

# RRC101-IP

## Quick start guide



**THIESEN**  
HARDWARE  
SOFTWARE  
DESIGN  
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## Description

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Quick start guide. First steps to connect and install the RRC101-IP unit.

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## 1 Precondition / Preamble

1. PC or Notebook/Laptop → hereafter referred to as PC
2. Switch + equivalent network cable respectively crossover cable → we recommend a switch
3. All units (RRC101-IP, RDU104, RRC101-IP-Marine) are in delivery status and with IP-address 192.168.56.1
4. The purpose is to configure all units via switch in a local network.

## 2 Configuration

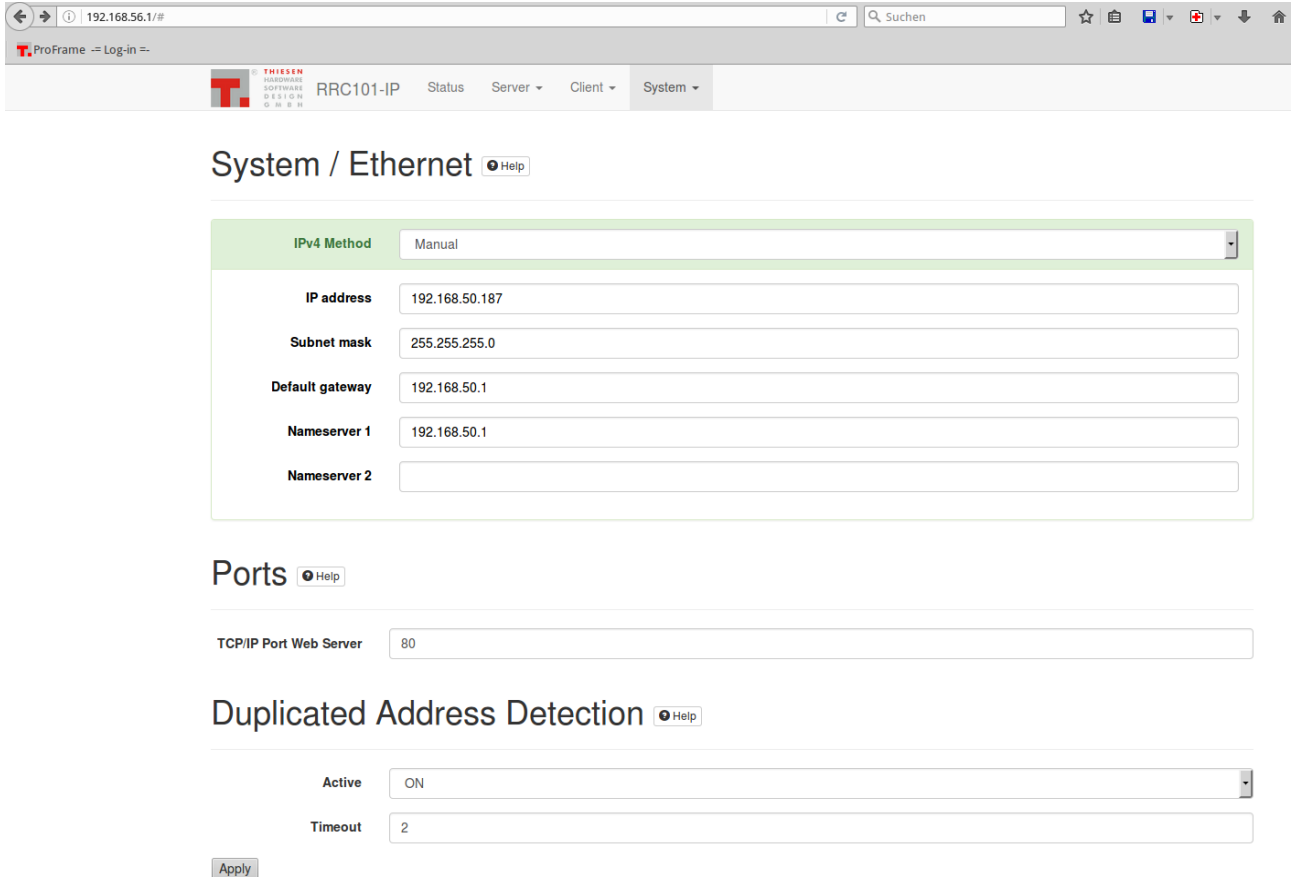
### 2.1 General procedure / connection

1. Set the IP address of the PC to correct network (192.168.56.0) for address-range 192.168.56.1 (preset IP-address of the units) and 192.168.56.2 to 192.168.56.254.  
Recommended IP-address for PC: 192.168.56.100
2. Connect PC and Switch.
3. Connect the units one after the other with the switch and proceed as follows: At first connect the server - then the Clients.
4. Open up your Browser at the PC (we recommend Mozilla Firefox) and enter the IP-address of the RRC101-IPs 192.168.56.1 and confirm your input with **<Enter>**.
5. The Browser Login-Dialogue will appear.  
Log in with  
Username: admin  
Password: admin
