

beroNet Gateway Assembly Guide

beroNet 
Cloud managed & monitored
VoIP Gateways and Appliances



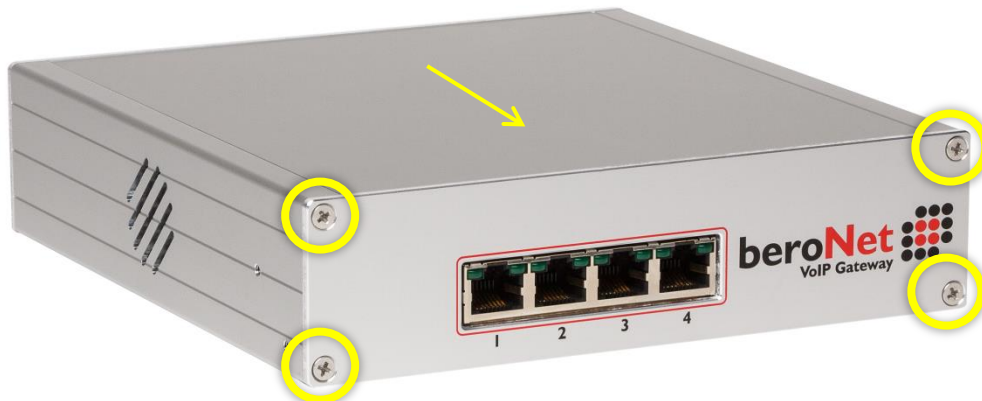
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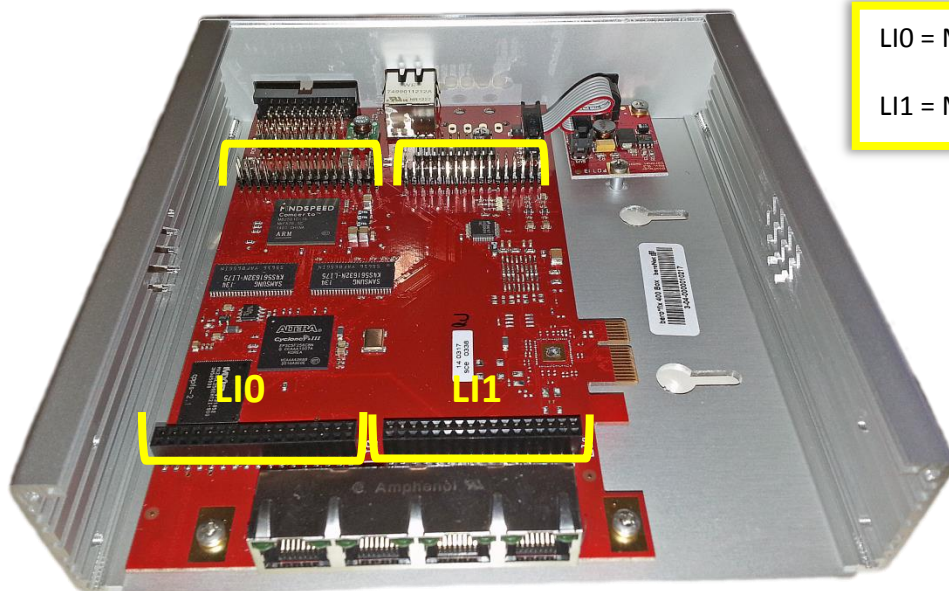
1. Mounting Modules

1.1 beroNet Gateway

To open the gateway and mount modules on it, you need to open the front plate and remove the top cover.



Every beroNet Gateway has two module slots.

