECOTEL® VTMpro** within the network.

3.2 Controlling the ECOTEL® VTMpro local and LINUX environment

To start the ServiceGear on local **ECOTEL® VTMpro** follow the instruction:

1. Connect a console (Monitor, Keyboard Mouse) to the gateway. For connecting the keyboard and mouse the delivered adapter must be used
2. After the boot sequence login with following default parameters:
   User: vierling
   Password: vierling
3. A gear-wheel icon "**ECOTEL® VTMpro** ServiceGear" appears on the desktop. Click ion this symbol to start the maintenance GUI.
4. Choose the gateway symbol from the vertical icon bar and press connect. By default the local machine can be accessed by the name "localhost", no password is given.

   ATTENTION

   For security reason the password should be changed.

5. To connect to the local gateway press the "Connect" button.

3.3 Controlling the ECOTEL® VTMpro from WINDOWS environment

To control the **ECOTEL® VTMpro** from WINDOW the specific software must be installed, which is explained in next chapter.

4. Softwareinstallation

Start the self inflating installing routine by double clicking on the following symbol from the CD:

rGateway_Win32.msi

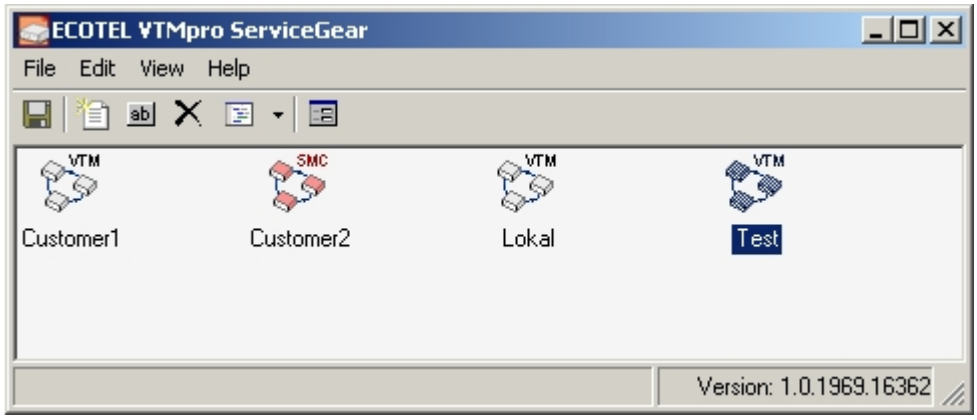
After the start follow the instructions!

The ServiceGear needs .Net framework from Microsoft. This framework is already installed on newer Windows installations. If not the **ECOTEL® VTMpro** installer will cancel the installation and advice to install the framework first. It gives also the option to do this immediately by providing this installation also by the **ECOTEL® VTMpro** installer. After the framework installation the **ECOTEL® VTMpro** ServiceGear installation can be started again.

5. ServiceGear – ECOTEL® VTMpro administration

After the successful installation the **ECOTEL® VTMpro** ServiceGear can be started by pressing the following icon on the desktop:

The administration area on group level appears.

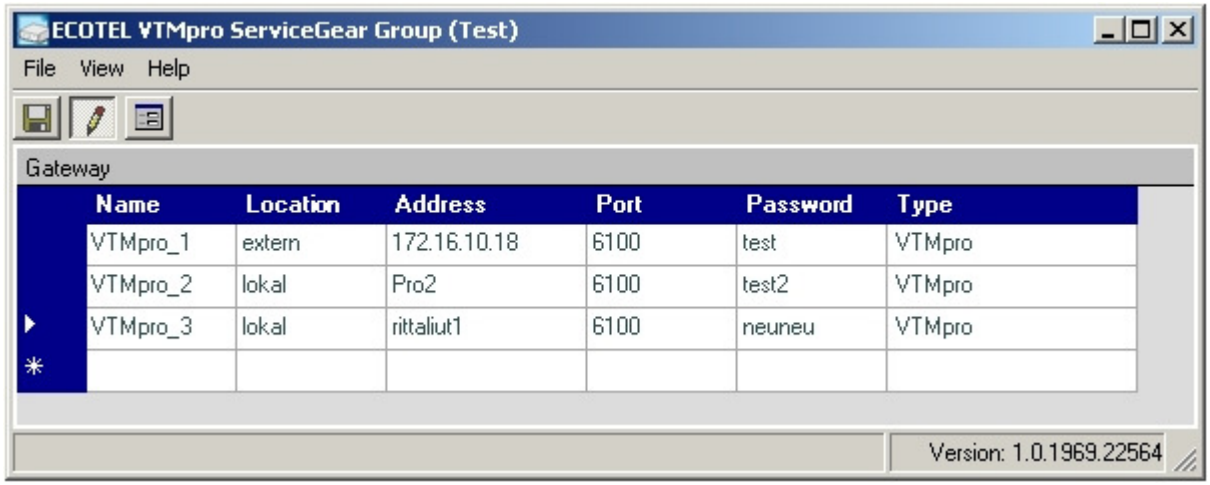


The ServiceGear provides the possibility to administrate groups of **ECOTEL® VTMpro** e.g. one group for each customer. (The screen shot shows already established groups).

To establish a new group the following steps must be done:

- Select Edit->New Group or the empty sheet symbol.
- Enter a group name at the field “Group Name”.
- The other settings are for use of an external Sim Server und must not be changed.
- Create the new group by pressing O.K..

The group can now bear many **ECOTEL® VTMpro** links. To apply a new **ECOTEL® VTMpro** to the new group double click on the specific group symbol within the **ECOTEL® VTMpro** Service Gear. The following Service Gear Group window appears:



To enter a new **ECOTEL® VTMpro** the following steps must be done:

- Click into a new line
- Press the “Pencil” symbol button from the menu to leave read only modus. Enter the following settings:

Attribut:	**Description:**
Name:	The **ECOTEL® VTMpro** can be given a individual name
Location	The **ECOTEL® VTMpro** can be given an arbitrary optional label for the physical location of the gateway.
Address	The address must be mandatory given in form of a known name within a network or a IP address.
Port	The port the ServiceGear communicates with VTMpro. May normally not be changed.
Password	Enter a valid password for the specific VTMpro. The default password is: NeuNeu
Type	Changes optionally the type of the Gateway and the ServiceGear to start, because the administration is universal usable for other gateway types.

- Confirm the settings by pressing the “Pencil” symbol again
- Select the **ECOTEL® VTMpro** to administrate the list and press the “GUI” symbol beside the pencil to start ServiceGear for the VTMpro. The remote maintenance will start with the correct items. Alternatively the ServiceGear gateway can be started manually and the necessary address and password can be entered by hand. See the following chapter:

6. Setup network interface

ECOTEL® VTMpro can be administrated by remote via TCP/IP connection. Therefore **ECOTEL® VTMpro** and the remote ServiceGear must be setup properly.

6.1 Default Configuration

The delivered default configuration of the network interface is setup to a static IP address, as follows:

172.16.8.16

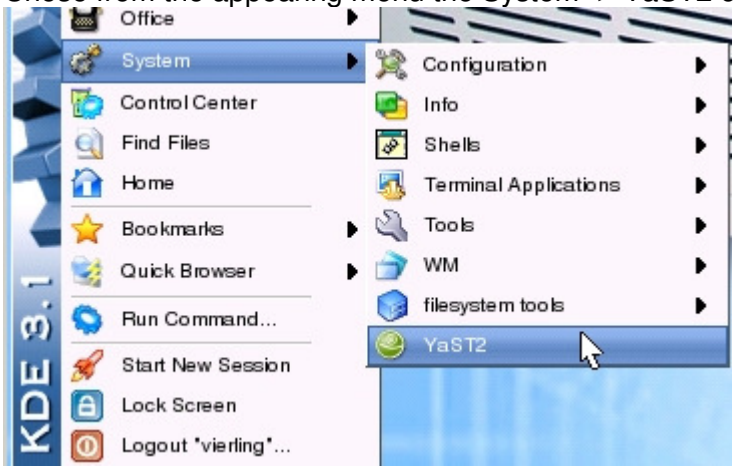
To reach the **ECOTEL® VTMpro** with the remote gear there are two possibilities of setup:

1. Set the **ECOTEL® VTMpro** IP configuration as default and configure the remote desktop to the value. This can be done anyway by a local connection between **ECOTEL® VTMpro** and the remote host by using a cross connect LAN cable. Otherwise the **ECOTEL® VTMpro** must be integrated into a existing network with this static IP address. For security reason it is recommended to ask your network administrator!
2. Change the IP interface of **ECOTEL® VTMpro** to DHCP or to a static IP address given by your network administrator. To change the IP interface the steps in the following chapter must be done!

