CONNECT / CONNECT II / CONNECT CONTROL
Router / remote maintenance / IP switch

User Guide
V1.13

German

Manual suitable for firmware / software V1.09 and newer!

Contents

1 General

1.1 To the manual

This manual describes the devices of the**CONNECT** -Family, hereinafter also simply referred to as a device.

The CONNECT and CONNECT-II devices are each available in a standard version and as a variant with an integrated LTE modem. The CONNECT devices are also available in both versions in a table and top-hat rail housing. The range of functions of the devices depends on the installed options, which can also be combined. When delivered, the devices are available with the option of router, remote maintenance and IP switch. For a description of the options, please refer to the section “3.3 Using the device“.

The CONNECT-CONTROL device includes all the functions of the remote maintenance option and also has GPS and integrated digital and analog IO ports to take on smaller control and reporting tasks.

This documentation can be downloaded from the product website under Downloads➔Documentation can be downloaded.

The manual is aimed at the following user groups:

- planner
- operator
- Commissioning engineer
- Service and maintenance personnel

Before using the device, be sure to read the manual.

If you have any questions and/or problems, please contact your sales partner's technical support.

2 System requirements

2.1 Hardware

Before you can start using the CONNECT device, you must supply the device with power. The CONNECT and CONNECT II devices can be supplied with power via the included 24V DC power plug or via the mini-USB socket (only for standard CONNECT devices). The CONNECT-CONTROL, on the other hand, is powered via the included power supply.

Make sure that the WLAN and, depending on the device, the LTE and GPS antenna(s) are screwed onto the SMA sockets of the device and then connect the router, PC and peripheral devices using LAN cables to the device according to your configuration. When using the LTE connection, insert the SIM card into the slot provided.

Depending on the configuration, you can then access the device via one of the LAN, WLAN and/or USB-LAN interfaces (optionally available as an adapter, but not with the CONNECT-LTE or CONNECT-CONTROL device).

2.2 software

You only need one to access the web server to check the status and configure the deviceInternet browser (e.g. Microsoft Internet Explorer, Mozilla FirefoxorGoogle Chrome).The use of the device is independent of the operating system and browser of the respective computer, tablet or cell phone.

Important:
In order to display the website correctly, please ensure that JavaScript is activated in your browser.

A notice:
Once the device is configured, access to the web server is only necessary for maintenance purposes, as the device works independently. Please note that when using the CONNECT connection type, Internet communication must take place from the PC connected to the device after each device startup so that the CONNECT device can recognize the Internet parameters.

3 Installation

Before you can start using your CONNECT device, you need to access the device's web interface and set some basic settings.

Please ensure that all conditions stated in the previous “System Requirements” chapter are met. You can then start accessing the device.

3.1 Access to the device

Before you can configure the device according to your needs and finally use it, you must first connect to the device. Depending on the device type, there are different options available to you, which are listed in more detail on the next pages.

Important:
This chapter describes the delivery status of the device. You can use the web interface to configure the device's interfaces as desired, so that access to the device via another interface is also possible.

Once your device is in a configured state, you also have the option to access your device's website using the keyword "connect" on the PC and peripheral interface (if used).

To do this, simply enter the keyword “connect” in the address bar of your web browser instead of the IP address. This access also works if the computer you want to use to access the device is in a different subnet than the CONNECT or the interface of the CONNECT device does not yet have an IP address.

3.1.1 CONNECT / CONNECT-II device

Access to the CONNECT / CONNECT-II devices is usually via the WLAN interface.

First make sure that the WLAN interface of your laptop or tablet is activated and display the networks that are within range. In the list of WLAN networks you should now find a network with the SSID

“CONNECT WiFi”. This network is unencrypted, so you don't need a password to connect to it.

The CONNECT devices are configured so that a DHCP server is active on the WLAN interface. If your laptop or tablet is set so that it can be automatically assigned an IP address using DHCP, no further configuration is necessary. Otherwise, you will need to switch your laptop or tablet to DHCP or manually assign it any IP address in the range 192.168.1.2 to 192.168.1.254.

Once you are connected to the CONNECT and your laptop or tablet has a valid IP address, you can open a web browser. Now enter the IP address 192.168.1.1 in the address line. You should now see the commissioning page of the device and can start configuring.

As an alternative to accessing via WLAN, you also have the option of accessing the device via wired connection. To do this, connect your computer to the LAN-A socket of the CONNECT device.

The device has the IP address 192.168.2.1 on this interface. You now have to manually assign any IP address from the range 192.168.2.2 to 192.168.2.254 to your PC so that you can access the device. The automatic assignment of addresses using DHCP, as is the case with the WLAN interface, is deactivated by default here for security reasons.

If you have assigned your PC a valid IP address, you can now open a web browser and enter the IP address 192.168.2.1 in the address line. You should then see the device's commissioning page.

A notice:
If you have the “Ethernet via USB” adapter, you can also access the device via this for the standard CONNECT devices and the CONNECT-II-LTE device. The device has the IP address 192.168.0.1 on the USB LAN interface and provides IP addresses, as well as the WLAN interface, using DHCP. Alternatively, you can manually assign your computer an IP address between 192.168.0.2 and 192.168.0.254.

3.1.2 CONNECT-CONTROL device

With the CONNECT-CONTROL devices, the 3 LAN ports and the WLAN network created by the device represent a common interface.

If you would like to access via WiFi, please first make sure that the WiFi interface of your laptop or tablet is activated and then display the list of available WiFi networks. You should now see a WLAN network with the SSID “RUT955_****”. You can find the exact SSID and the WLAN password required for connection from the label on the bottom of the device.

However, if you want to access via one of the LAN ports, all you have to do is connect your computer and the device with a cable.

As soon as you are connected to the device via WLAN or LAN, you now have to check your IP configuration and adjust it if necessary. The CONNECT-CONTROL devices are configured so that a DHCP server is active on this interface. Is your device with which you want to access the CONNECT-CONTROL configured so that itautomatically obtains an IP address from a DHCP server, no further configuration is necessary. Otherwise, you will need to switch your device to DHCP or manually assign it any IP address from the range 192.168.1.2 to 192.168.1.254.

If you have a valid IP address, you can now access the web server integrated in the device. To do this, open a web browser and enter the IP address 192.168.1.1 in the address bar. You should now see a page about getting the device started.

3.1.3 Device RUT955 from Teltonika

The hardware of the CONNECT-CONTROL device corresponds to the RUT955 from Teltonika Networks. If you have purchased the RUT955 device separately, you have the option of loading the CONNECT-CONTROL software onto it after registering for a fee. Your RUT955 device then has the same functionality as a directly purchased CONNECT-CONTROL device.

Before you can load the software into the device, you must first connect to it and access the web interface. The access path depends on the configuration you have already carried out. If your device is still in factory condition, please read the Teltonika quick guide.

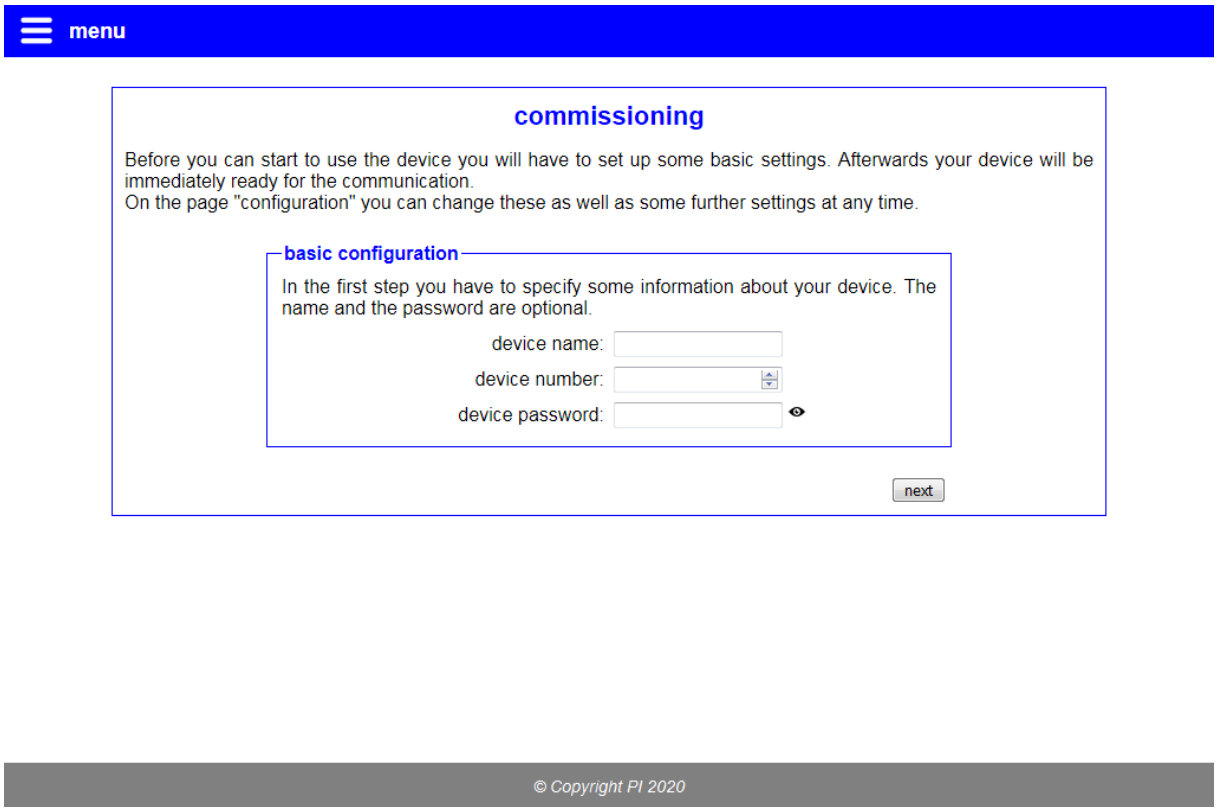
Once you have opened the device's web interface and logged in, first navigate to the menu item "System" → "Firmware" and check the firmware version. The device must have a version between 00.06.07.0 and 00.06.07.7. If your device has an older or newer firmware, please

first upgrade or downgrade to version 00.06.07.7. The firmware file (.bin file) can be found in the ZIP archive together with the software package, which you can download on the CONNECT-CONTROL device product page in the download area.