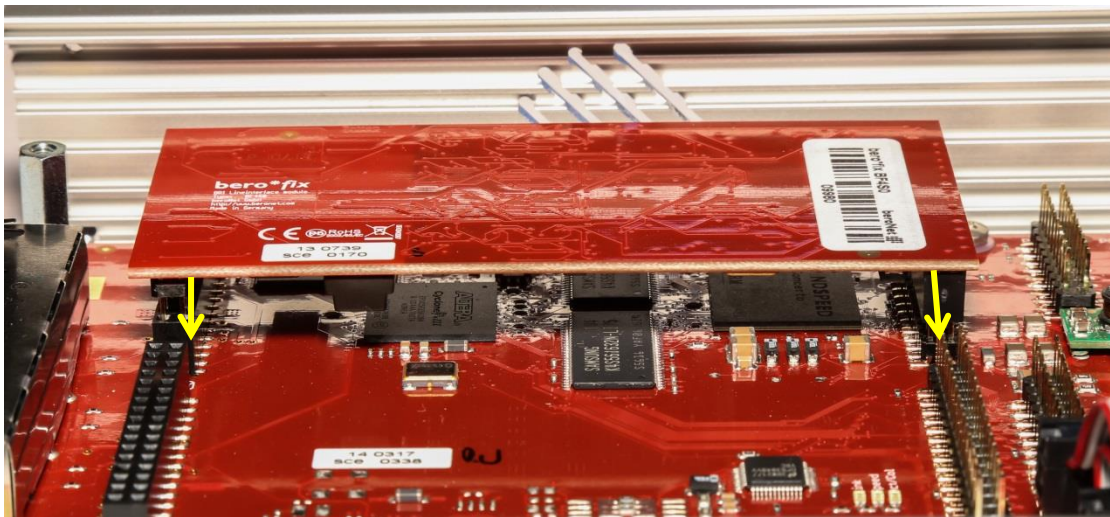


L10 = Module 1
L11 = Module 2

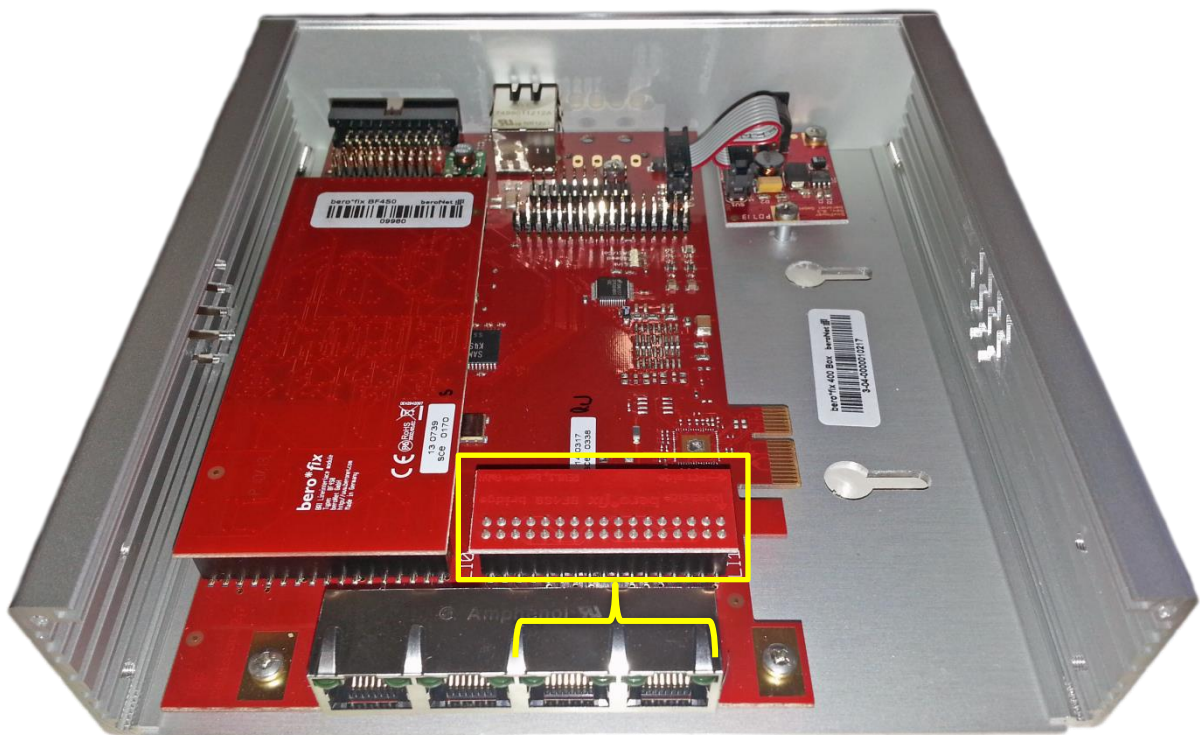
First you should place the module softly on one of the beroNet Gateway module slots. There is only one possible direction since one side of the module has a male and the other side has a female connector.

Make sure that every pin row is placed properly and that every pin has contact with the opposite connector.

If you want to remove an already installed module the corners have to be lifted up softly.



In case of a single 4 port module it is recommended to use the included BFBridge. Placing the BFBridge on the LineInterface 1 (LI1) will unlock the two additional RJ45 ports.



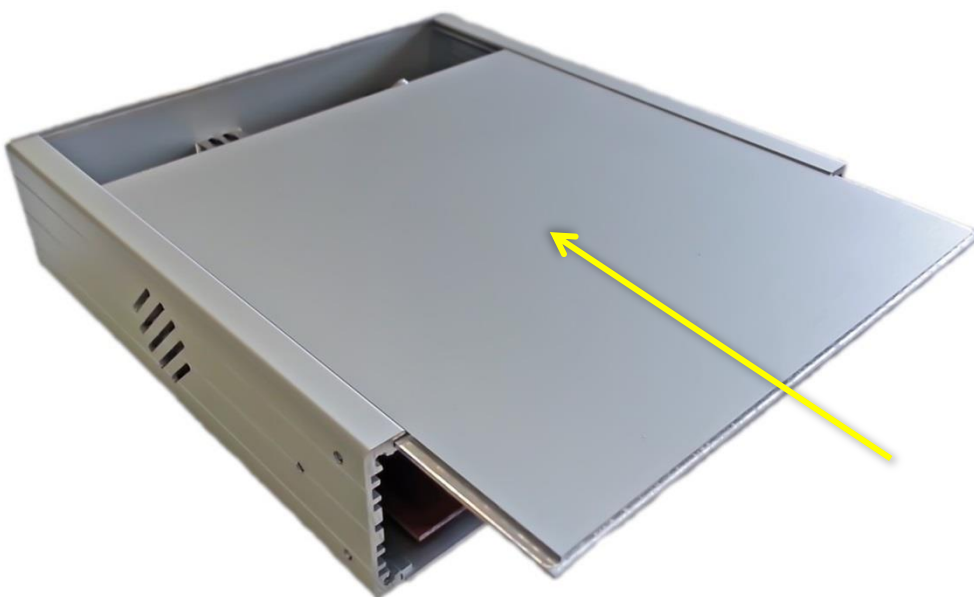
Since a beroNet Gateway has only 4 RJ45 ports but can be equipped with 2 modules in total containing up to 8 ports, it is necessary to break out the 4 additional ports. Therefore you need the BNTAdapters.

The picture below shows a beroNet Gateway equipped with 2x BF450 modules. The 4 BNTAdapters are splitting the 4 RJ45 to 8 RJ45 connectors.