6.2 Changing network configuration

1. Start the **ECOTEL® VTMpro** and wait until the login screen appears
2. Login with the following parameters:
   Login: vierling
   Password: U2xK3te8
3. Wait until the desktop is loaded completely
4. Click on the “Start Applications” button in the left bottom corner

5. Chose from the appearing menu the System -> YaST2 configuration tool:

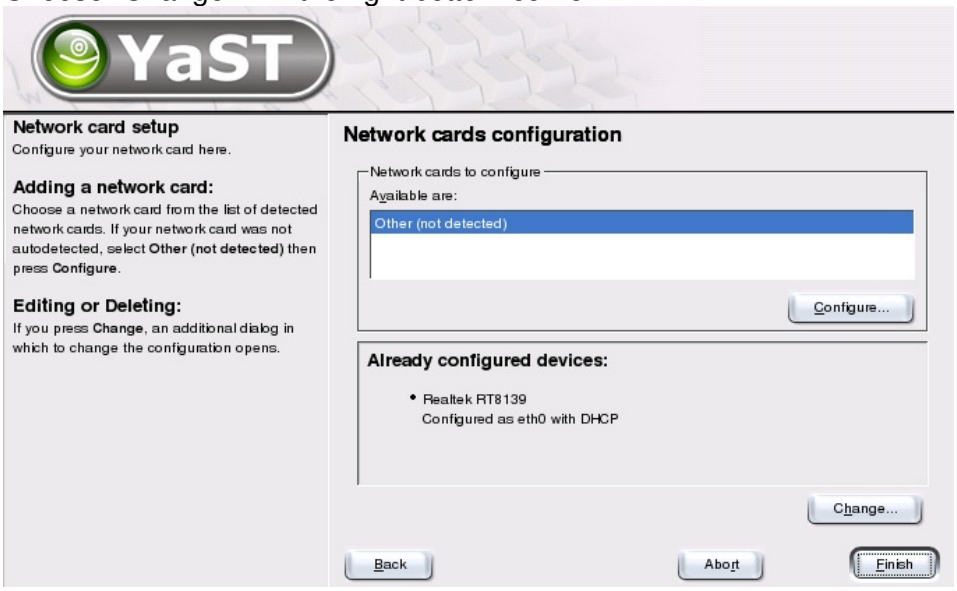


6. To make changes on system infrastructure the **root** password must be entered:
   Password: **gR76aLaB**

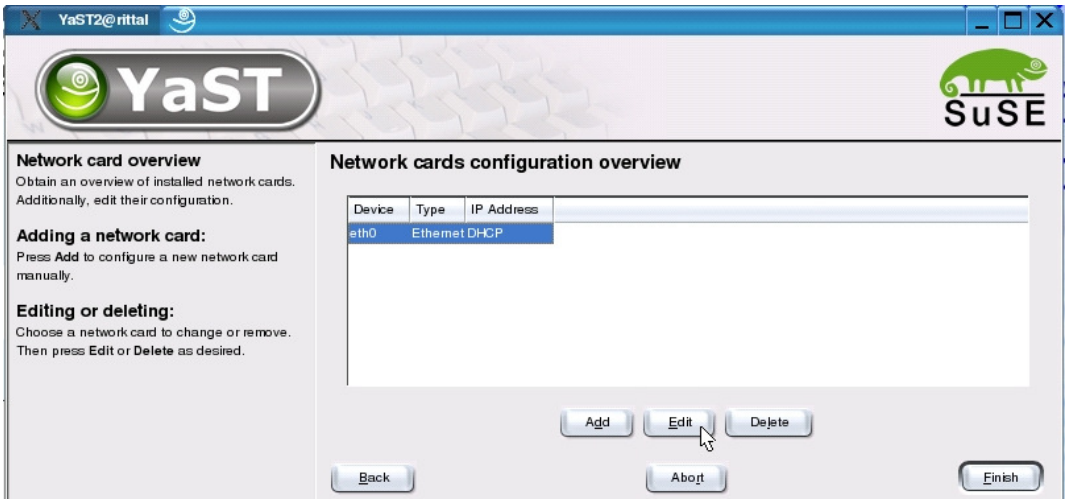
Confirm with OK.
Hint: Enter the password

7. Choose Network Devices ->Network card from the appearing menu:

8. Choose “Change...” in the right bottom corner:



9. Make sure that the “eth0” device is selected and press “Edit” button in the middle



10. Select
    - Automatic address setup (via DHCP) if there is a DHCP server available in the network to get a dynamic IP address assigned to the **ECOTEL® VTMpro** name. The **ECOTEL® VTMpro** default name is**: rittal**
    - Or Static address setup for selecting or changing the default IP address. Configure also the Subnet mask according to your network administrator.

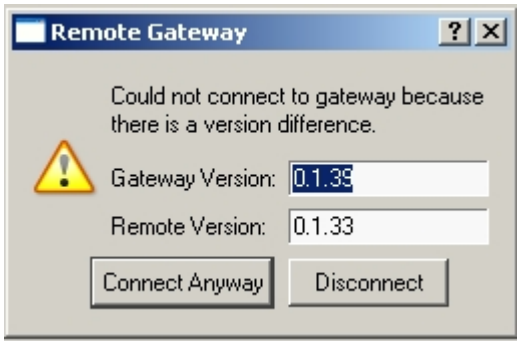
    Click on the “Next” button to confirm the settings

11. Finish the network configuration by pressing “Finish” at the screenshot from item 9 to close the settings.
12. Close the Yast control center by pressing “close”
13. Now **ECOTEL® VTMpro** settings are valid and it is reachable with the new address.

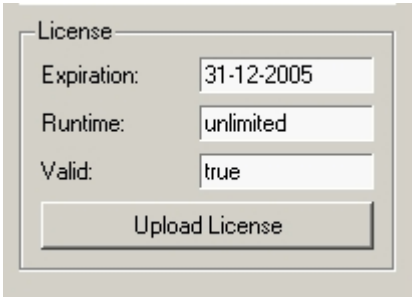
7. Connect to Remote Gateway

To connect the **ECOTEL® VTMpro** choose from the left row the item “Gateway” and enter the individual IP address into the field “Host” on the appearing fields. The predefined port in the field “Port” normally has not to be changed. When you have entered the correct IP address and pressed the button “Connect” you will be connected to the VTMpro. The connection is confirmed by the status line in the left bottom corner of the window. If there is a connection established the status is “connected” otherwise it is “idle” (compare to the next picture). By the way you can observe the amount of data transferred between the application on the **ECOTEL® VTMpro** and the computer the ServiceGear is hosted.

If the following screen appears you get a hint that you use different versions between the application on the **ECOTEL® VTMpro** and the ServiceGear on your host. A version conflict can happen, but normally the ServiceGear should be compatible until a certain degree to former **ECOTEL® VTMpro** applications. You can connect by pressing the “Connect Anyway” button.