6. The Webinterface opens up.

## 2.2 Server Configuration

At first the Server has to be configured. The next steps have to be carried out even in case of a „point-to-point“ connection. → One „point“ has to be the Server the other one the Client.

7. **Set the Server IP-address.** From Menue „**System**“ → choose „**Ethernet**“.  
Do the following settings:

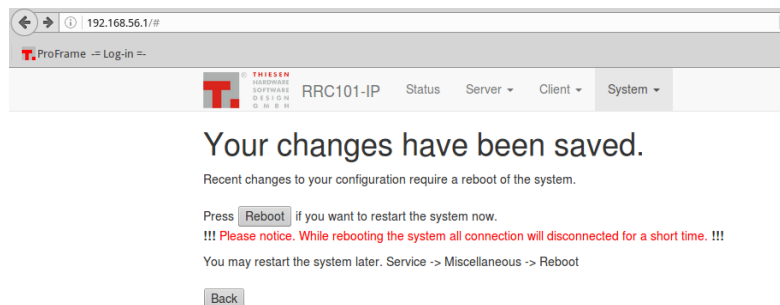


The screenshot shows the configuration web interface for RRC101-IP. The browser address bar shows 192.168.56.1/#. The page title is "System / Ethernet". The "IPv4 Method" is set to "Manual". The "IP address" is 192.168.50.187, "Subnet mask" is 255.255.255.0, "Default gateway" is 192.168.50.1, "Nameserver 1" is 192.168.50.1, and "Nameserver 2" is empty. The "Ports" section shows "TCP/IP Port Web Server" set to 80. The "Duplicated Address Detection" section shows "Active" set to ON and "Timeout" set to 2. An "Apply" button is visible at the bottom of the configuration area.

- IP address** → favoured IP-address
- Subnet mask** → respective Subnet-Mask

Is a connection via internet requested the „**Default gateway**“ and the „**Nameserver**“ have to be adapted.

Confirm the settings by pressing the „**Apply**“ button and activate the new settings with a reboot in the appearing Dialogue-box „*Your changes have been saved.*“ → Press „**Reboot**“ Button → the unit reboots. This may take up to 2 minutes.