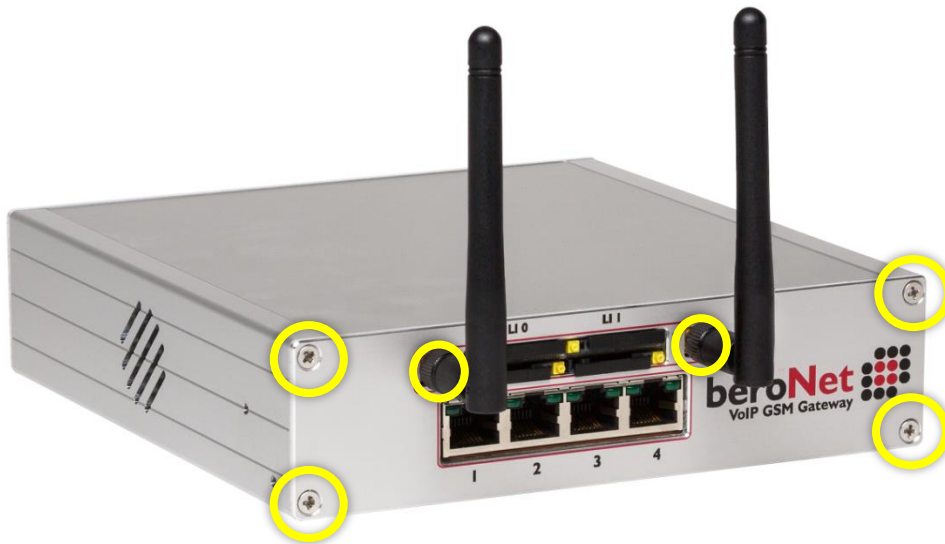
After the beroNet Gateway has been successfully upgraded with the modules, the Box has to be closed again.

Place the top cover into the slits and push it back in.
Put the front plate back on.

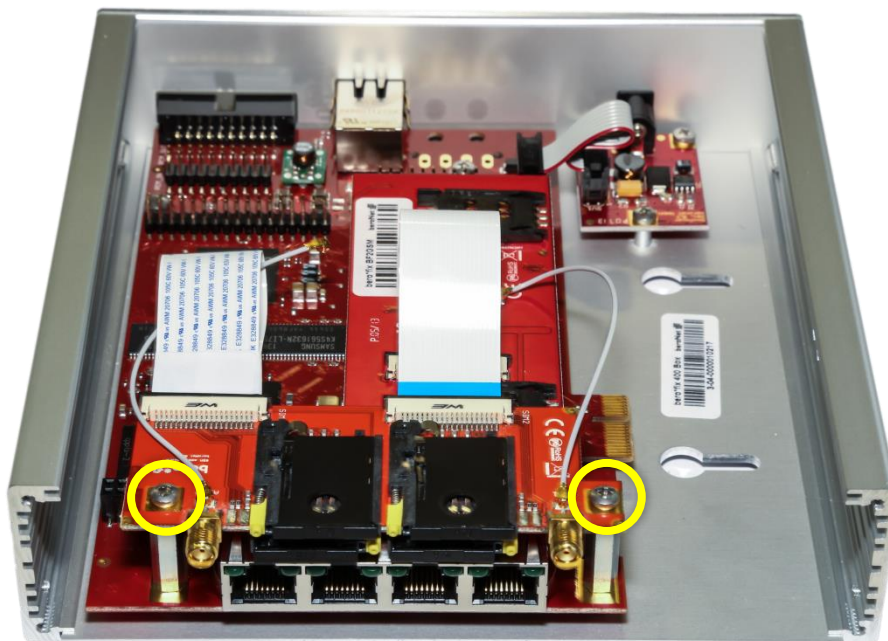


1.2 beronet GSM Gateway

In order to upgrade or replace the modules you have to open the box. Detach the antennas and remove the SIM card holders in order to remove the front plate and the top cover.



In case of a 2GSM beronet Gateway the 2GSM module is placed on LineInterface 1 (LI1) because it has a built-in BFBridge. This allows you to place a 4 port module without using an additional BFBridge.



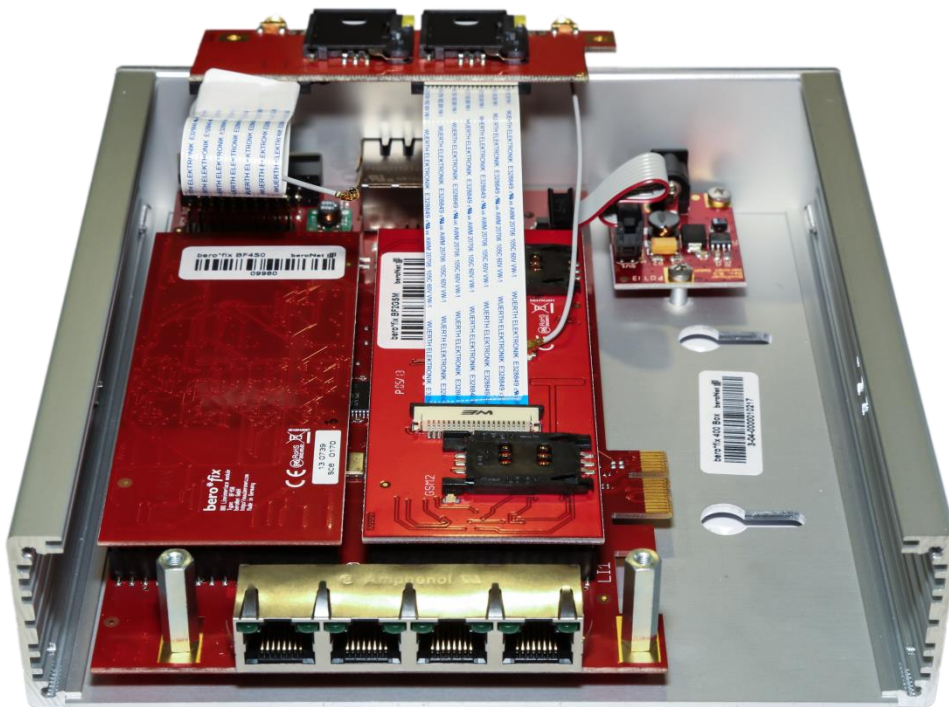
After the box has been opened the GSM_Extension Kit has to be lifted up in order to reach LineInterface 0 (LI0).