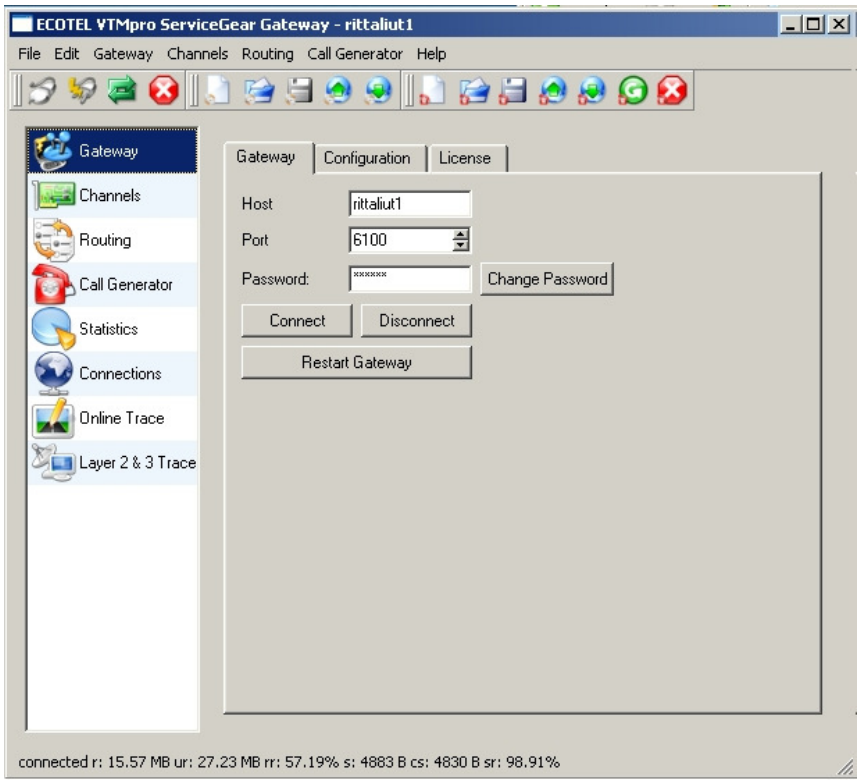
After a successful connection the following part of the right screen part now carries valid data:



This box shows license information. The **ECOTEL® VTMpro** may be restricted to a limited lifetime. If lifetime has expired **ECOTEL® VTMpro** can not be further used. The “Valid” field shows if **ECOTEL® VTMpro** can be still used or not. In case of expiration you can load a valid license file to the system by using the function “Upload License”. Contact VIERLING Communications support how to get such a license file. The lifetime is separated in two categories:

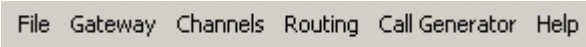
- Expiration: The **ECOTEL® VTMpro** runs unlimited until this date. After this date the **ECOTEL® VTMpro** is unusable.
- Runtime: The **ECOTEL® VTMpro** runs as long as the amount of entered hours in the dedicated field. After expiration the **ECOTEL® VTMpro** is unusable. Only the active time is counted. The idle time is ignored.

8. ServiceGear - Gateway



After starting the program "**ECOTEL® VTMpro** ServiceGear Gateway" you will see the above screen. The screen contains different parts, explained as follows:

8.1 Statusline



The statusline contains different menu items:

8.1.1 File

Attribut:	Description:
Quit:	Closes **ECOTEL® VTMpro** ServiceGear Gateway

8.1.2 Gateway

Attribut:	Description:
Connect:	Connects to remote gateway. Same function like the button on the appearing screen after choosing the "Gateway" item from the vertical icon bar.
Disconnect:	Closes a connection between the ServiceGear and the gateway.
Restart:	Restarts the application on the gateway. The connection to the ServiceGear closes automatically. A new connection is possible when the application on the **ECOTEL® VTMpro** has rebootet.

8.1.3 Channels

Attribut:	Description:
Download Configuration:	Retrieves a saved hardware configuration from the **ECOTEL® VTMpro** into the ServiceGear for manipulation or just for viewing.
Load and activate configuration:	Loads a new established or loaded and manipulated hardware configuration in to the remote VTMpro. The changes are only valid if this has been done. Otherwise changes will be discarded. This feature is useful to clone **ECOTEL® VTMpro** hardware settings.

8.1.4 Routing

Attribut:	Description:
New	Establishes a new routing configuration
Open	Opens an already established and saved routing file from the local machine
Save / Save as	Saves a routing configuration on the local machine
Activate	Activates a change in the routing on the VTMpro
Download	Retrieves a routing from the **ECOTEL® VTMpro** in to the ServiceGear

8.1.5 Call Generator

The call generator is a very useful tool for generating calls from any port of the **ECOTEL® VTMpro** for test aims.

Attribut:	Description:
New	Establishes a new configuration for the call generator.
Open	Opens a configuration that is saved on the local machine
Save / Save as	Saves a routing configuration on the local machine
Activate	Activates a change in the configuration from the call generator in the VTMpro
Download	Retrieves a call generator configuration from the **ECOTEL® VTMpro** to the ServiceGear.
Start	Starts call procedure programmed in a call generator configuration file
Stop	Stops call procedure

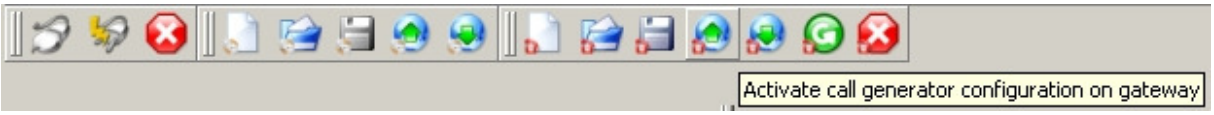
8.1.6 Help

About: Information about the version of the ServiceGear

8.2 Horizontal Icon Bar

The horizontal icon bar is divided into three themes: Gateway, Routing and Callgenerator

Gateway Routing Callgenerator



The contents are the same like the menu described in the chapter before. To get information about the meaning of the icons use the hover help function. If you hover the mouse arrow over an item and you stay a little time on the same place then a box will be shown with a short description of the dedicated button like the example above.

8.3 Vertical Icon Bar

The right side of the window depends on the choice from the vertical icon bar.

Gateway: Provides the function to enter the IP address, port number and control the connection to the VTMpro. Furthermore there is a part to administrate license context. View expiration values and validate new license files.

Channels: The main function of this menu item is to provide an overview of all communication channels. These are basically all hardware ports to the environment, like GSM-, ISDN- and VOIP-cards. Moreover this includes also system functions like SMS-Email conversion, local SIM administration and SIM switching. Selecting one of the items in the visible tree provides further information and settings about the dedicated channel.

Routing: Provides a window where the very flexible central routing functions can be established. The routing is port organized. Every port has specific features and, except from the premier and the last port, a predecessor and a successor.

Call Generator: This feature provides very useful test functions. One or more call scenarios can be established and started to test own hardware ports, routing or other devices working with VTMpro.

Statistics: Includes all function necessary to monitor a working system. It is possible to view the statistic online organized in a column for every port. With these parameters the maintain stuff can monitor if a systems runs well or not.