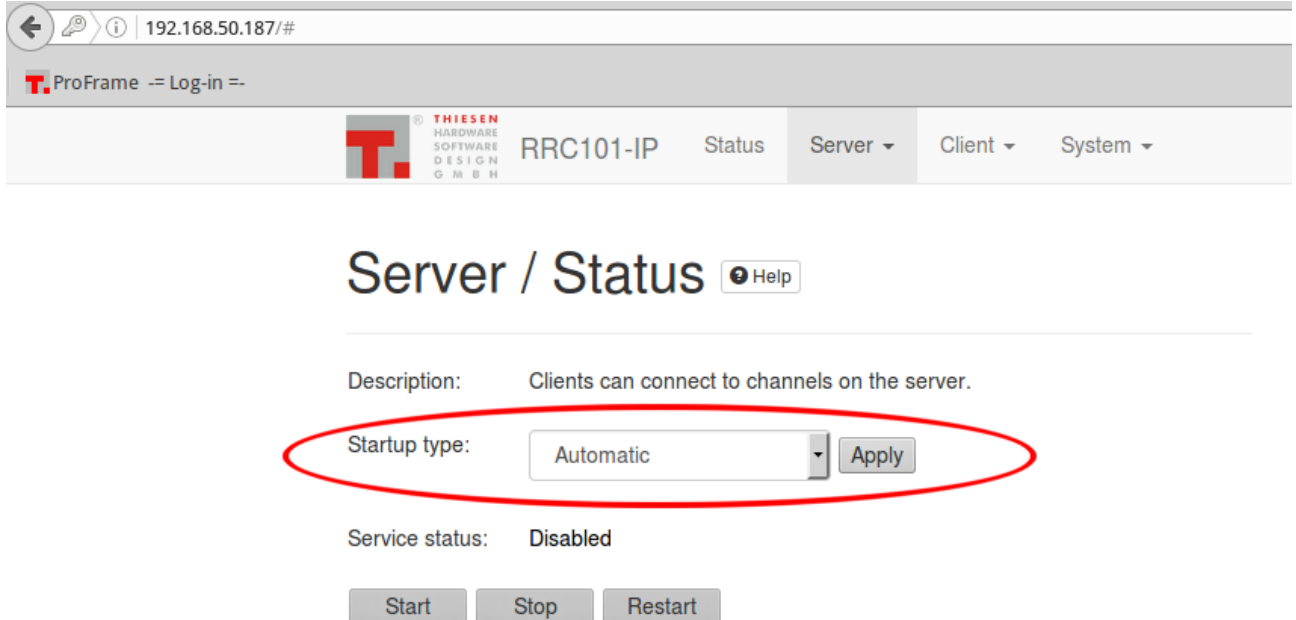


The screenshot shows a dialog box with the title "Your changes have been saved." Below the title, it says "Recent changes to your configuration require a reboot of the system." There is a "Reboot" button. Below the button, it says "Press **Reboot** if you want to restart the system now." A red warning message follows: "!!! Please notice. While rebooting the system all connection will disconnected for a short time. !!!" Below the warning, it says "You may restart the system later. Service -> Miscellaneous -> Reboot". A "Back" button is at the bottom.

### 8. Set the starting sequence to automatic

From the menue „**Server**“ → „**Status**“ choose the „**Startup type**“ and set it to „**Automatic**“

Confirm with „**Apply**“ → no reboot necessary. The settings will be confirmed with „*Your changes have been saved*“.



192.168.50.187/#

ProFrame - Log-in -

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RRC101-IP Status Server Client System

## Server / Status [Help](#)

Description: Clients can connect to channels on the server.

Startup type:

Service status: Disabled

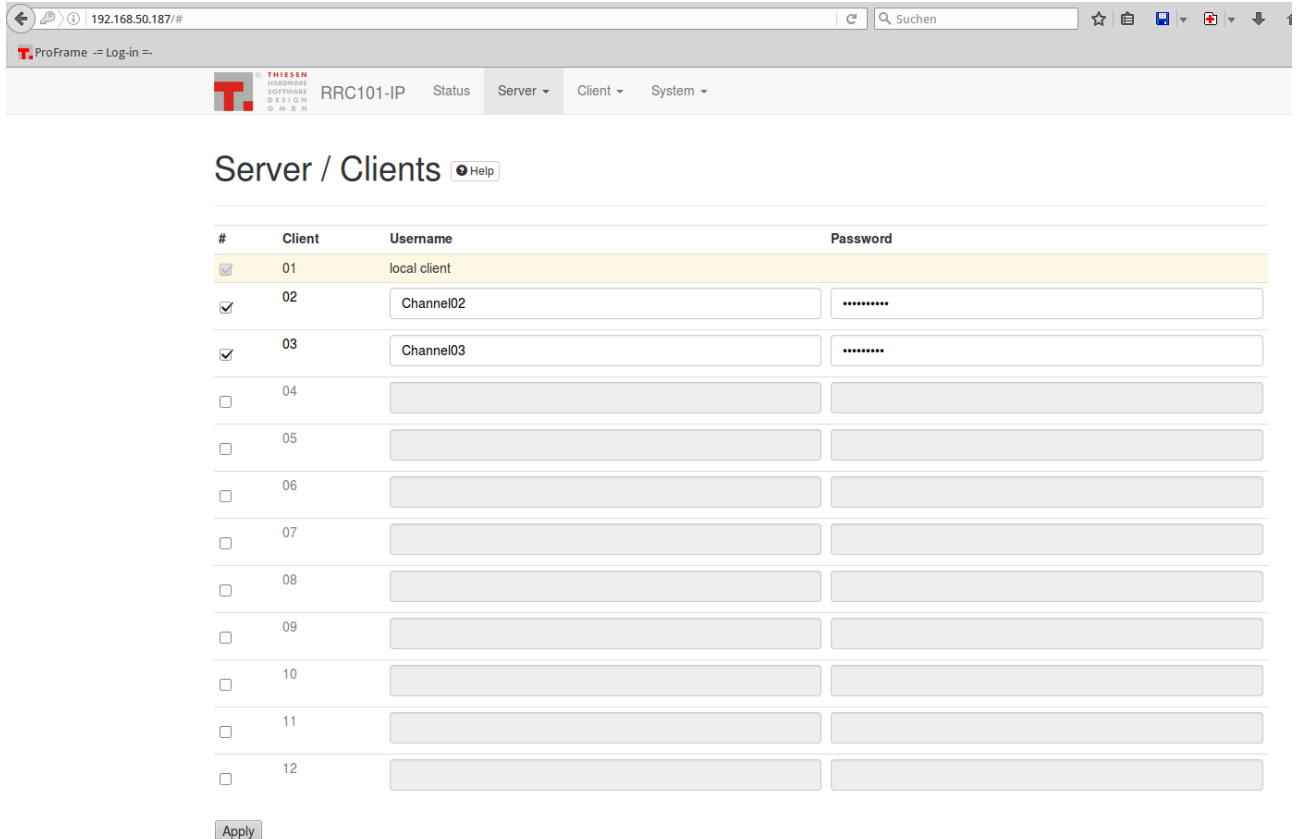
### 9. Register the Clients

In order to connect Clients with the Server there has to be a Username-Password – combination registered for every Client. Later on the client authenticates himself with this combination at the server.

Choose from the menue „**Server**“ → „**Clients**“, tick off a box to activate a client and register the Username-Password – combination. *Username* and *Password* are arbitrary but have a few restrictions (see below).

Confirm the entries with „**Apply**“ and the dialogue „*Your changes have been saved.*“ appears. Activate the settings py pressing the „**Restart**“ button → the restart takes only a few seconds.

The „*Client 01*“ is the server and is intern also noted as a client. This setting cannot be changed.



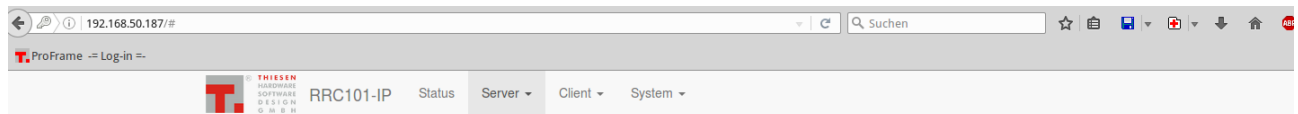
#	Client	Username	Password
<input checked="" type="checkbox"/>	01	local client	
<input checked="" type="checkbox"/>	02	Channel02	*****
<input checked="" type="checkbox"/>	03	Channel03	*****
<input type="checkbox"/>	04		
<input type="checkbox"/>	05		
<input type="checkbox"/>	06		
<input type="checkbox"/>	07		
<input type="checkbox"/>	08		
<input type="checkbox"/>	09		
<input type="checkbox"/>	10		
<input type="checkbox"/>	11		
<input type="checkbox"/>	12		