Remove the marked screws and lift up the GSM_Extension Kit.

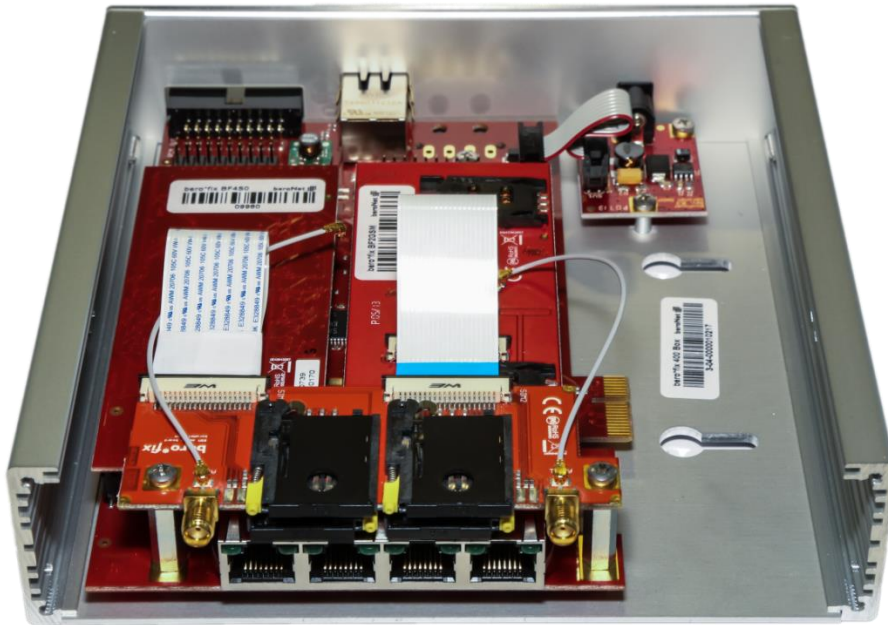
The GSM_Extension Kit has been pre-attached with an additional SIM and antenna cable in order to optionally add a second GSM module.



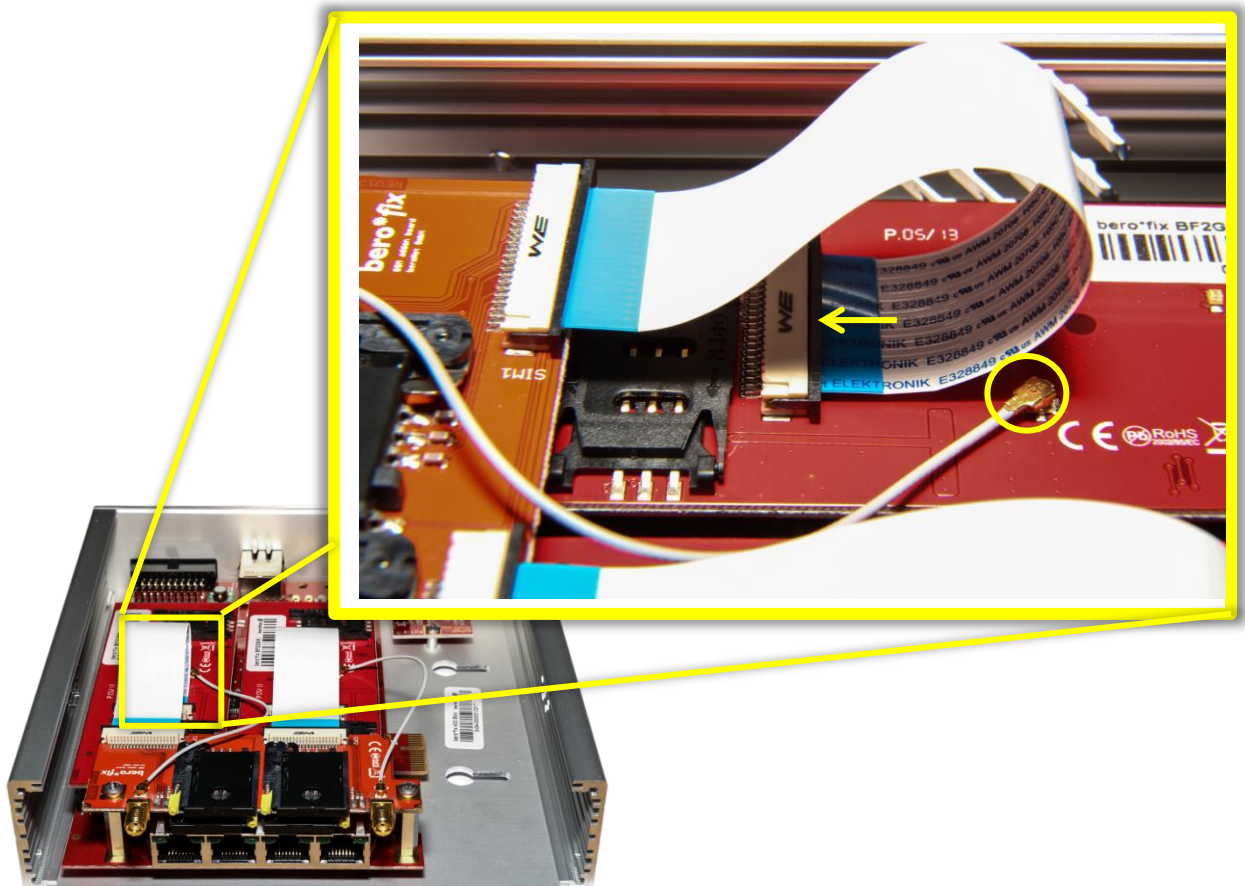
Now the LineInterface 0 (LI0) can easily be reached so you can place your chosen module which the box has to be upgraded with.