Once your device has the correct firmware version, you can next install the software package. To do this, navigate to the menu item “System” → “Package Manager” and click on the “Upload” tab. There you can now upload the software package (.ipk file) from the ZIP archive. Then confirm the warning that this is not a software package certified by Teltonika.

When the installation process is complete, you can now switch to the web interface for the CONNECT devices via the menu item “Services” → “CONNECT”. The commissioning page of the device should now be displayed here.

3.2 Configuration of the device



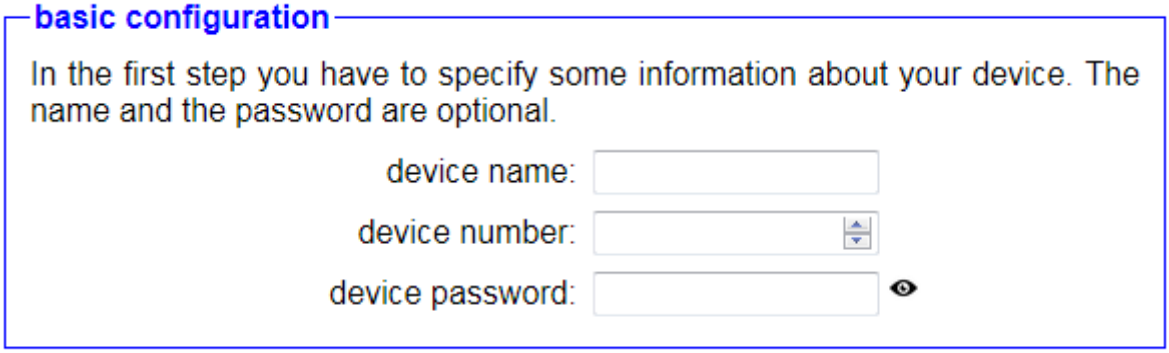
When you use the device for the first time, you will first be shown the commissioning page. This page guides you through the most important settings in just a few steps, depending on the options installed on the device.

You can navigate between the individual steps using the “Back” and “Next” buttons. In the last step, instead of the “Continue” button, you will have a button that says “Save”. Your settings will only be applied once you have clicked on this. Your device will then be fully set up and fully functional.

A notice:
The commissioning page is only displayed the first time you use the device. If you would like to commission it again, you must reset your device to factory settings.
On the CONNECT-CONTROL devices, some of the IP and WLAN settings are already preset with the current configuration.

3.2.1 Remote maintenance option

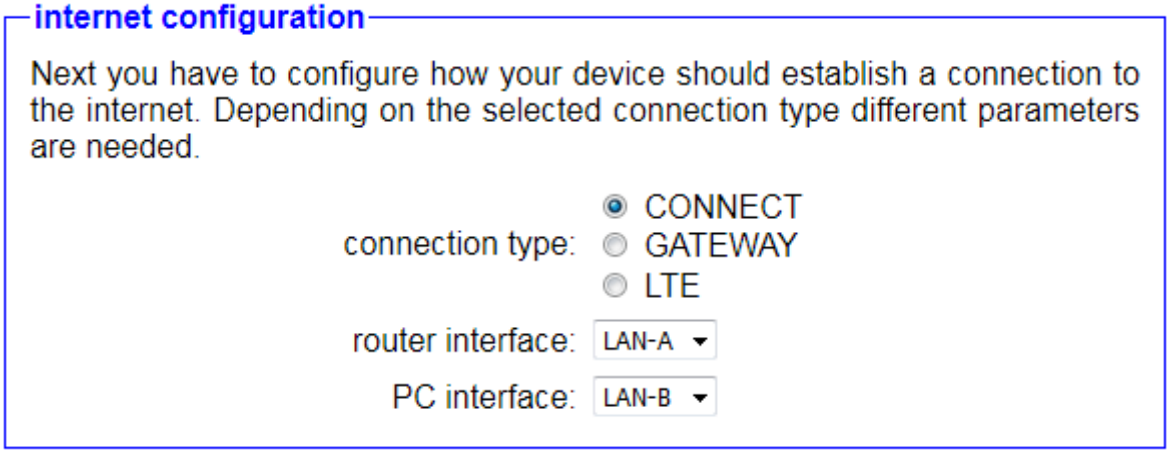
3.2.1.1 Basic configuration



In the first step of commissioning, you can set parameters for networking the device in your CONNECT cloud. The device number is used for unique identification in the cloud and may not be used multiple times among your devices. Optionally, you can also give your device a name that makes it easier to identify, and set a password that is required when establishing a connection to this device.

A notice:
If you do not give your device a password, you can connect to this device from any of your other devices.

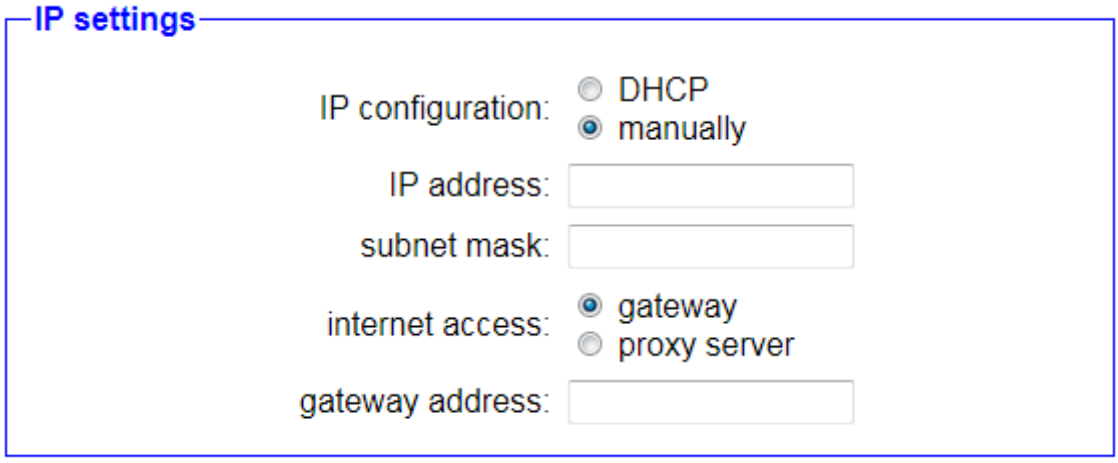
3.2.1.2 Internet configuration



Once you have set the basic device parameters, the next step is to determine how the device will connect to the Internet. The connection type setting is used for this:

- **CONNECT:**The CONNECT device must be connected between the router for Internet access and an Internet-capable PC. The device then recognizes the PC's parameters and uses them. Please make sure that the PC is overIPv4 parameters (IP address, subnet mask, gateway address), otherwise there is no connection to the Internet.
- **GATEWAY:**The CONNECT device is connected to the router for Internet access. The device has its own IP address that is used to establish the Internet connection.
- **LTE:**The CONNECT device establishes the Internet connection via the integrated LTE modem(only available on CONNECT devices with integrated LTE modem).

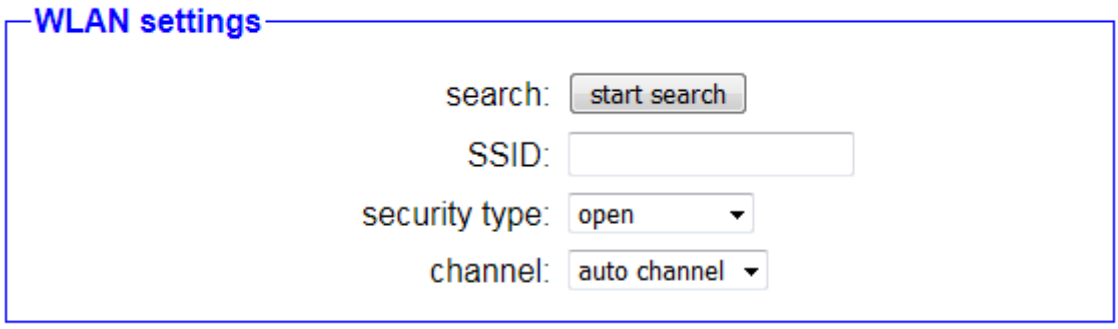
Depending on the type of connection you select, you then have to use the router interface and PC interface settings to specify which interface the gateway or proxy server and the PC are connected to.