Apply

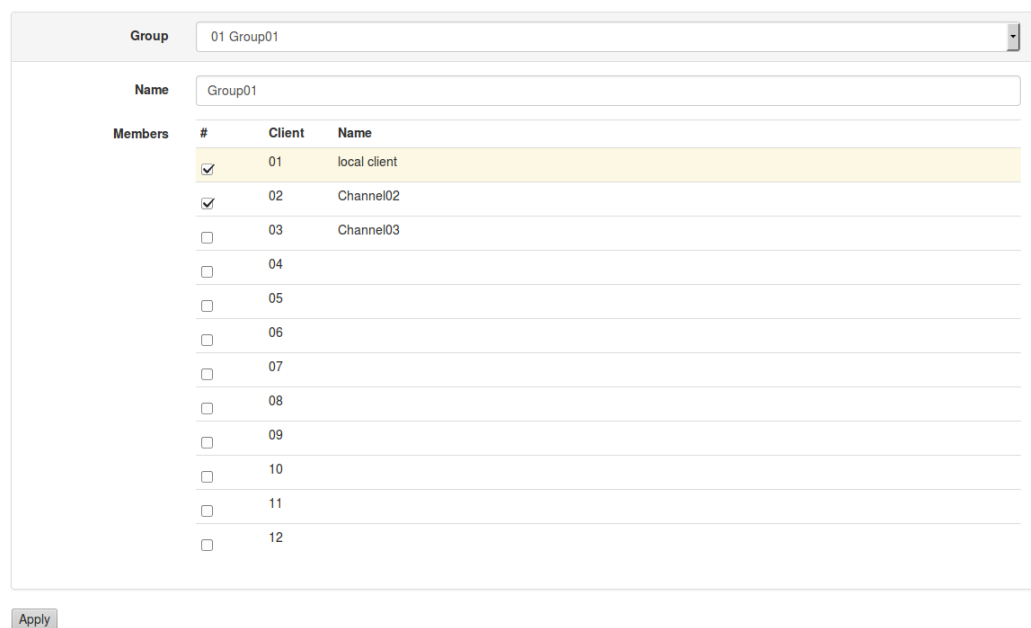
- Restrictions:**
- Valid characters : A-Z, a-z, 0-9 and the special characters ".", "\_", "-"
  - Username : 5 to 20 characters
  - Password : 3 to 30 characters
  - special characters ".", "\_", "-" are not to be set at the beginning nor the end.

### 10. To establish at least one group

Which units can communicate with each other respectively are allowed to communicate with each other is regulated in groups. At least one group has to be active to obtain a communication.



### Server / Groups [Help](#)



Members	#	Client	Name
<input checked="" type="checkbox"/>	01	local client	
<input checked="" type="checkbox"/>	02	Channel02	
<input type="checkbox"/>	03	Channel03	
<input type="checkbox"/>	04		
<input type="checkbox"/>	05		
<input type="checkbox"/>	06		
<input type="checkbox"/>	07		
<input type="checkbox"/>	08		
<input type="checkbox"/>	09		
<input type="checkbox"/>	10		
<input type="checkbox"/>	11		
<input type="checkbox"/>	12		

Choose from the menu „**Server**“ → „**Groups**“.

The number of the available groups depends on the number of the maximum possible clients:

2 – 8	clients	→	8 groups
9 – 16	clients	→	16 groups
17 – 24	clients	→	24 groups
25 – 32	clients	→	32 groups

The maximum available groups are already stored in the dropdown-Box „**Group**“.

In order to establish a group from the dropdown-Box pick group „**01 Group01**“ → the under „9. Clients entry“ *already stored* clients will be listed.

To add a client to a group tick the box in the column „#“. The client cannot communicate with other units of the group if it is not ticked (see Client03).

Group-names can be changed by entering a new name into field „**Name**“ while the desired group is selected/active.

All entered data will be saved by pressing the „**Apply**“ button. Activate the new settings with the button „**Restart**“ at the following dialogue „*Your changes have been saved.*“ → the restart takes only a few seconds.



## 2.3 Client configuration

### 11. To set the Client IP-Address.

Choose from the menue „**System**“ → „**Ethernet**“ and do the following settings:

**IP address** → requested IP-address

**Subnet mask** → appropriate Subnet-mask

Is a connection via internet requested the „**Default gateway**“ and the „**Nameserver**“ have to be adapted.

The setting „**Apply**“ has to be confirmed. Activate the new settings with the „**Reboot**“ button in the following dialogue „*Your changes have been saved.*“ → the new start takes up to 2 minutes.