After the Gateway has been upgraded attach the GSM_Extension Kit back to its previous position.



In case of upgrading the GSM Gateway with an additional 2GSM module it has to be connected with the GSM_Extension Kit. Use the pre-attached cables on the GSM_Extension Kit.

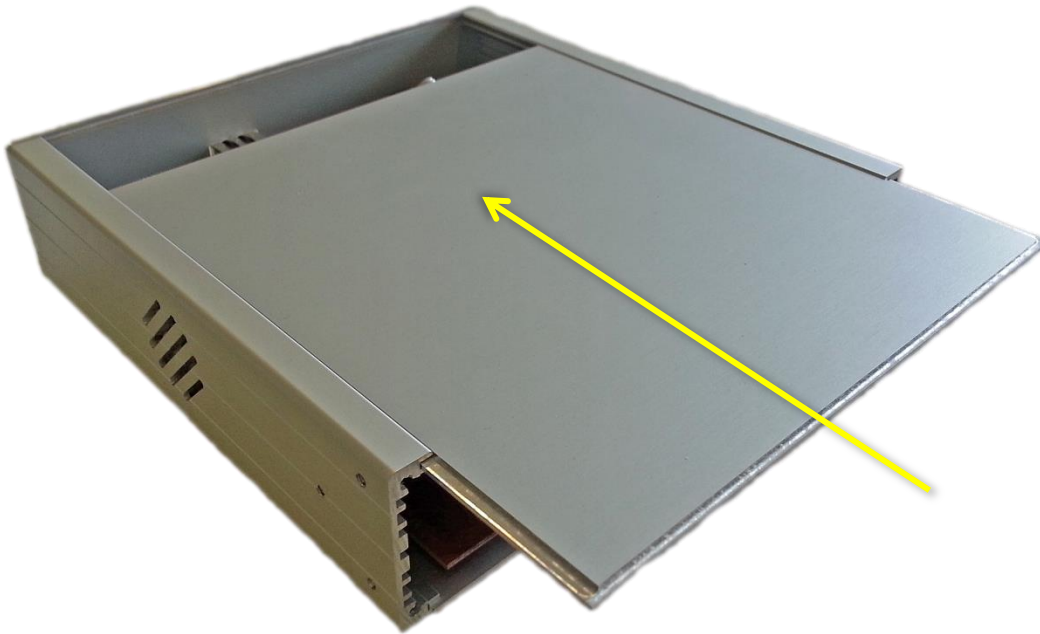


After the beroNet Gateway has been successfully upgraded with the modules it has to be closed again.

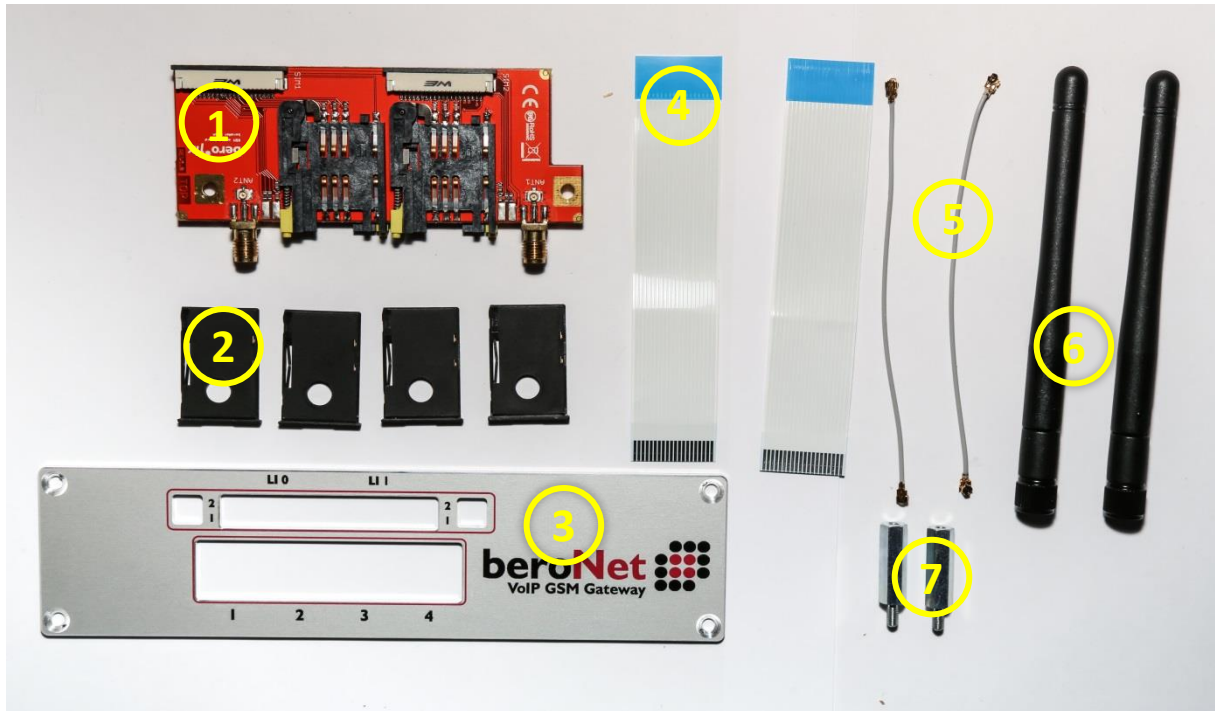
Place the top cover into the slits and push it back in.