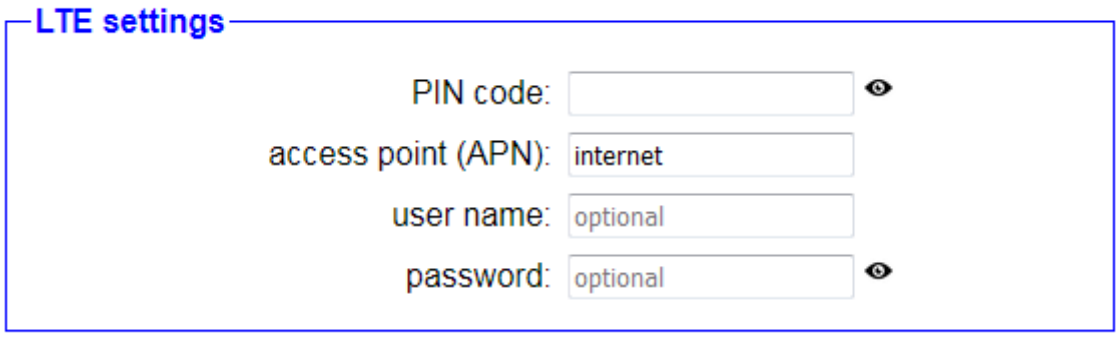
If you have selected GATEWAY as the connection type, a field for manual configuration of the IP parameters appears. There you can first choose whether the device should obtain the configuration from a server via DHCP or whether the parameters should be set manually. When configuring manually, you then have to enter the IP address and, if necessary, the subnet mask. Next, you need to choose how the device will gain access to the Internet:

- **Gateway:**The device communicates directly with the Internet via a router/gateway. Here it is necessary to specify the IP address of the gateway.

- **Proxy server:**The device communicates with the Internet via a proxy server. With this access you must specify the IP address and port of the proxy server.

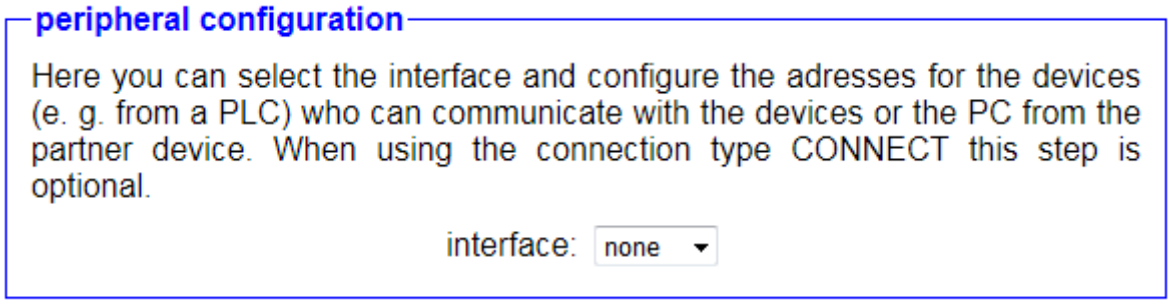


If you have selected CONNECT or GATEWAY as the connection type and WLAN as the router interface, a block with WLAN settings will also appear. There you specify which WLAN network the CONNECT device should connect to. The fields SSID, security level, password and channel are available for this purpose. If you are not sure about the settings, you can also use the “Start Search” button to display a list of available WiFi networks. Then you just have to click on the relevant search entry. All fields except the password will then be filled in automatically.



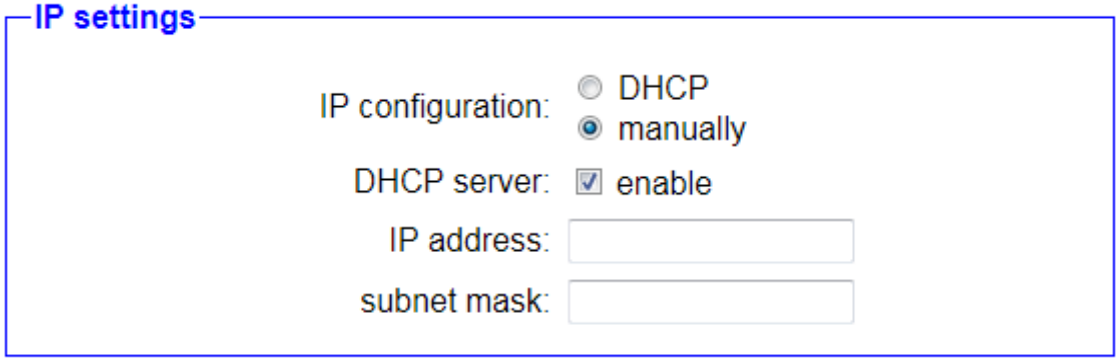
For the LTE connection type, a small block appears within the current window in which you can specify the pin number of your SIM card (if necessary) and the name of your provider's access point (APN). The access point on the CONNECT- and CONNECT-II devices is automatically preassigned to “internet”, which works with a variety of providers. This is recognized automatically on CONNECT-CONTROL devices. It is also possible to specify a user name and password. But these parameters areis now required if the registered access point also requires registration with the provider.

3.2.1.3 Peripheral configuration



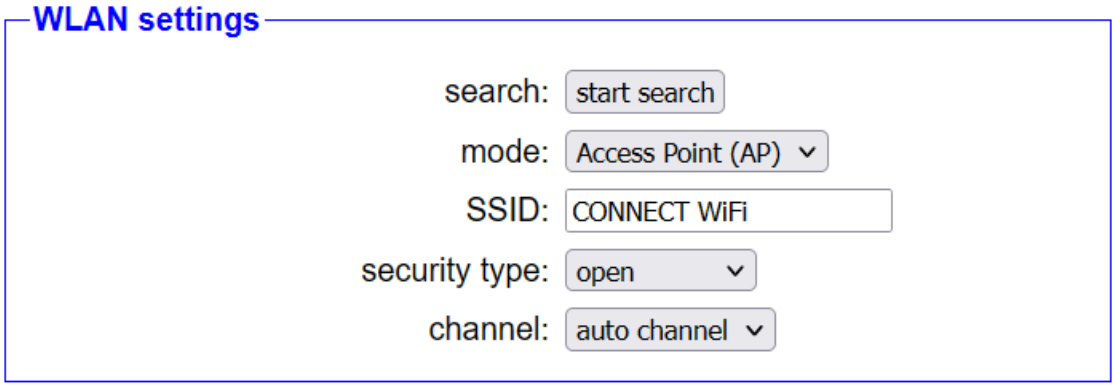
Next, the peripheral interface is configured. The peripheral interface is the network interface at which the devices that use the CONNECT device should be able to communicate with the devices that are connected to another CONNECT device. If you have selected CONNECT as the connection type, specifying a peripheral interface is optional.

Important:
If CONNECT is used as the connection type, the PC can always communicate with the devices on the partner device. This is independent of the peripheral configuration.



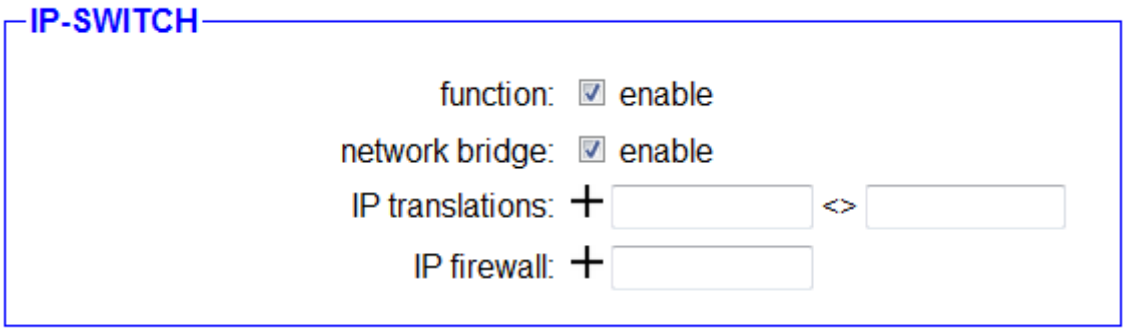
If you have selected a peripheral interface, a block with IP settings appears. There you specify the IP address and, if necessary, the subnet mask for the device. These parameters are required so that the CONNECT device can communicate with the connected peripheral devices. If the peripheral interface is connected to a network in which there is a DHCP server, this can happenthe device will also get the settings there automatically. However, if you want to set the parameters manually and the “DHCP server” setting is activated, devices that are connected to the CONNECT no longer necessarily have to be configured manually, but they then automatically receive an IP configuration from

the CONNECT device. Of course, manual configuration of peripheral devices is still possible.



If you have selected WLAN as the peripheral interface, a block with WLAN settings will also appear. There you can first use the mode to determine whether the device should provide its own network as an access point or connect to an existing network as a client. You can then fill in the SSID, security level, password and channel fields accordingly. If you are not sure about the settings of your existing WiFi network, you can use the “Start Search” button to display all networks within range. Clicking on the search entry then fills in all fields except for the password.

A notice:
If you have selected the same interface for the peripheral interface as for the router interface, the blocks appear with theIP and WLAN settings no longer.

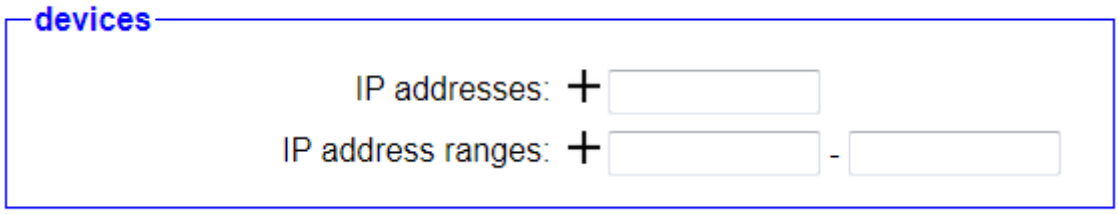


If your device has the IP switch option, “IP SWITCH” will be displayed as the next group. There you can first determine whether the function for converting IP addresses should be activated. Next, you can set whether a network bridge should be active between the router and peripheral interfaces. If this setting is activated, all packets between the router and peripheral interface for which no IP translation can take place or is configured will be passed on without change. However, if the setting is deactivated, the two networks are isolated from each other and only the packets processed by the option are forwarded.

Next, in the “IP translations” line you have the option to configure the translations of IP addresses. To do this, you must enter the addresses in the two text fields and then click on the┼Click icon. The first address represents the actual IP address of the device on the peripheral interface, whereas the second address represents the implemented address of the device. You can then enter additional IP conversions if necessary. To delete an added entry, all you have to do is click on the─ Click on the symbol of the respective entry.