### 12. Connect with the server

The connection to the server has to be stored at each client. Therefor choose the menu „**Client**“ → „**Remote Station**“.

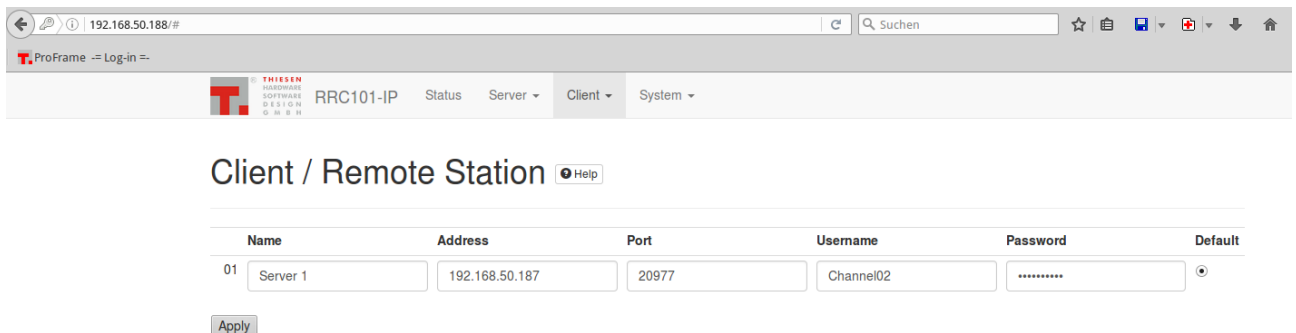
**Name** → Insert a name for the server of which the connection is desired with. This entry will not be copied from the other clients!

**Address** → Enter the IP-Adresse of the Server, as noted under „7. Server IP-Address“.

**Port** → This is the default TCP/IP-Port (Control) of the server. Normally this Port has not be changed. Port-Settings will be set at the server under „**Server**“ → „**Ports**“ and have to be readjusted at every client.

**Username** → Enter an appropriate user name as stored under „9. Clients“

**Password** → Enter an appropriate password as stored under „9. Clients “



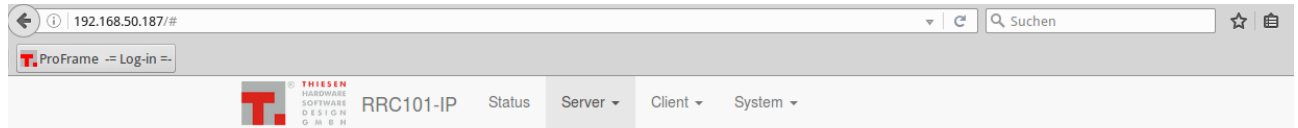
The screenshot shows a web browser window with the URL 192.168.50.188/#. The page title is "ProFrame --Log-in--". The navigation menu includes "RRC101-IP", "Status", "Server", "Client", and "System". The main content area is titled "Client / Remote Station" with a "Help" button. Below the title is a table with columns: Name, Address, Port, Username, Password, and Default. The table contains one entry: "01 Server 1" with Address "192.168.50.187", Port "20977", Username "Channel02", and Password ".....". There is a radio button next to the Password field. Below the table is an "Apply" button.

	Name	Address	Port	Username	Password	Default
01	Server 1	192.168.50.187	20977	Channel02	.....	<input type="radio"/>


Apply

## 2.4 Check connections

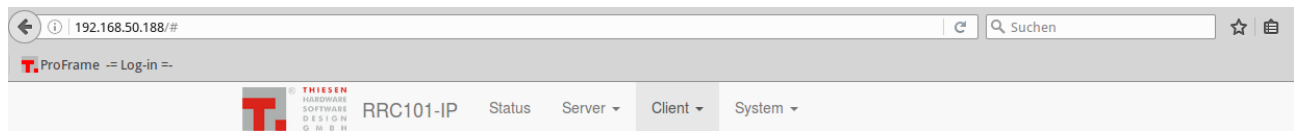
13. At the **Server** choose „**Server**“ → „**Overview**“ from the menu. All links and their current status are shown.