Put the front plate back on.

Finally attach the GSM antennas and insert the SIM card holders back in.



1.3 GSM_Extension Kit

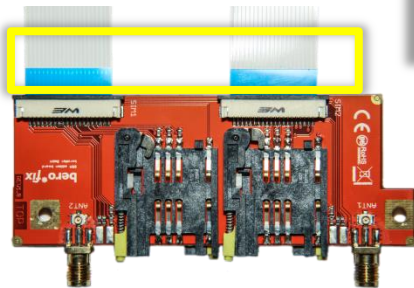
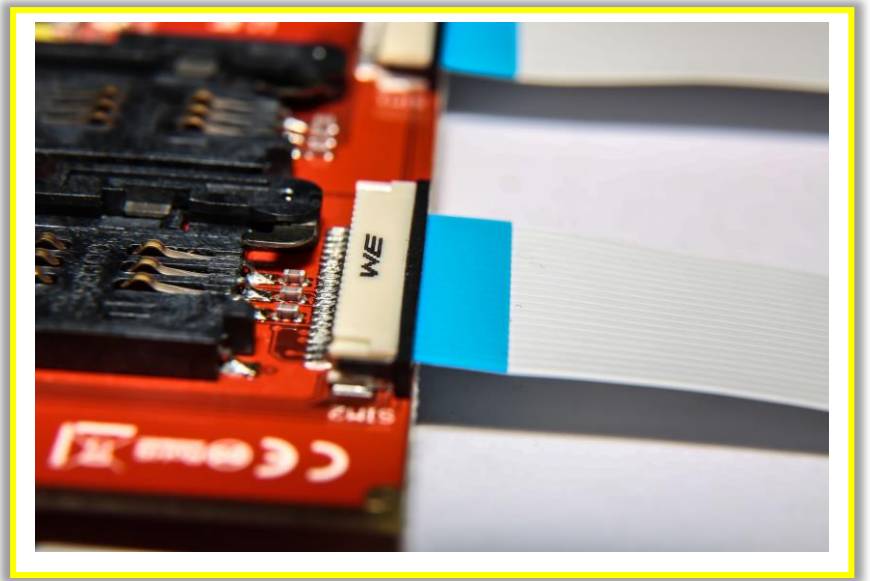


Content:

- 1. 1x Extension Board
- 2. 4x SIM holder
- 3. 1x GSM front plate
- 4. 2x SIM cable
- 5. 2x Antenna cable
- 6. 2x GSM Antenna
- 7. 2x GSM screws

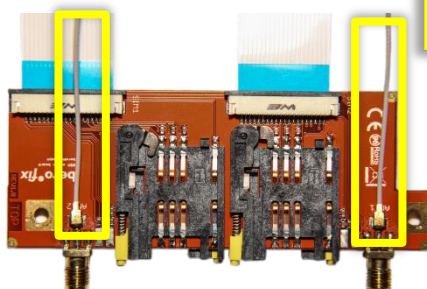
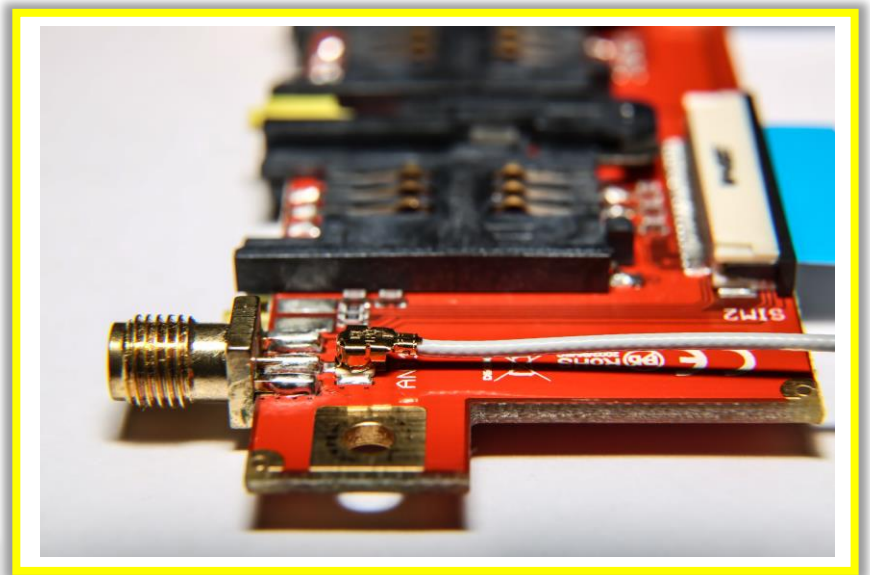
Step 1:

Connect the 2 SIM cables face up to the GSM Extension board.



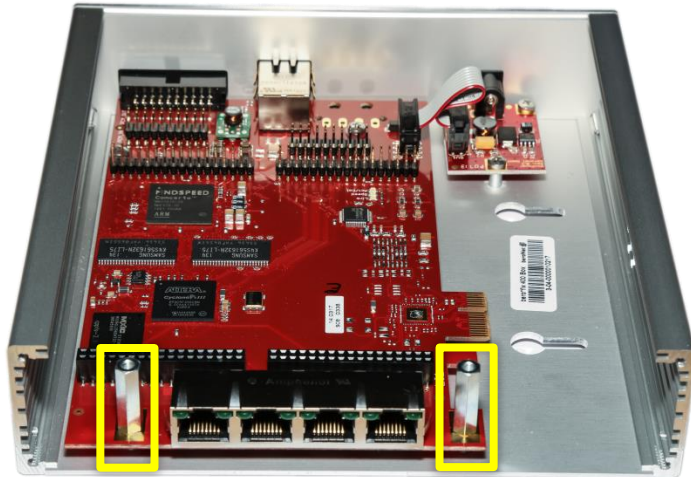
Step 2:

Connect the 2 antenna cables to the GSM Extension board.