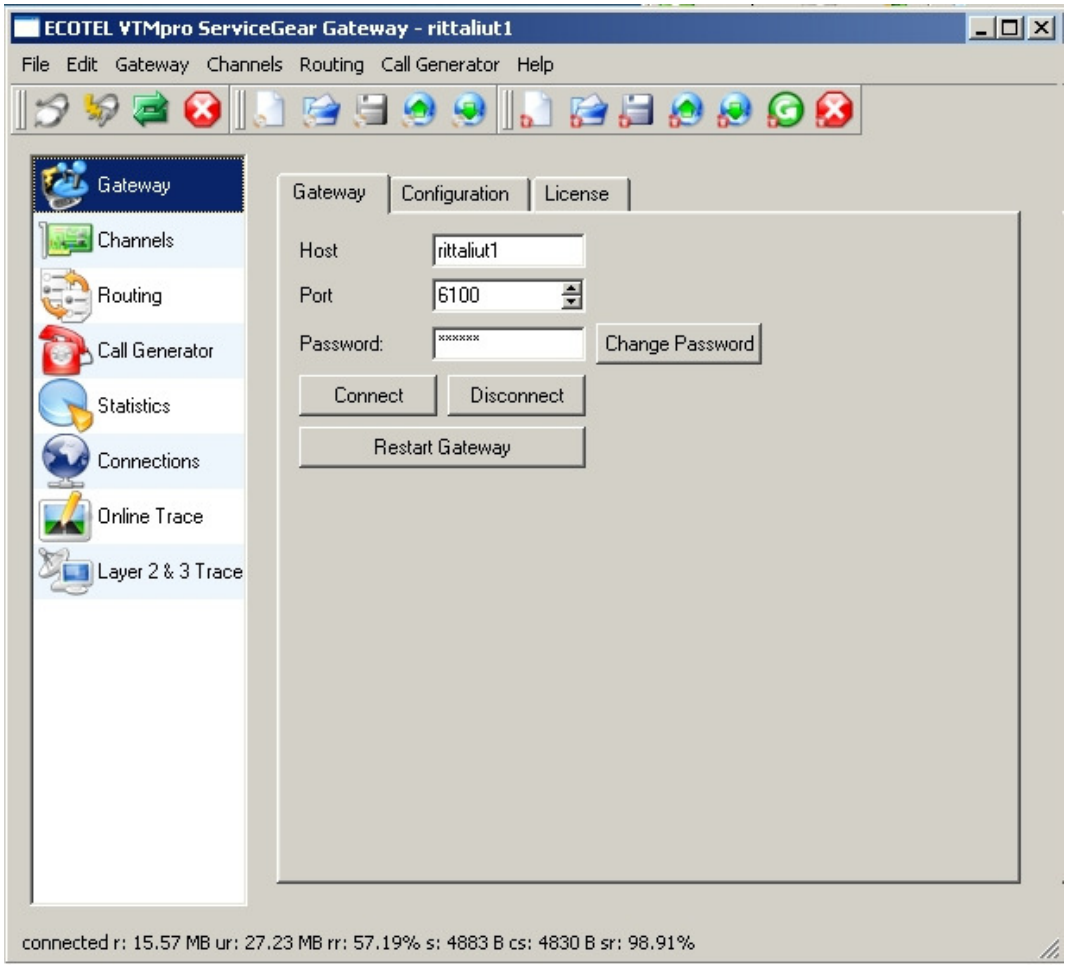
Connections: This view enables online monitoring. Each connection occupies one line. The lines can be vanished with a configurable delay, the monitoring is very easy.

Online Trace: Provides debug information for developing aims. This is interesting a suspicion of a fault in the software arouses.

Layer2&3 Trace: Very powerful function to trace all ports as well hardware as system ports like Email-SMS conversion. The trace can be scalably switched on or off and provides different depth.

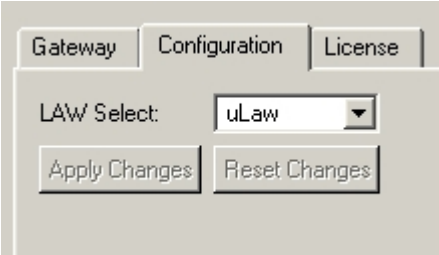
9. Gateway

9.1 Gateway



Attribute	Description
Host	The name within a network with DHCP or the IP address of the **ECOTEL® VTMpro** to control must be entered here
Port	The port the ServicegearGearGateway communicates with the **ECOTEL® VTMpro** can be changed here. Normally the default values should not be changed.
Password	The password for remote configuration must be entered here. The password is key sensitive!
Change Password	The actual password can be changed by pressing this button.
Connect/Disconnect	When all necessary data are entered the remote **ECOTEL® VTMpro** can be connected by pressing this button. To confirm the established connection the status line at the bottom must show “connected”. To release the connection “Disconnect” must be pressed.
Restart Gateway	This button restarts the software of VTMpro.

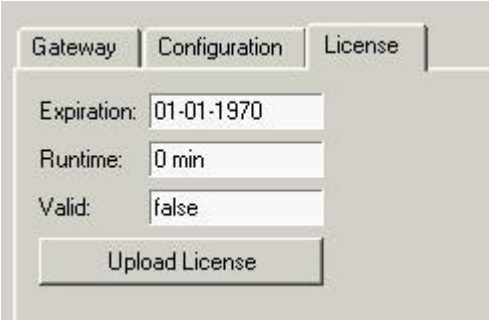
9.2 Configuration



Attribute	Description
Law Select	The **ECOTEL® VTMpro** provides ISDN channel coding aLaw and uLaw. To change the modes the specific law must be selected and the "Apply Changes" button must be pressed. The changes can be cancelled by pressing the "Reset Changes" button.

9.3 License

The **ECOTEL® VTMpro** supports license models. Therefore the option to monitor and upload licenses must be provided.

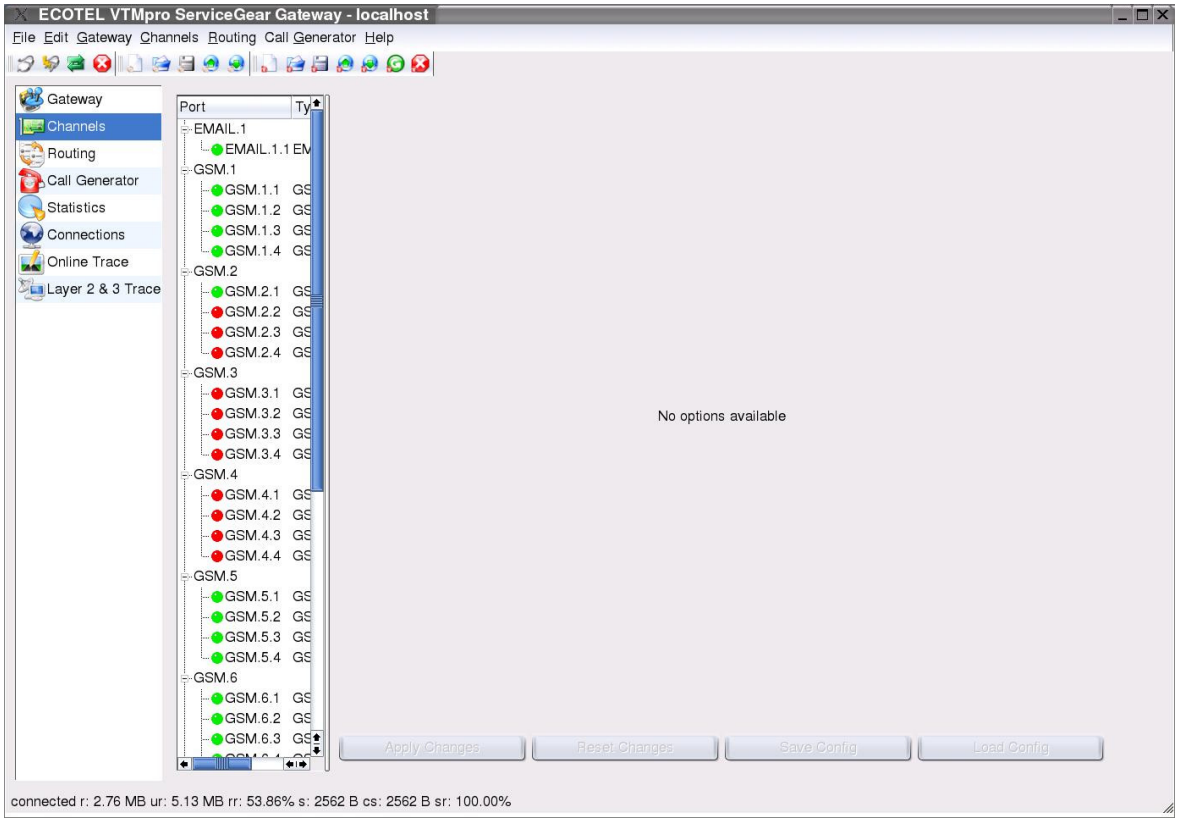


Attribute	Description
Expiration	The **ECOTEL® VTMpro** provides two sets of licenses. The expiration model provides full function until the expiration date is reached. At this moment the **ECOTEL® VTMpro** does not work anymore.
Runtime	The runtime license provides full function not to a specific date, but on a limited amount of time. When the licensed amount of minutes of the gateway have been terminated the **ECOTEL® VTMpro** will not work further.
Valid	The valid label does display whether there is a valid license available or not.

10. Channels

After a successful connection and selection of the “Channels” item on the left side the following screen is visible.