In the “IP firewall” line you have the option of specifying which devices from the peripheral interface are allowed to communicate with the router network and, if applicable, the network or Internet behind it via the router interface. Enter the actual address of the device as the IP address here and then click on it┼Symbol. Here too you can use the symbol to mark an existing entry─delete again.

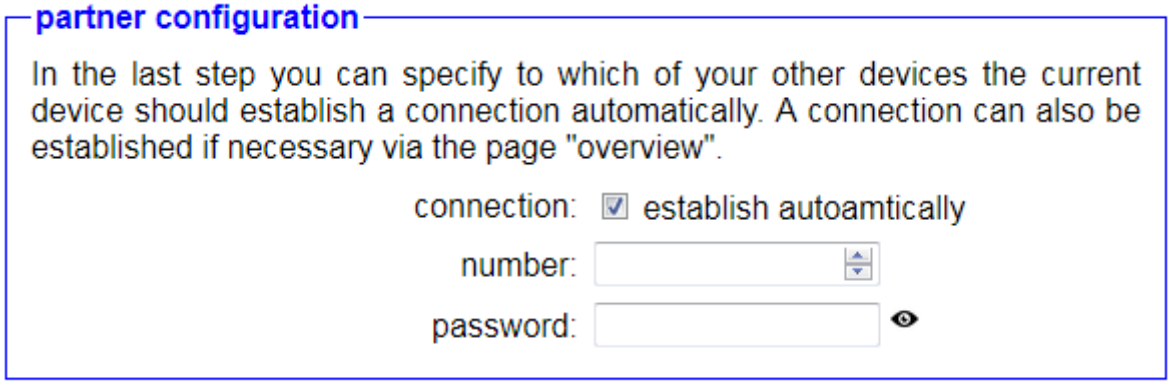
Important:
The peripheral and router interfaces must be different if the option is used.
If one of the IP addresses entered here should also be allowed to communicate with the devices of the partner device, you must also enter the converted IP address in the list there in the next block.



In addition to the IP settings, the “Devices” block appears as soon as a peripheral interface has been selected. Individual IP addresses as well as entire IP address ranges can be defined there for the peripheral devices that are allowed to communicate with the devices of the partner device via the CONNECT device. To add an address or an address range to the list, you must enter the addresses in the appropriate input fields and then click on the+ Click icon. You can repeat this process as often as you like. If you would like to remove an entry from the list, all you have to do is click on the symbol—click before the respective entry.

A notice:
The devices that automatically receive an IP address from the CONNECT device via DHCP do not need to be configured manually.

3.2.1.4 Partner configuration



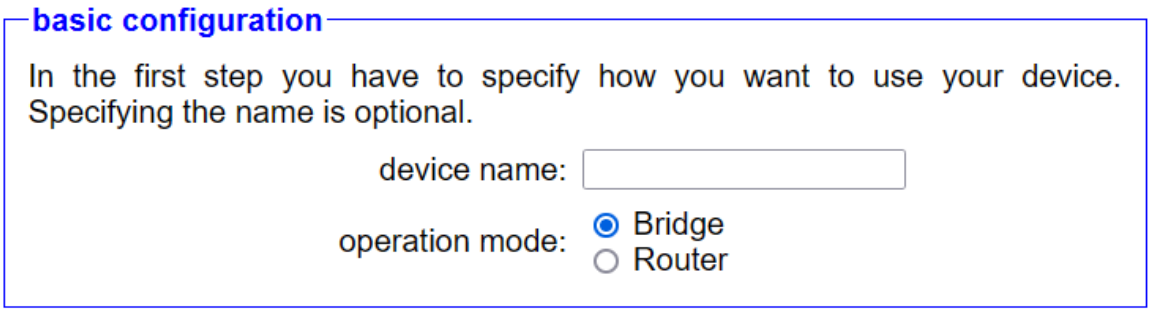
In the final commissioning step, you have the option of specifying whether the device should automatically establish a connection to another device from your CONNECT cloud. If you would like to use this function, you must first check “Connection” andEnter the number and, if necessary, the password of the device to which a connection is to be established. Automatic connection establishment is usually suitable for the device in the office if an immediate connection is desired, or for permanent connections.

If the IP switch option is installed in your device and you have activated it and set CONNECT or GATEWAY as the connection type, the “Remote access” setting will also appear, with which you can completely deactivate access to and from other devices. This may be desired if the device is only used to convert IP addresses without any remote maintenance function.

Important:
Configure automatic connection establishment only on one of the two devices (usually the device in the office). Otherwise it is hardly possible to manually establish a connection to another device.

3.2.2 Router option

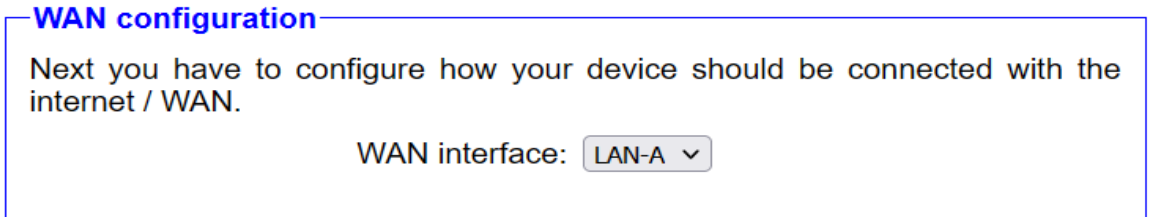
3.2.2.1 Basic configuration



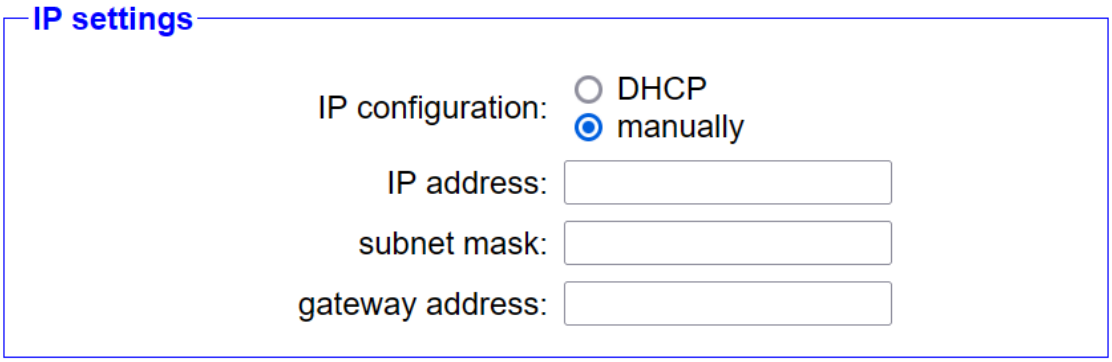
In the first step, you can give your device a name and then specify the operating mode:

- **Bridge:**The CONNECT device connects multiple interfaces into a common network. The participants connected to the device are all in the same subnet.
- **Routers:**The CONNECT device routes between the WAN interface network and the network of one or more LAN interfaces. The two networks each have their own subnet.

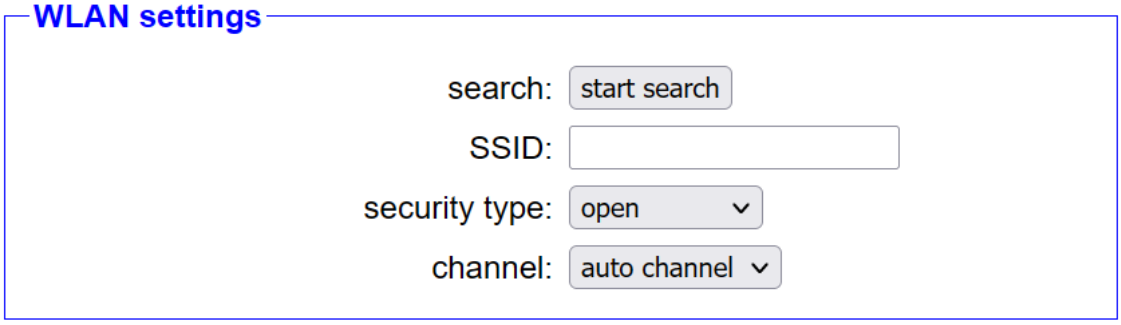
3.2.2.2 WAN configuration



If you have selected router as the operating mode, the next step is to configure the WAN interface. To do this, you must first select which interface should be used for the WAN. However, if you have selected Bridge as the operating mode, this step will be automatically skipped.



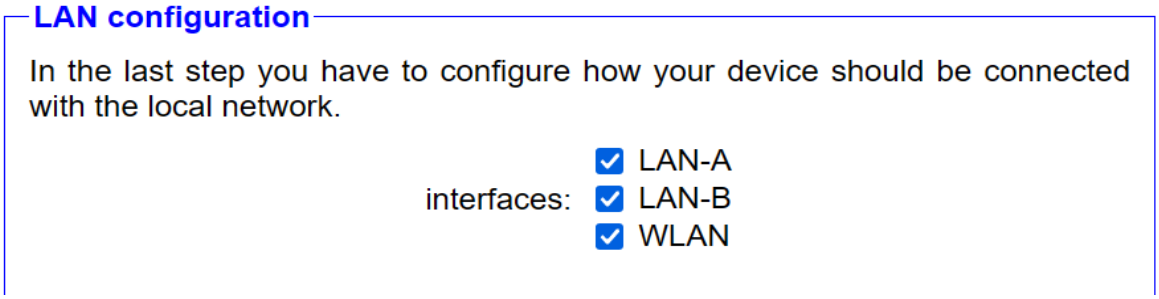
A field for manually configuring the IP parameters appears directly below the selection list for the WAN interface. There you can first choose whether the device should obtain the configuration from a server via DHCP or whether the parameters should be set manually. When configuring manually, you then have to enter the IP address and, if necessary, the subnet mask as well as the IP address of the gateway.