Step 3:

In order to attach the GSM_Extension Kit to the beroNet Gateway the two front screws have to be replaced by the GSM screws.

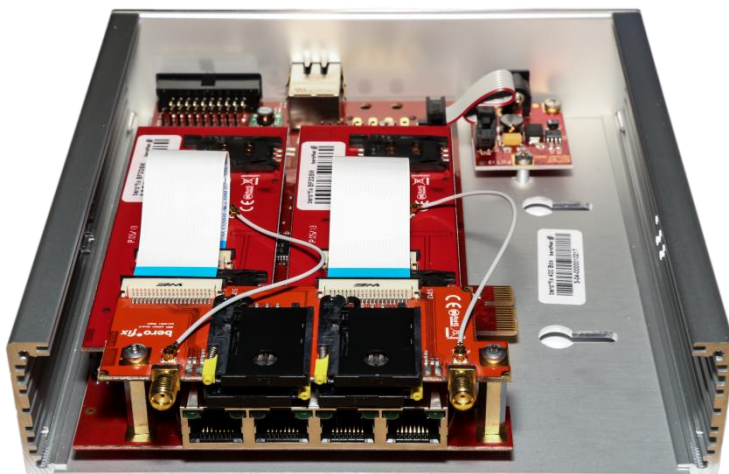


Step 4:

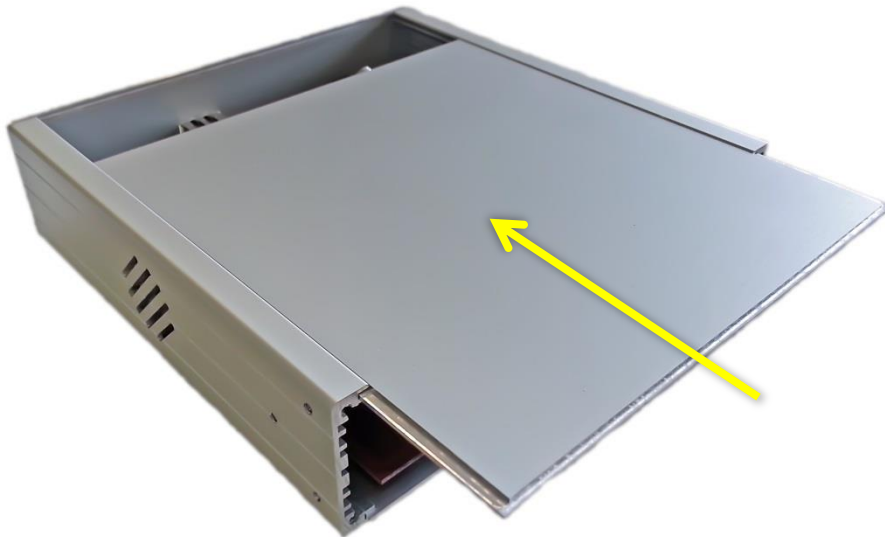
Before attaching the GSM_Extension Kit to the beroNet Gateway you have to upgrade it with GSM modules.

Remember: In case of using a single 2GSM module it is recommended to place it on the LineInterface 1 (LI1) because of its integrated BFBridge.

After the gateway has been upgraded with the modules the GSM_Extension Kit may be attached and connected to the modules.



After the beroNet Gateway has been successfully upgraded with the modules and the GSM_Extension Kit it has to be closed again.
Place the top cover into the slits and push it back in.
Put the front plate back on.
Finally attach the GSM antennas and insert the SIM card holders back in.

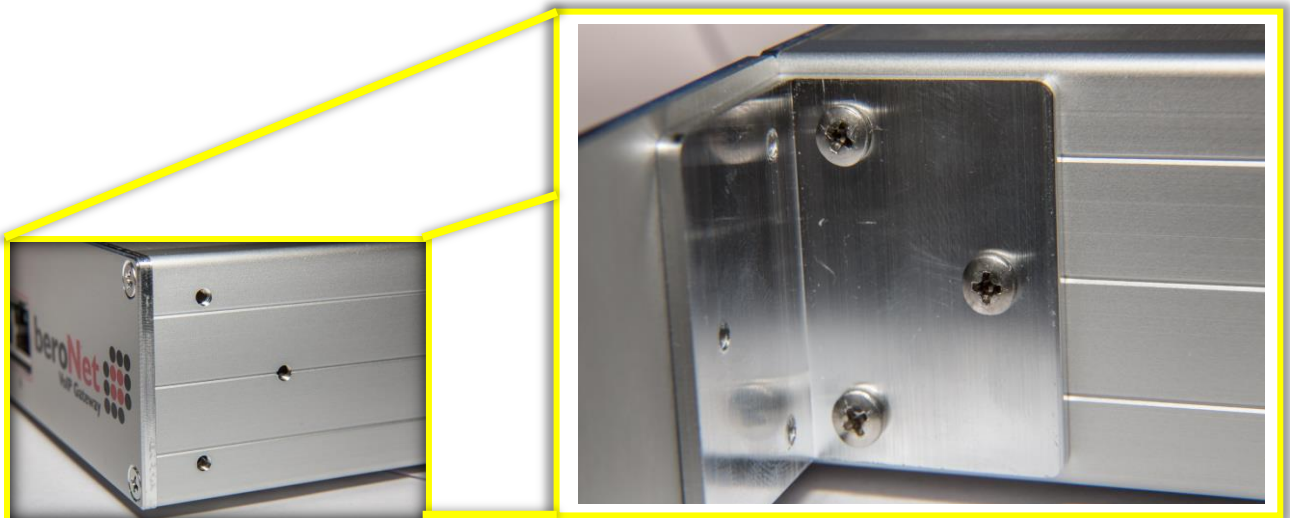


2.1 19" Bracket

The 19" brackets allow the user to mount a beroNet Gateway into a 19" server rack.