The middle part shows the port overview tree. There are listedall available ports. The amount of ports can vary depending on the installed hardware and the available license. Generally there is a hierarchy in hardware administration of <Board> <Port> <Channel>. E.g. the E1/T1 Card is one <Board> with four E1/T1 <Ports> and 30 <Channels> each.



In the following chapter the maximum available ports and its function are listed:

10.1 Email

If email is chosen in the tree view, the following configuration windows will be visible on the right side:

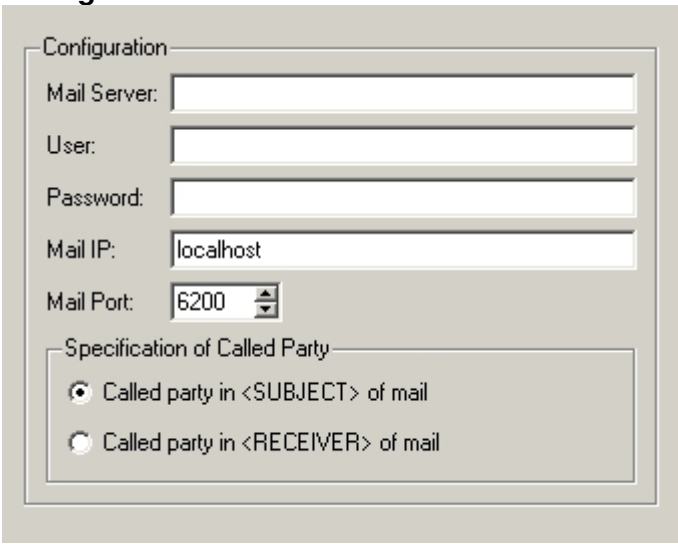
10.1.1 General

The email port of the **ECOTEL® VTMpro** works as a client. Therefore a mail server must be available where the **ECOTEL® VTMpro** can register at!

10.1.2 Details

Vertical Tree View:

Configuration



Attribute	Description
Mail Server:	The IP address of the mail server must be entered here
User:	A valid user account for the **ECOTEL® VTMpro** within the mail server must be entered here
Password	The password according to the user name within the network must be entered here
Mail IP	The script providing email in the **ECOTEL® VTMpro** is internally interfaced by a network layer, so this script can also run on a remote hardware. If this is true the IP address of this hardware must be entered here. Normally the email ports run on the same hardware as the **ECOTEL® VTMpro** software so the default value must be localhost.
Mail Port:	The port the email skript can be accessed. Normally the default value 6200 must be there. See also “Mail Port”
Specification of called party	A valid mobile number must be entered here to send an email to a mobile by email/sms conversion. With this settings you can configure if the destination number must be entered in the field <Subject> or <Receiver> of the email.

10.1.3 Usage Step by step

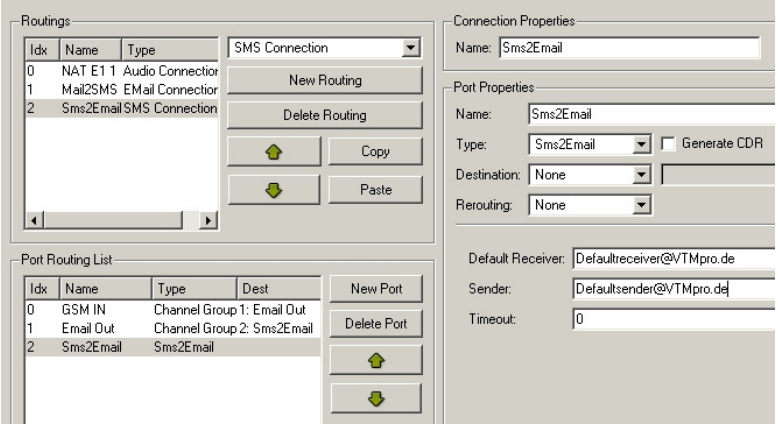
10.1.3.1 Settings in VTMpro

1. Enter the mail server's address in the field "Mail Server" in form of an IP or a known name within the network. E.g. 172.16.1.114 or EmailServer.
2. Enter a valid user of the mail system in the field "User". The **ECOTEL® VTMpro** mail manager will poll this account every 5 seconds and checks whether there is a valid message to convert. After polling the mails are **not** available at the account anymore!
3. Enter the valid password for the email account
4. The other values can be default!

10.1.3.2 Example SMS-Email

10.1.3.2.1 Routing

For a proper function a routing for SMS-Email conversion must be available.



1. Select Routing at the vertical icon bar
2. Press the button New Routing, Select "SMS Connection" from the properties above and enter an individual name in the Connection Properties -> Name
3. Press New Port beside the Port Routing list.
4. Enter an individual name and choose Channel Group type from the Port Properties menu.
5. Assign to the Channel Group at least one GSM channel the SMS can be received. More channels are possible.
6. Press New Port beside the Port Routing list again.
7. Enter an individual name and choose Channel Group type again from the Port Properties menu.
8. Assign to the Channel Group the Email channel, the email can be sent trough.
9. Press New Port beside the Port Routing list again.
10. Enter an individual name and choose SMS2Email type from the Port Properties menu. Set a default receiver email address if the received SMS bears no specific receiver. Set also a default sender that will be set within the created email by VTMpro. The timeout in seconds can be set different to zero, when a new attempt shall be made when no confirmation is received from the mail server that the email has been sent.
11. Press "Activate Routing on Gateway" from the horizontal icon bar.

10.1.3.2.2 Structure of SMS

The SMS must contain the destination email address at the beginning of the text. The email address must be in brackets. The same rule exists for the sender. A sender address

can be set in the same way at the beginning of the SMS. This address will be set into the sender field of the email. After the brackets the user text can be written.

Example:
The Text “Hello World” shell be sent by SMS from the origin Sender@VTMpro.de to the destination Receiver@VTMpro.de. The SIM with the CLI 0160/1234567 within the gateway will be used.

Solution:

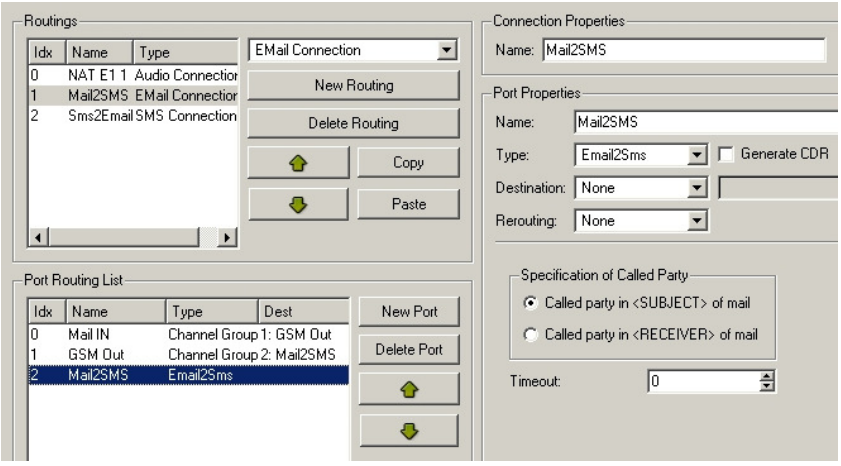
Text: <Receiver@VTMpro.de><Sender@VTMpro.de> Hello World

Send to Mobile: 0160/1234567

10.1.3.3 Example Email-SMS

Routing

For a proper function a routing for Email-SMS conversion must be available.



1. Select Routing at the vertical icon bar
2. Press the button New Routing, Select “EMail Connection” from the properties above and give an individual name in the Connection Properties -> Name
3. Press New Port beside the Port Routing list.
4. Enter an individual name and choose Channel Group type from the Port Properties menu.
5. Assign to the Channel Group the Email channel the email can be received through.
6. Press New Port beside the Port Routing list again.
7. Enter an individual name and choose Channel Group type again from the Port Properties menu.
8. Assign to the Channel Group at least one GSM channel the SMS can be sent. More channels are possible
9. Press New Port beside the Port Routing list again.
10. Enter an individual name and choose Email2SMS type from the Port Properties menu.
11. Choose whether there is the called party in subject or receiver field of the mail. The timeout in seconds can be set different to zero, when a new attempt shall be made when no confirmation is received from the network provider that the SMS has been sent.
12. Press “Activate Routing on Gateway” from the horizontal icon bar.