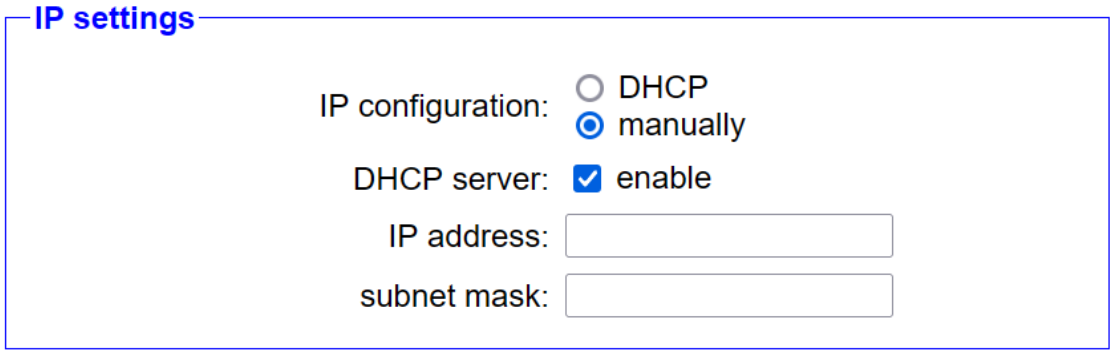
If you have selected WLAN as the WAN interface, a block with WLAN settings will also appear. There you specify which oneWLAN network the CONNECT device should connect. The fields SSID, security level, password and channel are available for this purpose. If you are not sure

about the settings, you can also use the “Start Search” button to display a list of available WiFi networks. Then you just have to click on the relevant search entry. All fields except the password will then be filled in automatically.

3.2.2.3 LAN configuration

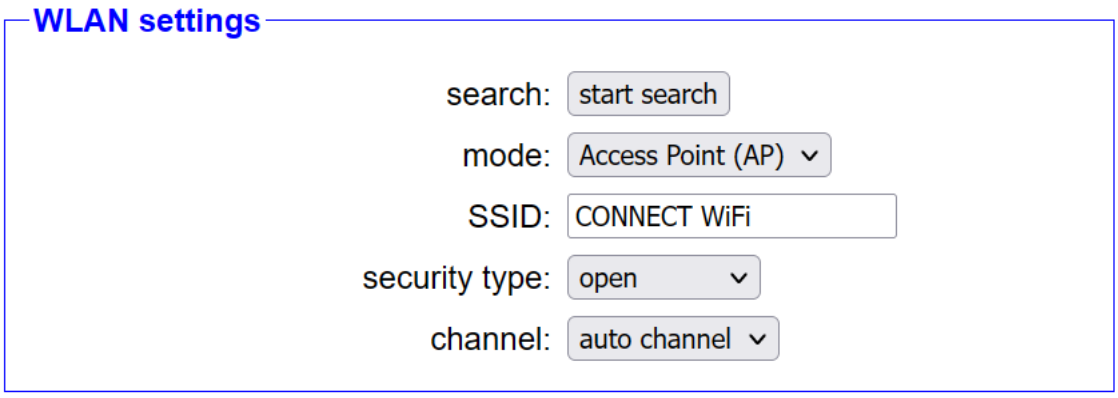


In the final commissioning step, you determine which interfaces should be connected to a common network as a bridge and represent the local network (LAN). Depending on your needs, you can choose one or more interfaces here.



A block with IP settings is displayed directly below the interface selection. There you specify the IP address and, if necessary, the subnet mask for the device. If there is already a DHCP server in the network, the device can get the settings there automatically. However, if you would like to set the parameters manually and the “DHCP server” setting is activated, devices that are connected to the CONNECT no longer necessarily have to be configured manually, but will then receive them from theCONNECT device automatically creates an IP configuration. Manual configuration of devices that are connected to the CONNECT is of course still possible.

If you have (also) selected WLAN as the LAN interface, a block with WLAN settings will also appear. There you can first use the mode to



determine whether the device should provide its own network as an access point or connect to an existing network as a client. You can then fill in the SSID, security level, password and channel fields accordingly. If you are not sure about the settings of your existing WiFi network, you can use the “Start Search” button to display all networks within range. Clicking on the search entry then fills in all fields except for the password.

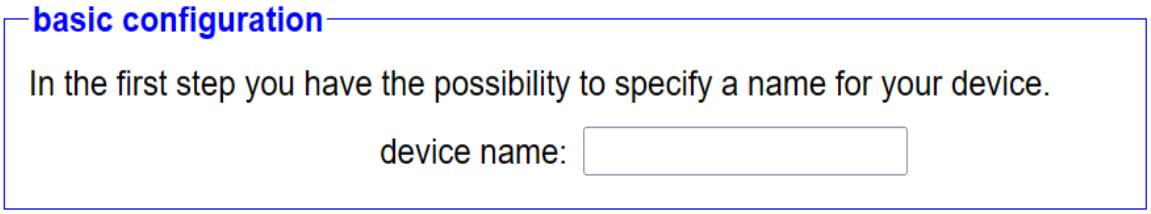
A notice:
If you have set router as the operating mode, you can no longer select the interface that you selected for the WAN for the LAN.

3.2.2.4 Overview of possible applications

situation	Operating mode	WiFi mode	Special feature
With a laptop around the S5/7 PLC + CONNECT-Router	bridge	Access point	PLC via S5/7 LAN on LAN A port, additional LAN participants on LAN B port
Bring S5/7 PLC or LAN participants into the existing WIFI network	bridge	Client	PLC via S5/7 LAN / LAN participant on LAN A port, additional LAN participant on LAN B port
Create a separate subnet for connected devices	routers	Access point	LAN-A port to the company network, LAN-B port + WLAN to the machine network (Don't forget routes in the company network)
Extend LAN route Attention: 2 devices are required	bridge	1. Device Access point 2. Device Client	One device as AP and the second as client

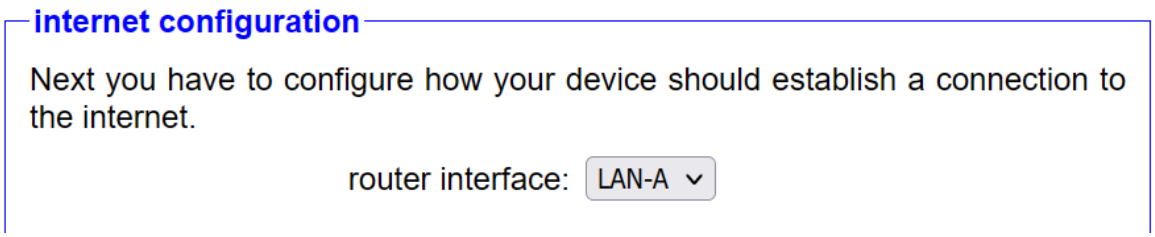
3.2.3 IP switch option

3.2.3.1 Basic configuration

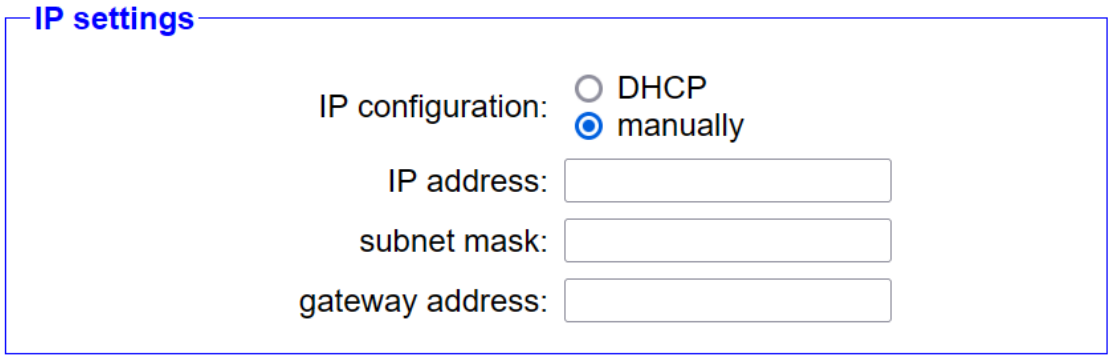


In the first step you can give your device a name. This is optional and only serves for easier identification.

3.2.3.2 Internet configuration

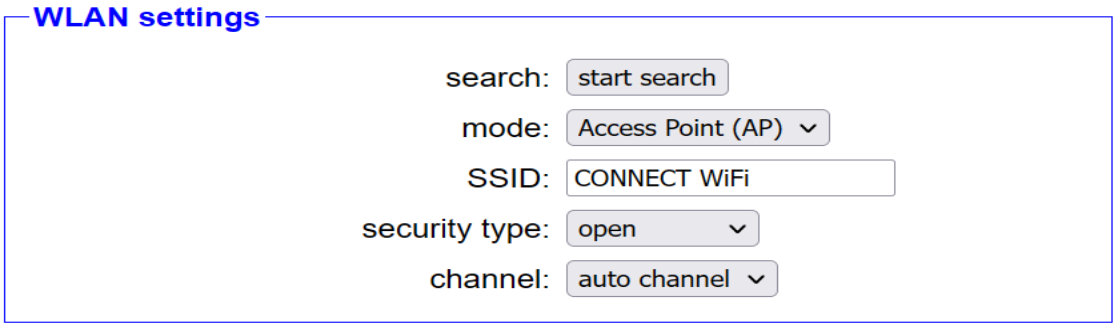


The next step is to configure the router interface. The router interface is the interface from which you later want to reach the devices connected to the peripheral interface via a converted IP address.