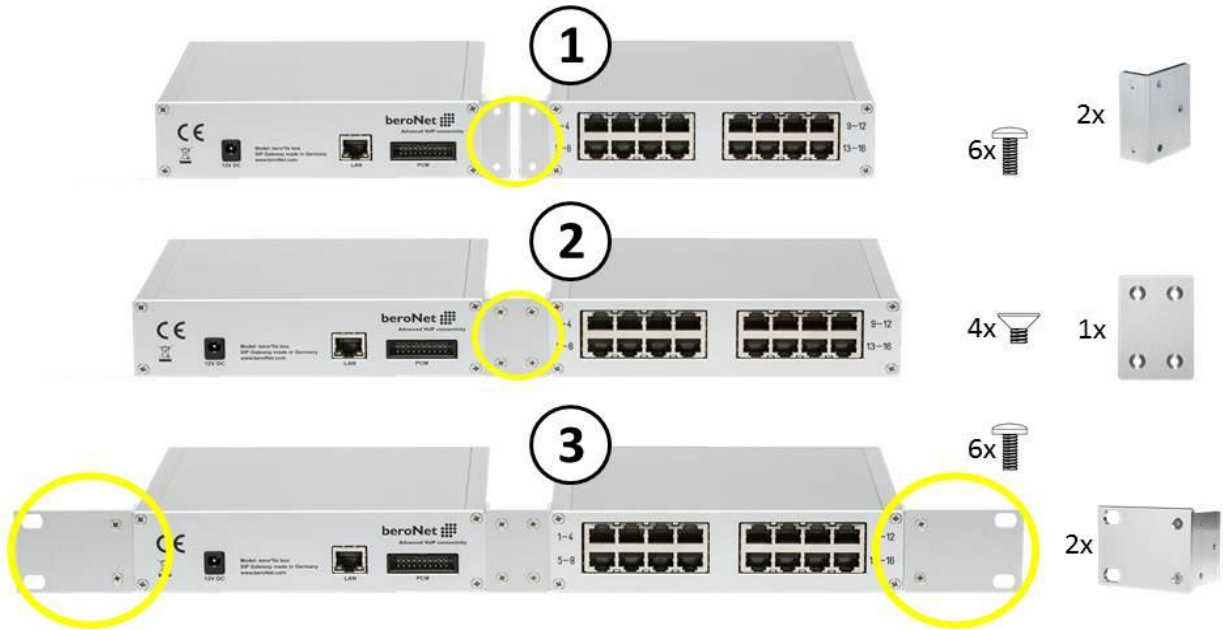
In order to attach the 19" brackets to the gateway use the 3 mounting threads on the sides of the gateway.



2.2 19" DBL Bracket

The 19" DBL brackets allow the user to mount two gateways side by side into a 19" server rack. The 16FXS Break-out box can also be mounted next to a gateway.

Follow the steps below.



3. Accessories

3.1 PCM

Since berofix firmware 2.X beroNet devices can be interconnected via a PCM cable to enable hardware bridging for transparent voice, data and fax transmissions across two berofix devices. That means that the audio part is transmitted in TDM over the PCM cable, and not send using RTP over the network. The signaling is still send via SIP.



In order to use PCM bridging two beroNet Gateways have to be connected via the PCM cable as shown in the picture below.



General Module Combinations

LineInterface 0 (LI0)	LineInterface 1 (LI1)	Accessories
4S0	BFBridge	
4S0	4S0	4x BFTAdapter
4S0	2S02FXS	2x BFXX cable, 4x BFTAdapter
4S0	4FXS	4x BFXX cable, 4x BFTAdapter
4S0	4FXO	4x BFXX cable, 4x BFTAdapter
4S0	2GSM	2x BFTAdapter, GSM_Extension Kit
2S02FXS	BFBridge	
2S02FXS	4FXS	6x BFXX cable, 4 BFTAdapter
2S02FXS	2GSM	2x BFXX cable, 2x BFTAdapter, GSM_Extension Kit
1E1		
1E1	4S0	2x BFTAdapter
1E1	4FXS	4x BFXX cable, 2x BFTAdapter
1E1	4FXO	4x BFXX cable, 2x BFTAdapter
1E1	2S02FXS	2x BFXX cable, 2x BFTAdapter
1E1	2GSM	GSM_Extension Kit
2E1		
2E1	1E1	
2E1	4S0	2x BFTAdapter
2E1	4FXS	4x BFXX cable, 2x BFTAdapter
2E1	4FXO	4x BFXX cable, 2x BFTAdapter
2E1	2S02FXS	2x BFXX cable, 2x BFTAdapter
2E1	2GSM	GSM_Extension Kit

LineInterface 0 (LI0)	LineInterface 1 (LI1)	Accesories
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4FXO	BFBridge	4x BFXX cable
4FXO	4FXO	8x BFXX cable, 4x BFTAdapter
4FXO	4FXS	8x BFXX cable, 4x BFTAdapter
4FXO	2S02FXS	6x BFXX cable, 4x BFTAdapter
4FXO	2GSM	4x BFXX cable, 2x BFTAdapter, GSM_Extension Kit
4FXS	BFBridge	4x BFXX cable
4FXS	4FXS	8x BFXX cable, 4x BFTAdapter
4FXS	2GSM	4x BFXX cable, 2x BFTAdapter
	2GSM	GSM_Extension Kit
2GSM	2GSM	GSM_Extension Kit