### Server / Overview [Help](#)

Channels	Username	Loggedin	IP Adress	TxRx Control (In/Out)
Ch 01	local client		127.0.0.1	
Ch 02	Channel02		192.168.50.188	
Ch 03	Channel03		-	

14. At the **Client** choose „**Client**“ → „**Overview**“ from the menu. The connection with the server and its current status is shown.

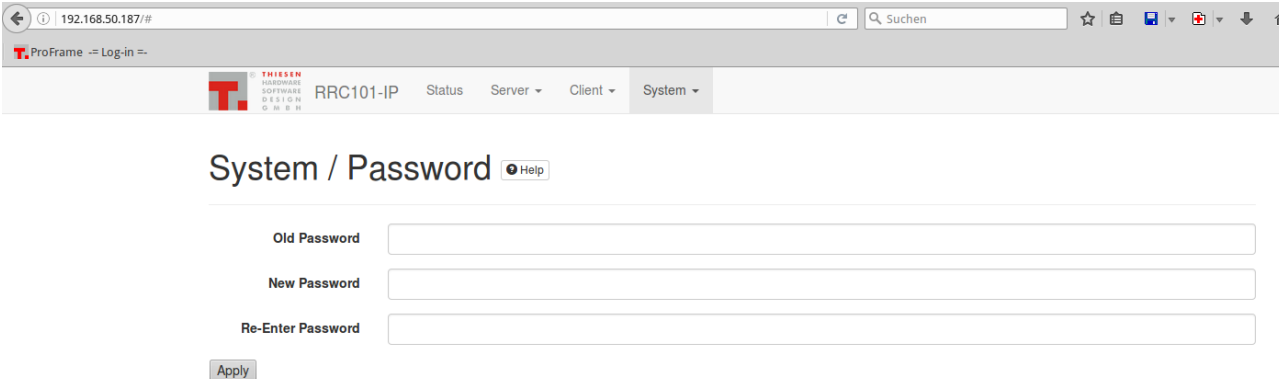


### Client / Overview [Help](#)

Server	Connected	Front-Panel Data (Serial/Parallel)	TxRx Control (In/Out)
192.168.50.187			

## 2.5 Change password for Webinterfaces

To change the password for the Webinterfaces choose the menu „**System**“ → „**Password**“ and do the requested settings.



The screenshot shows a web browser window with the address bar containing "192.168.50.187/#". The page title is "ProFrame := Log-in :=". The navigation menu includes "RRC101-IP", "Status", "Server", "Client", and "System". The "System" menu is expanded, showing "System / Password" with a "Help" link. The form contains three input fields: "Old Password", "New Password", and "Re-Enter Password". An "Apply" button is located below the fields.

Confirm the new setting by pressing the „**Apply**“ button.

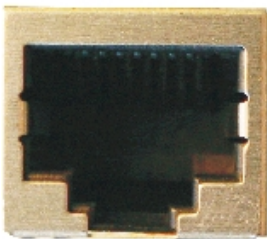
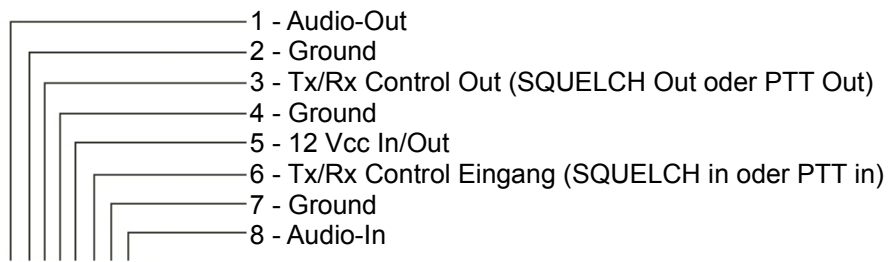
**Note the restrictions:**

- valid characters: A-Z, a-z, 0-9 and ".", "-"
- Password: 5 to 30 characters
- special characters ".", "-" are not to be set at the beginning nor the end.

## 3 Pin assignment

To produce a cable to connect the RRC101-IP and the radio unit refer to the pin assignment below:

### 3.1 AUDIO



### 3.2 DATA