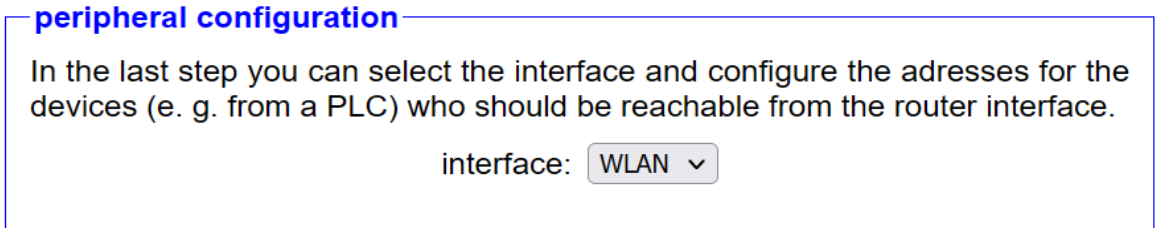
A field for manually configuring the IP parameters appears directly below the selection list for the router interface. There you can first choose whether the device should obtain the configuration from a server via DHCP or whether the parameters should be set manually. When configuring manually, you then have to enter the IP address and, if necessary, the subnet mask as well as the IP address of the gateway.

If you have selected WLAN as the router interface, a block with WLAN settings will also appear. There you specify which WLAN network the

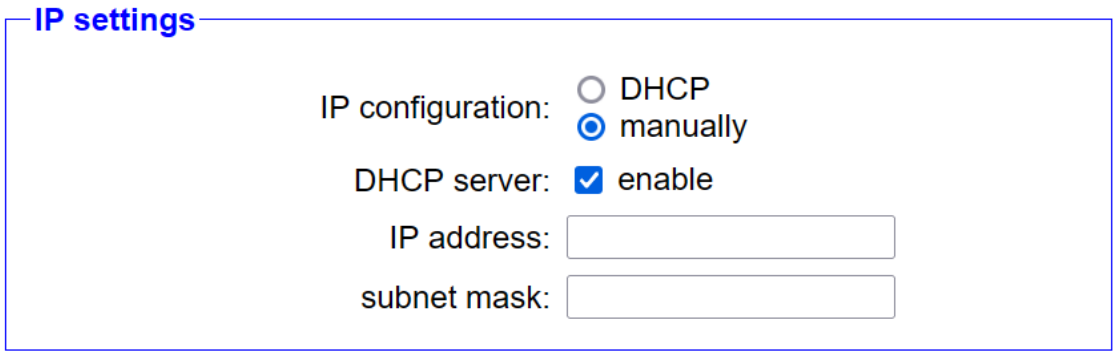


CONNECT device should connect to. The fields SSID, security level, password and channel are available for this purpose. If you are not sure about the settings, you can also use the “Start Search” button to display a list of available WiFi networks. Then you just have to click on the relevant search entry. All fields except the password will then be filled in automatically.

3.2.3.3 Peripheral configuration



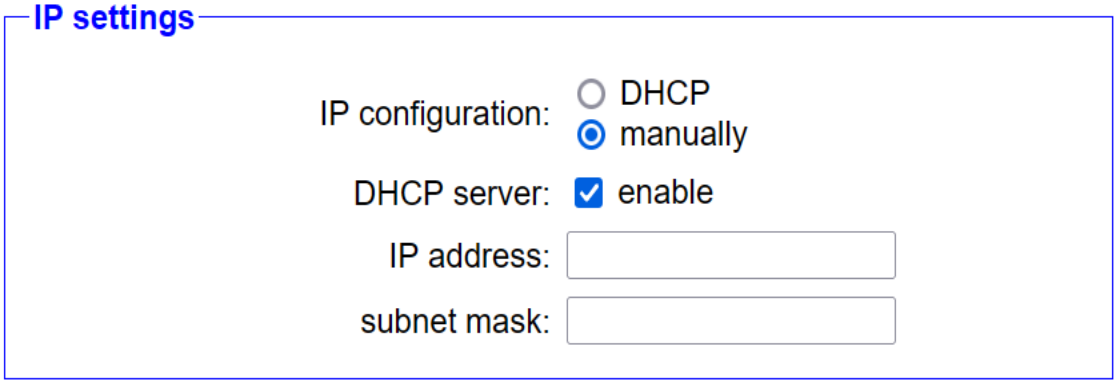
In the last step you have to configure the peripheral interface.



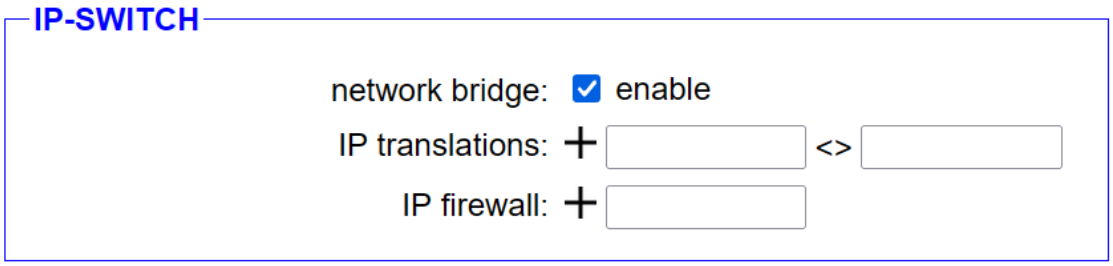
A block with IP settings is displayed directly below the selection list for the peripheral interfaces. There you specify the IP address and, if necessary, the subnet mask for the device. If on the networkIf a DHCP server already exists, the device can get the settings there automatically. However, if you want to set the parameters manually and the “DHCP server” setting is activated, devices that are connected to the CONNECT no longer necessarily have to be configured manually, but they then

automatically receive an IP configuration from the CONNECT device. Manual configuration of devices that are connected to the CONNECT is of course still possible.

A notice:
Please note that devices that have automatically received an IP configuration via the CONNECT via DHCP are not automatically reachable from the network at the router interface. The entry for the IP conversion must always be made manually.



If you have selected WLAN as the peripheral interface, a block with WLAN settings will also appear. There you can first use the mode to determine whether the device should provide its own network as an access point or connect to an existing network as a client. You can then fill in the SSID, security level, password and channel fields accordingly. If you are not sure about the settings of your existing WiFi network, you can use the “Start Search” button to display all networks within range. Clicking on the search entry then fills in all fields except for the password.



The “IP-SWITCH” group is displayed as the last block. There you can first determine whether a network bridge should be active between the

router and peripheral interfaces. If this setting is activated, all packets between the router and peripheral interface for which no IP translation can take place or is configured will be passed on without change. However, if the setting is deactivated, the two networks are isolated from each other and only the packets processed by the option are forwarded.

Next, in the “IP translations” line you have the option to configure the translations of IP addresses. To do this, you must enter the addresses in the two text fields and then click on the┼Click icon. The first address represents the actual IP address of the device on the peripheral interface, whereas the second address represents the implemented address of the device. You can then enter additional IP conversions if necessary. To delete an added entry, all you have to do is click on the─ Click on the symbol of the respective entry.

In the “IP firewall” line you have the option of specifying which devices from the peripheral interface are allowed to communicate with the router network and, if applicable, the network or Internet behind it via the router interface. Enter the actual address of the device as the IP address here and then click on it┼Symbol. Here too you can use the symbol to mark an existing entry─delete again.

Important:
The peripheral and router interfaces must be different.

3.3 Using the device

Once you have completed and saved the configuration of the device, the device will next adopt the set parameters. Make sure the device is connected according to your configuration. After a few seconds, the device can be reached again via one of the configured interfaces.

3.3.1 Remote maintenance option

The remote maintenance option gives you the opportunity to access and communicate with the network participants connected to the device via the Internet and another CONNECT device or the CONNECT software.

As soon as the device has completely booted up, the device's LED S1 begins to flash (not on the CONNECT-CONTROL devices).

If you have selected CONNECT as the connection type, you must next communicate with the Internet from the PC connected to the CONNECT device. This can e.g. B. the call ofwww.google.debe in your web browser. Your CONNECT device should now have recognized the Internet parameters from the PC and is ready for use. With the GATEWAY and LTE connection types, the device is ready for operation without any further action.

If you have activated automatic connection establishment in the device, the CONNECT will now attempt to establish a connection to the configured partner device. If you have not activated the automatic connection establishment or would like to establish a connection to another device, you can do this via the “Device list” dialog on the “Overview” page of the web server.

As soon as the CONNECT device has established a connection to another device from your CONNECT cloud, the LED S1 stops flashing and instead lights up permanently (not for the CONNECT CONTROL devices). The configured peripheral devices and, if applicable, the PC (with the CONNECT connection type) can now communicate with the devices of the partner device as if they were in the same network.

Important:

If you have deactivated the “remote access” setting, the device’s LED S1 will not flash. If you have selected the CONNECT connection type,

Internet communication is not absolutely necessary because the device does not require any Internet parameters.

3.3.2 Router option

With the router option you have the option of using the CONNECT device as a bridge or router.

With a bridge, several interfaces are connected to form a common network. The participants are all in the same subnet and can communicate directly with each other, just as if they were connected to a switch. This operating mode can e.g. B. can be used to connect devices that only have a LAN port to an existing WiFi network. You can also configure the device as an access point so that you can connect mobile devices such as smartphones or tablets to devices that have a LAN port via the CONNECT.

If you have two different subnets that you want to connect, set the device to router operating mode. The CONNECT device then routes the packets between the WAN and one or more LAN interfaces. In order for a device to access the network of the other interface, the IP address of the CONNECT device must be entered as a gateway.