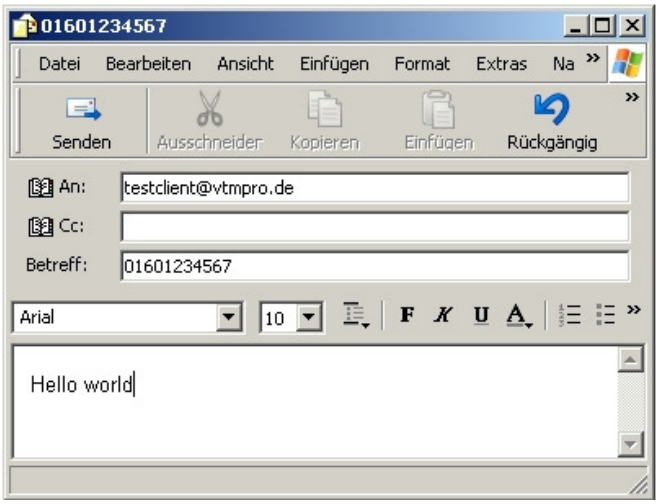
10.1.3.3.1 Structure of Email

The email must be directed to the mail client that is registered for **ECOTEL® VTMpro** at the mail server in the network. This client must be entered into the receiver field of the email. The destination CLI of the mobile has to be set in default i to the subject field of the email. The Text can be written into the text field.

Example:

The message "Hello world" shall be sent to the mobile user CLI 0160/1234567 via the **ECOTEL® VTMpro** mail client testclient@vtmpro.de.

Solution:

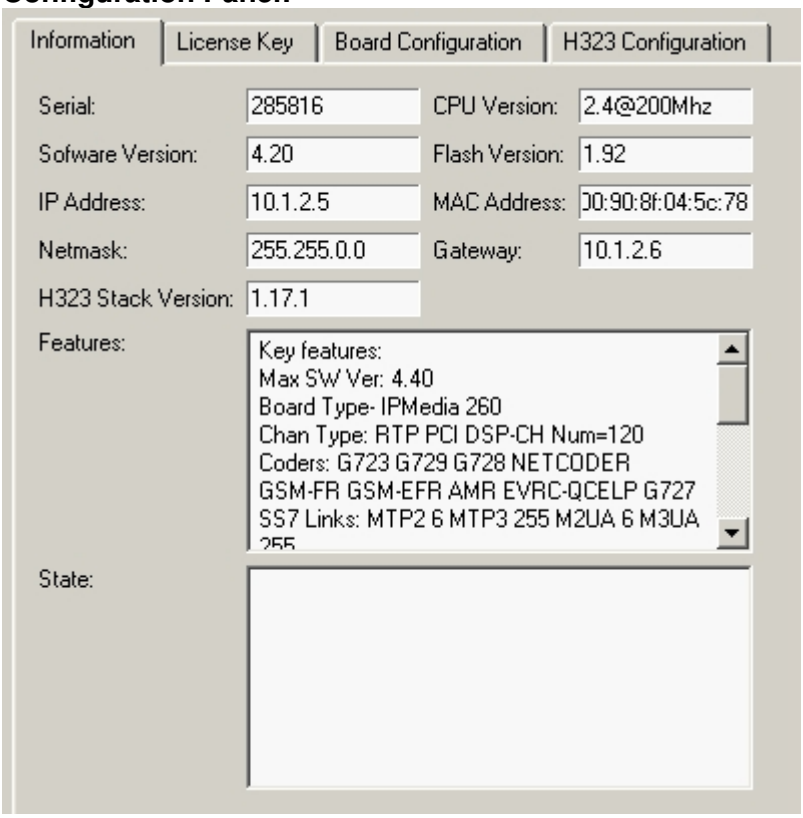


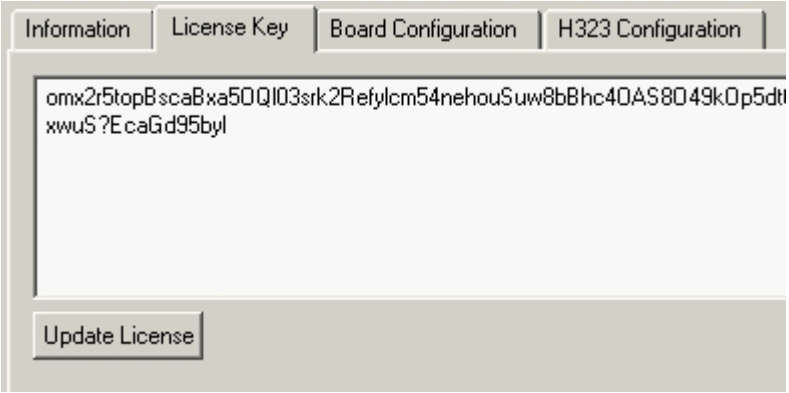
10.2 VoIP

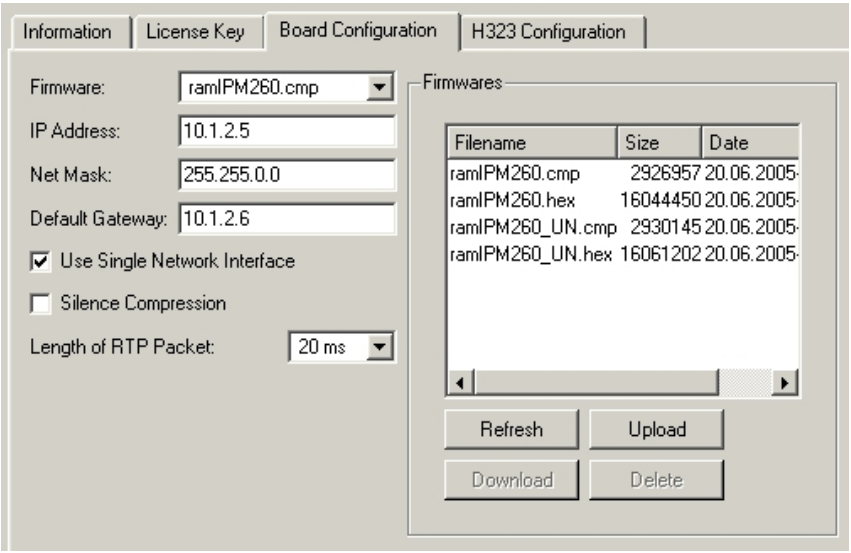
If VoIP is chosen in the tree view, the following configuration windows will be visible on the right side for VoIP.

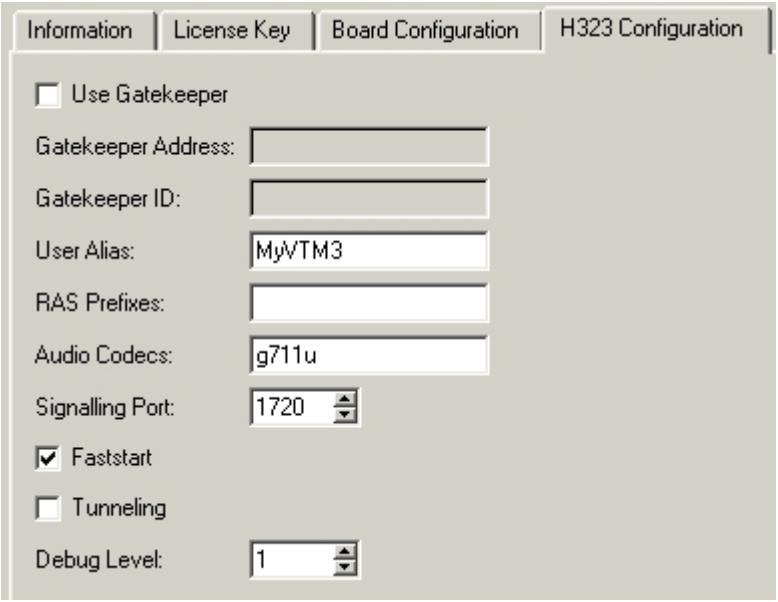
Vertical Tree View:

Configuration Panel:




Information
License Key
Board Configuration
H323 Configuration
omx2r5topBscaBxa50QI03srk2Refylcm54nehouSuw8bBhc4OAS8049kOp5dt
xwuS?EcaGd95byl
Update License


Information
License Key
Board Configuration
H323 Configuration
Firmware:
ramIPM260.cmp
IP Address:
10.1.2.5
Net Mask:
255.255.0.0
Default Gateway:
10.1.2.6
Use Single Network Interface
Silence Compression
Length of RTP Packet:
20 ms
Firmwares
Filename
Size
Date
ramIPM260.cmp 2926957 20.06.2005
ramIPM260.hex 16044450 20.06.2005
ramIPM260_UN.cmp 2930145 20.06.2005
ramIPM260_UN.hex 16061202 20.06.2005
Refresh
Upload
Download
Delete


Information
License Key
Board Configuration
H323 Configuration
Use Gatekeeper
Gatekeeper Address:
Gatekeeper ID:
User Alias:
MyVTM3
RAS Prefixes:
Audio Codecs:
g711u
Signalling Port:
1720
Faststart
Tunneling
Debug Level:
1

10.2.1 Information

Attribut:	Description:
Serial	Displays the serial number of the mounted VoIP Board for identification aims or CODEC upgrade
Software Version	Displays the software version of the VoIP board
Flash Version	Displays the version of the firmware on the VoIP board
CPU Version	Displays the parameter of the VoIP board CPU
MAC Address	Displays the hardware address of the VoIP board
H.323 Stack Version	Displays the version of the used h.323 stack.
Features	Displays other features of the used VoIP card. Especially there are listed all licensed CODECS. If there are problems in using CODECS check here if the used CODEC is installed!

10.2.2 License Key

For providing additional CODECs there is a license key necessary. The key string must be entered in to the field and the “Update License” button must be pressed to activate the CODEC.

10.2.3 Board Configuration

Attribut:	Description:
Firmware	The used firmware can be chosen in this field. The available firmware versions are visible in the field on the right side of the window. Normally this is very useful when an update is uploaded to the gateway
IP adress	This is the IP address of the VoIP port for signaling and audio data
Net Mask	This is the mask for IP address decoding. Settings belong to the network architecture
Default Gateway	Set the default gateway for the network **ECOTEL® VTMpro** is installed
Use Single Network Interface	Normally the VTMpro needs an own public IP address for VoIP service. By using an internal NAT service and providing a network switch it is possible to use only one public IP for remote access and VoIP. In this case a unique local IP address must be entered in the “IP address” field of the VoIP card .
Silence Compression	This setting enables the silence compression in G.711 codec. This feature provides the option of saving bandwidth and data amount when there is silence in the traffic channel
Length of RTP Packet	This setting enables to choose the length of the real time protocol packets. Short packets generate more overhead but the chance is given that a loss of single packets will not effect the quality of voice too much

10.2.4 VoIP Configuration

Attribut:	Description:
Use Gatekeeper	If a gatekeeper for traffic distribution in the system is available then choose this box
Gatekeeper Address	If gatekeeper is chosen then a valid IP address must be entered here
Gatekeeper ID	If the gatekeeper provides a ID or name this can be entered here. This parameter is optional.
User Alias	The name of the gateway must be entered here. This RAS Prefix
Audio Codecs	The used codecs must be entered in this field as a string separated by spaces. E.g. G723
Signalling Port	Configures the port the h.323 signaling is working
Fast Start	Enables the h.323 fast start option
Tunneling	Enables the h.245 tunneling option

10.2.5 Firmware

Shows the provided firmware for the VoIP card. Normally the loaded firmware may not be changed and can be set at default values.

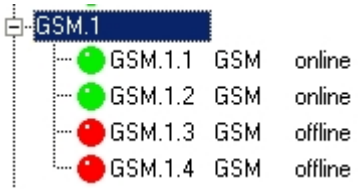
10.3 GSM

The GSM card has got board level and port level configuration settings.

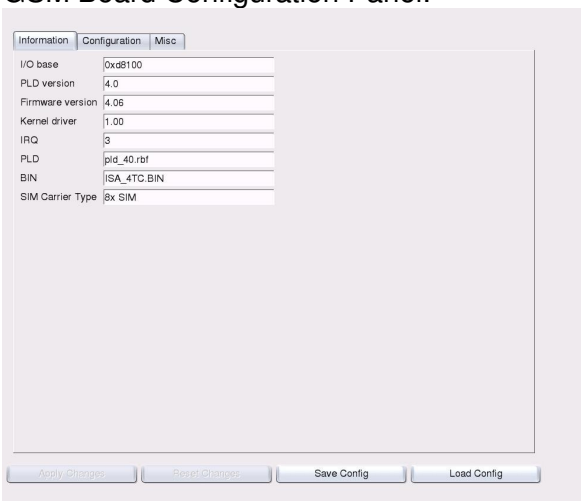
10.3.1 Board Control Panel

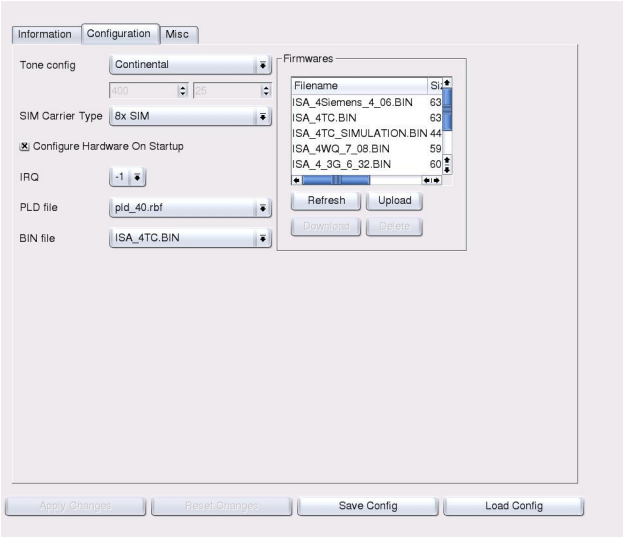
Selecting the board in the tree view shows the board level settings:

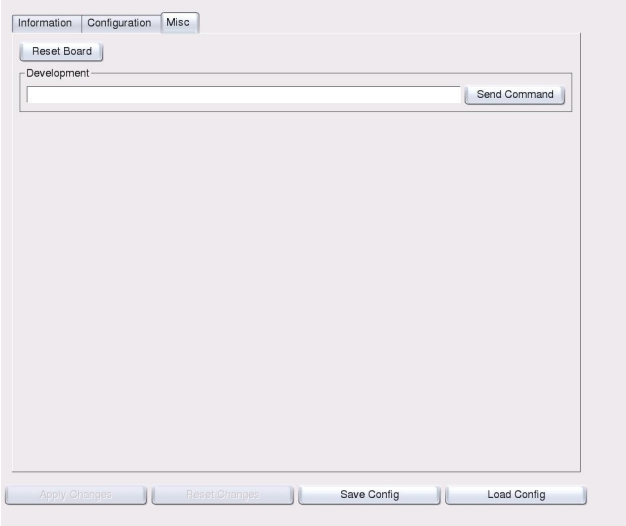
Vertical Tree View:



GSM Board Configuration Panel:







10.3.1.1 Configuration

Tone Config

Settings for the in-band signaling tone recognition. The tone recognition is characterized by the base tone and the window size. There are three combo boxes available. The upper wide box provides the chance to use preconfigured settings for base tone and window size or to realize user defined configuration:

Name:	**Basetone in Hz**	Windowsize in Hz
Continental	400	25
US/UK	350	125
User defined	<User Settings>	<User Settings>

If one of the user defined settings has been chosen, then the values in the table are valid. For “User defined” settings own values must be entered in the two additional combo boxes. The left one sets the basetone and the right one the windowsize.

ATTENTION

Increasing the windowsize increases the probability of recognizing the alert tone, but increases also the possibility of interpreting any noise as an alert tone!