3.3.3 IP switch option

With the IP switch option you have the option of configuring IP address conversions in the device in order to connect two networks with different subnets without having to use a router. The devices on the peripheral interface are then no longer accessed with the original IP address, but rather with a virtual IP address that matches the network.

An example is a system network with a controller that should now be addressed by the operating data acquisition. A direct oneHowever, communication between the two network participants is not possible because the two networks have a different subnet. Before you convert the entire system network to a different subnet, which in some cases is very time-consuming or you are not even authorized to do so, the CONNECT device can easily solve this problem with the IP switch

option. A precise example including the necessary configuration can be found below.

A notice:
A CONNECT device with the remote maintenance option installed is inherently a device for coupling via the Internet. However, if necessary, it can also be used exclusively to exchange IP addresses with the IP switch option.
By default, all network traffic is initially passed on between the peripheral and router interfaces. If an IP address entered in the list is accessed from the router interface, it will be implemented according to the entry in the list before it is passed on. If necessary, the forwarding of network traffic can also be limited to the registered IP addresses.
If the setting for remote access is activated, the same conversion of IP addresses occurs even if a device on the partner device accesses an IP address entered in the list.

Important:
The communication across subnets enabled with this option only applies if the connection from the device on the router interface or the partner device to the device on the peripheral interface is actively established. There is no implementation in the other direction.

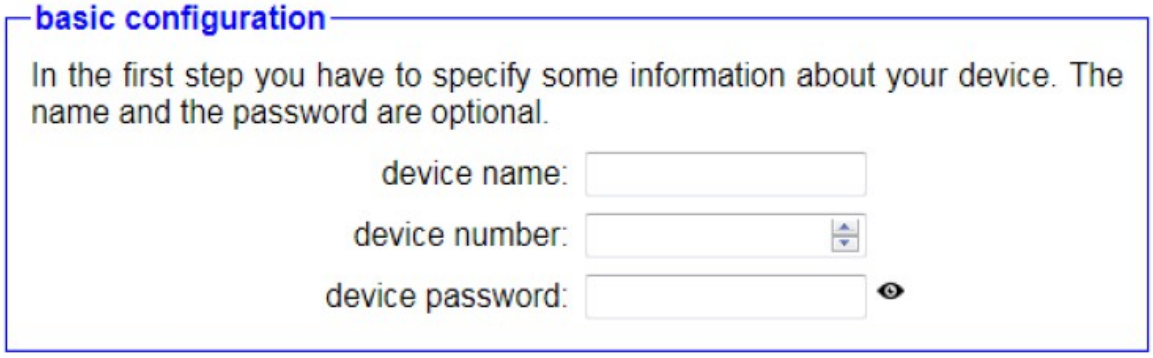
3.3.3.1 Example configuration

If you only want to use the device with the functionality for converting IP addresses, without any remote maintenance purposes, this section describes what a minimal configuration for commissioning might look like. Otherwise, the complete configuration, depending on which options are installed in your device, is shown in the section “3.2 Configuration of the device“described.

For the following example configuration, it is assumed that a controller with the IP address 192.168.2.100 from the plant network (subnet 192.168.2.0/24) is accessed by the operating data acquisition from the company network (subnet 10.10.12.0/8) via the IP address 10.10. 12.101 should be addressed. The other participants in the system network should not be accessible from the company network.

A notice:
The following dialogs show the commissioning of a device with the remote maintenance and IP switch options. If the remote maintenance option is not installed in your device, a few settings will be omitted.

Make sure you can access your device as described in the “3.1 Access to the device“described. You can then start with the basic configuration:



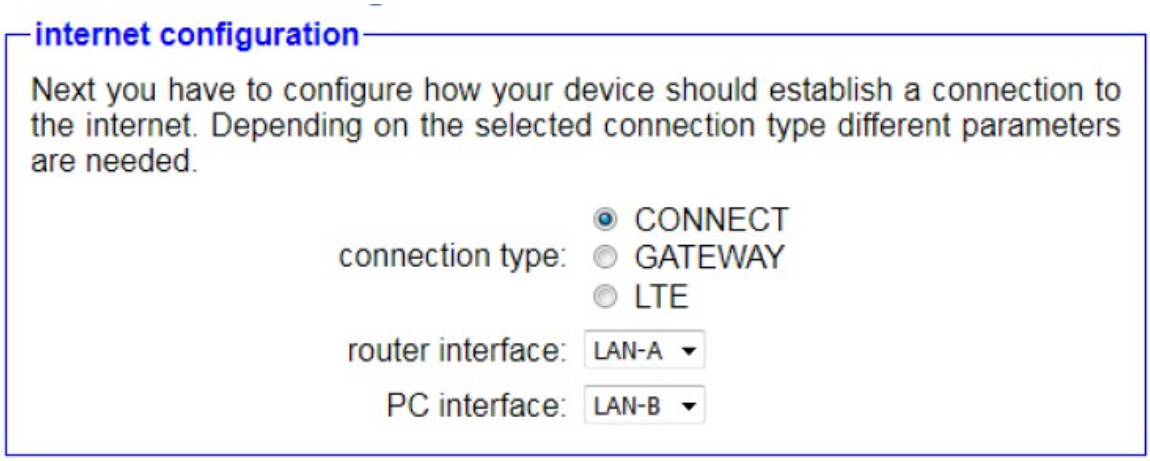
Device name: Display name for the device*(optional)*

Device number: 1

Device password: (*Leave empty)*

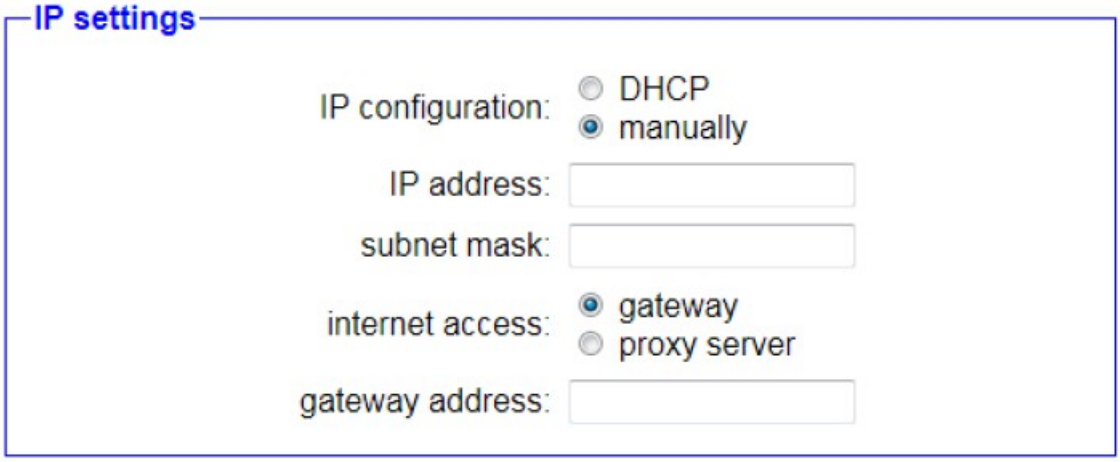
Then click Next".

Next, you need to determine the use of the interfaces and the parameters for the company network:



Connection type: GATEWAY

Router interface: LAN-A / WAN (interface to the company network)



IP configuration: Manually

IP address: IP address of the device in the company network *(Example: 10.10.12.100)*

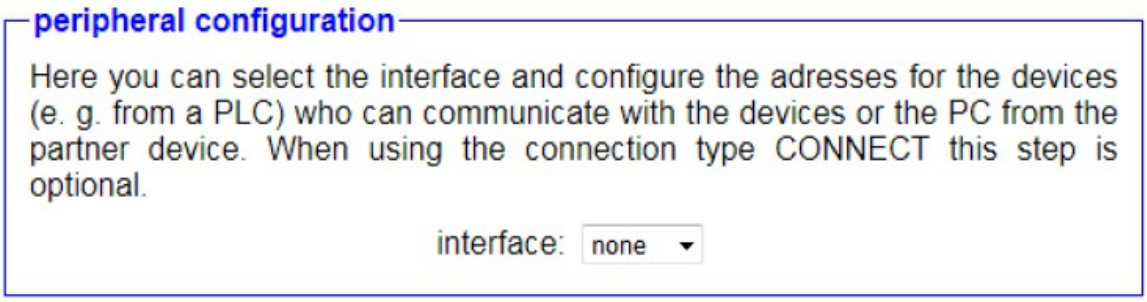
Subnet mask: 255.0.0.0*(entered automatically)*

Internet access: Gateway

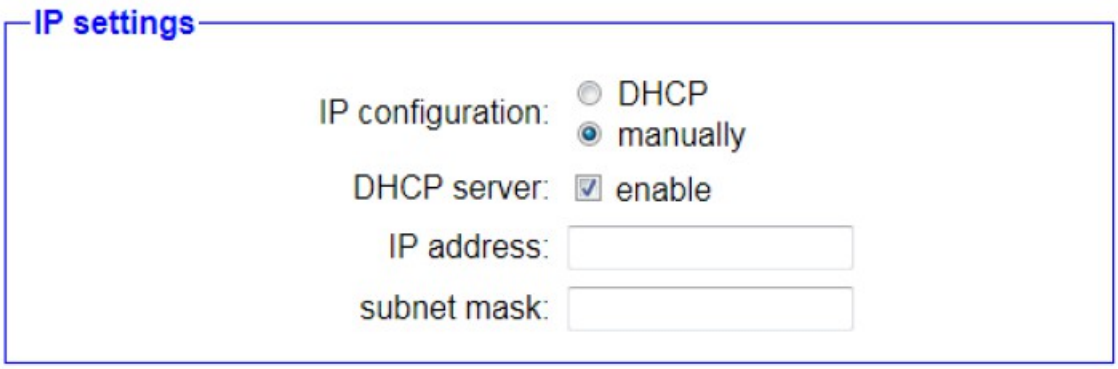
Gateway address: IP address of the gateway in the company network *(Example: 10.10.12.1)*

Then click Next".