Configure Hardware On Startup

ECOTEL® VTMpro provides the possibility to configure hardware with default or individual settings for each board. If individual values must be used then this box must be checked and the following values must also be set.

IRQ

Sets the Interrupt for the specific board. The value –1 uses the default value. Normally no changes must be done at this configuration. Any changes have to be done very carefully to prevent hardware conflicts.

PLD file

This setting locates the used firmware for the programmable logic on the board. There is also the chance to use a default firmware by electing “default” in the combo box or the use of a specific file. The choice is limited to the available files with the ending “<name>.pdf” visible in the “firmwares” listbox on the right side.

ATTENTION

A change will be valid first after a reboot of the gateway!

BIN file

This setting locates the used firmware for the controller on the board. There is also the chance to use a default firmware by selecting “default” in the combo box or the use of a specific file. The choice is limited to the available files with the ending “<name>.bin” visible in the “firmwares” listbox on the right side.

ATTENTION

A change will be valid first after a reboot of the gateway!

Firmware

Provides the opportunity to administrate different firmware version for this board. The actual available firmware can be seen in the “Firmware” list box .

Refresh

Refreshes the view of the list box containing the firmware.

Upload

Provides the possibility to upload a new firmware from the host running the ServiceGear software to the actual controlled gateway.

Download

Provides the possibility to download a firmware from the actual controlled gateway to the host running the ServiceGear software. The firmware which should be downloaded must be marked in the list box.

Delete

Provides the possibility to delete a firmware on the actual controlled gateway. The firmware which should be deleted must be marked in the list box.

ATTENTION

Deletion of a firmware that is actual used causes trouble at the next reboot, because the specific board will not be able to run anymore!

Information

Provides hardware informations:

I/O Base

Displays the used adress of the specific board on the isa-bus.

PLD version

Displays the version of the used file for the programmable logic device on the board.

Driver version

Displays the version of the used file for the controller on the board.

IRQ

Displays the used interrupt of the board within the host computer.

PLD

Displays the filename of the used firmware for the PLD.

ATTENTION

The displayed filename and the set filename in the configuration menu can differ, because the settings will be valid not before the gateway has been restarted!

BIN

Displays the filename of the used firmware for the microcontroller of the board.

ATTENTION

The displayed filename and the set filename in the configuration menu can differ, because the settings will be valid not before the gateway has been restarted!

10.3.1.2 Misc

Reset Board

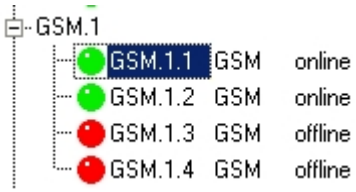
Provides the possibility to reset the whole board. The reset is straight connected to the reset pin of the boards controller. If this button will be pressed all four channels on the board are affected.

Development

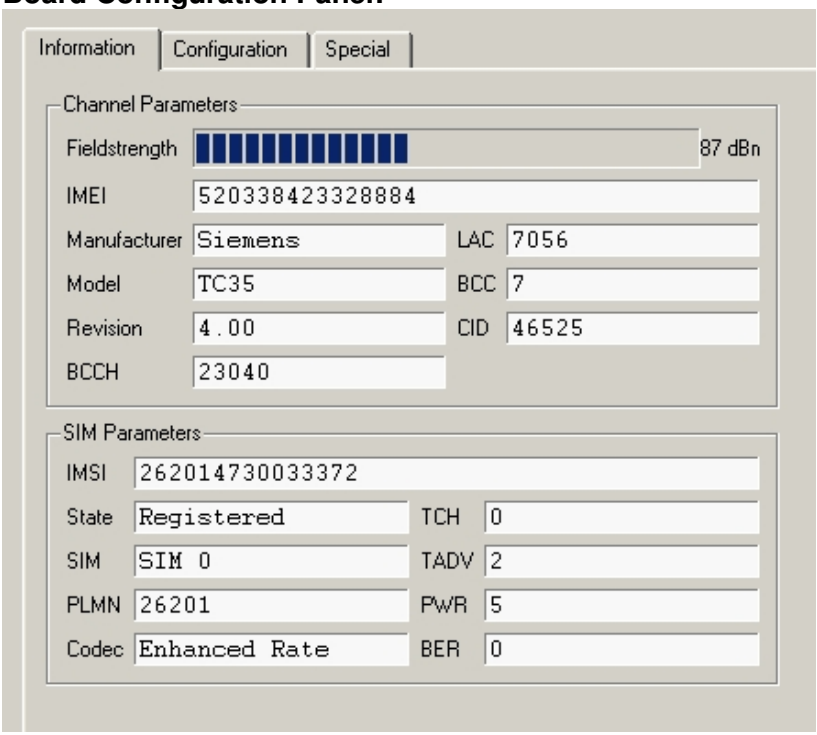
Provides direct settings of commands as strings. Use only for experts and development!

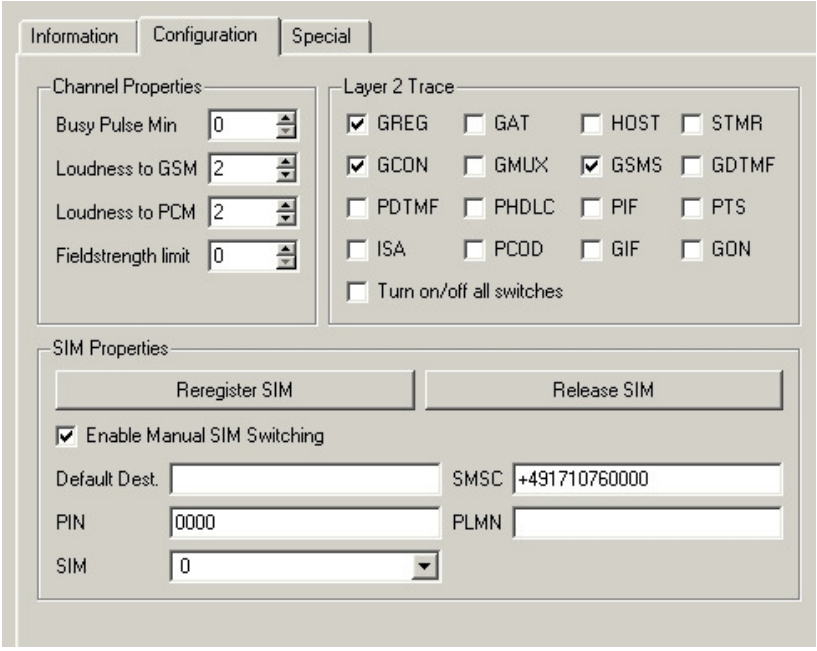
10.3.2 Channel Control Panel

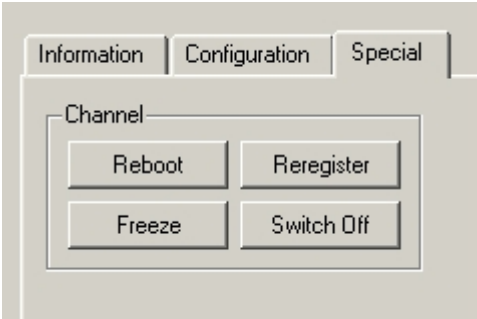
Vertical Tree View:



Board Configuration Panel:







10.3.2.1 Channel Properties

Provides channel specific settings

Busy Pulse Min

In case of in-band signaling detection it has mainly to be differentiated between busy-tone, alert-tone and any other signals categorized as voice-tone. The detection algorithm works like this: If there is a valid signal in the voice path (matching frequency) then it has to be decided according to the pulse/pause ratio whether it is an alert signal or busy. If the frequency does not match then it is be messaged to the host as a voice-announcement. In case of limited parameters only the busy-pulse minimum length is configurable. The delta between minimum length and maximum valid length is fix (200 ms). If the pulse length is between <BusyPulseMin> and <BusyPulseMin+200 ms> then it is a valid busy signal and will be transferred to the host. If it is longer then it is an alert signal, if shorter it is invalid!

The entered format is coded as following: The number entered is multiplied internal with 40 ms. So entering 1 means 40 ms, 15 means 600 ms!