In the next step, the parameters for the system network and the actual implementation of IP addresses are configured:



Interface: LAN-B / LAN (interface to the system network)

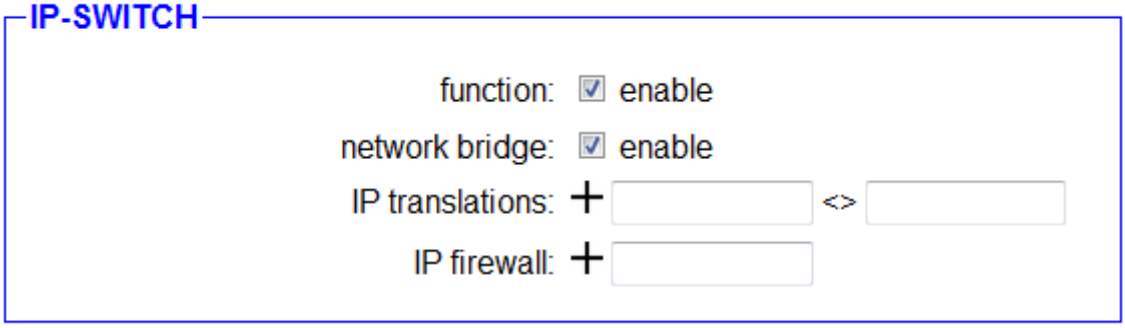


IP configuration: Manually

DHCP server: do not activate

IP address: Address of the device in the system network
(Example: 192.168.2.200)

Subnet mask: 255.255.255.0*(entered automatically)*



Function: activate

Network bridge: do not activate

IP implementations: Entering the implementations, which IP address a device from the system network which Corresponds to the IP address from the company network.

The entries in the text fields can be made by Click on that ┼symbol will be adopted. It multiple entries are possible. Taken over Entries can be made by clicking on this ─symbol be deleted again.

(Example: 192.168.2.100 <> 10.10.12.101)

IP firewall: Entering IP addresses of devices from the System network, which is connected to the company network and can access the underlying Internet.

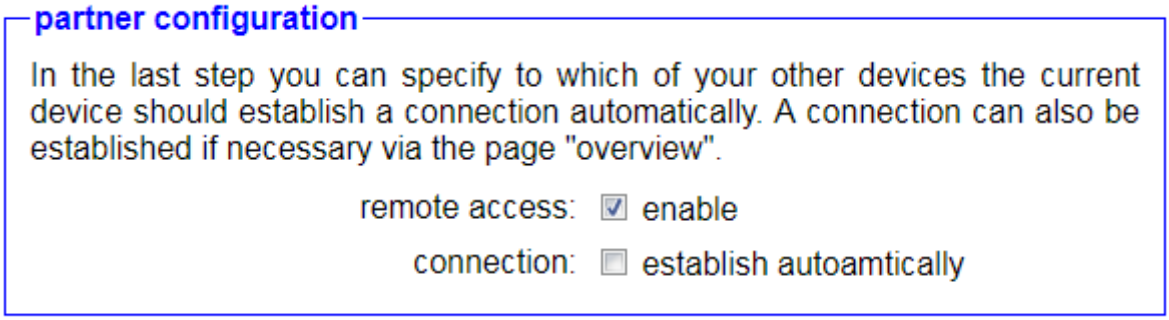
The input in the text field is indicated by a Click on that ┼Symbol adopted. There are multiple entries possible. Already taken over Entries can be made by clicking on this ─symbol be deleted again.

(Example: 192.168.2.100 - if required)

No configuration is necessary in the following block “Devices”.

Then click Next".

In the last step, the functionality of the device is determined:



Remote access: do not activate (this will cause all further fields hidden)

Finally you have to click on “Save”.

The configuration of your device to use the IP switch option is now complete.

The control in the system network with the IP address 192.168.2.100 can now be reached in the company network via the IP address 10.10.12.101.

4 Controls

4.1 Status LEDs

4.1.1 CONNECT / CONNECT-II device

The CONNECT / CONNECT-II devices have several status LEDs on the front of the device. The LEDs have the following meaning:

- **ON:**lights up when the device is supplied with voltage
- **Wi:**lights up when WLAN is active and flashes when data is being transferred
- **S1:**lights up when there is an active connection to a partner device and flashes during synchronization and when ready
- **S2:**currently not in use
- **S3:**currently not in use
- **S4:**currently not in use
- **LAN A:**lights up when the link status of interface A is active and flashes during data transfer
- **LAN B:**lights up when the link status of interface B is active and flashes during data transfer

The CONNECT devices with an integrated LTE modem also have another LED, which is located on the right side of the device near the SIM card slots. If this LED flashes slowly and at regular intervals, a network search is currently taking place. As soon as the LED lights up, a network has been found. If communication takes place via the LTE modem, the LED flashes at rapid or irregular intervals.

4.1.2 CONNECT-CONTROL device

The CONNECT-CONTROL device has several different status LEDs on the front of the device.

The first green LED, which is located at the bottom left of the power supply connection, signals whether the device is also being supplied with voltage.

To display the status of the RJ45 interfaces, all four sockets each have a green LED. This LED lights up when the left status is active and flashes during data transfer.

There are also additional LEDs at the bottom right to indicate the mobile phone connection. The five green LEDs below the bar display show the signal strength. The more LEDs light up, the better the signal. The LED directly below the cellular symbol is a multicolored LED and indicates the general status of the cellular connection:

Colors	**Behave**	**Meaning**
green + red	flashes alternately every 500ms	No SIM card present or wrong pin number
green + red + orange	flashes alternately every 500ms	GSM connection is being established
red	flashes every 1s	GSM connection without data connection
	lights up/flashes	GSM connection with data connection *(flashes during data transfer)*
orange	flashes every 1s	UMTS connection without data connection
	lights up/flashes	UMTS connection with data connection *(flashes during data transfer)*
green	flashes every 1s	LTE connection without data connection
	lights up/flashes	LTE connection with data connection *(flashes during data transfer)*

4.2 Button

4.2.1 CONNECT / CONNECT-II device

The CONNECT / CONNECT-II devices have two buttons on the right side. These have the following function:

- **FS:**Button to trigger factory settings
- **T:**currently not in use

If you want to reset your device to factory settings, you must press and hold the “FS” button for at least 3 seconds. It is best to use a paper clip to press the button.

After holding the button for 3 seconds and then releasing it, your device will be reset to factory settings. The device then restarts and should be accessible again after approx. 30 seconds with the standard settings, as described in the “Commissioning” chapter.

4.2.2 CONNECT-CONTROL device

The CONNECT-CONTROL device has a button on the back that can be operated with the supplied needle or a paper clip. The use of the button can be individually parameterized in the Teltonika web interface. By default, the following actions are triggered depending on the duration of the key press:

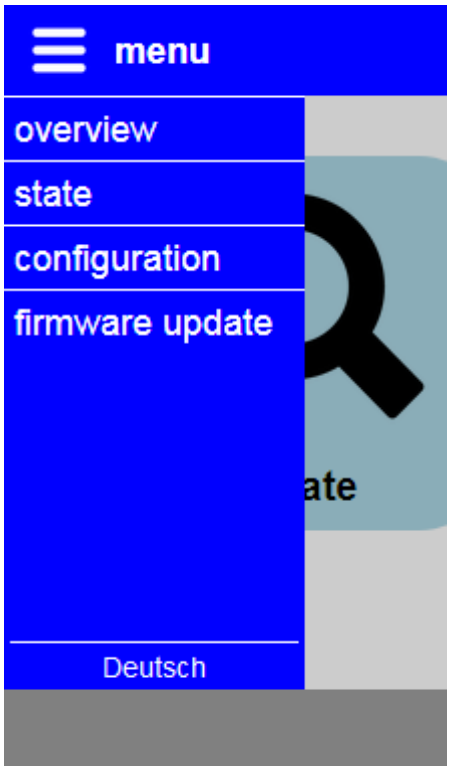
min. time	max. time	Meaning
0	5	Restart
6	11	Restore user settings
12	20	Restore factory settings

Important:
Restoring user or factory settings also removes the CONNECT software from the device. In this case, you will then have to completely reinstall the software.

4.3 Web server

The device is operated to configure and check the status as well as to establish and disconnect connections to partner devices via the integrated web server. Access to the web server is possible via all interfaces of the device that have an IP configuration. In addition, access via the PC and peripheral interface (if used) is always possible using the keyword “connect”.

4.3.1 Page layout



All pages consist of a header, a footer and a content area. The menu is hidden by default. This structure means that the website can also be displayed on devices with a small resolution or screen diagonal (such as smartphones).

If you would like to show the menu, all you have to do is click on the icon or the word “Menu” at the top left. The menu will then appear on the left side. To navigate you just have to click on one of the points. You can also hide the menu using the icon or the lettering.

The interface language of the device can be switched using the “English” or “German” entry at the bottom of the menu. This setting is saved in the device.

On CONNECT-CONTROL devices, the Teltonika Networks logo is located on the left in the footer. Clicking on the logo opens the Teltonika RUT955 web interface. There you then have the option of parameterizing further settings independently of the CONNECT software. For more information about these settings, please refer to the Teltonika manual.

4.3.2 Access protection

In order to prevent third parties from accidentally changing the configuration or from connecting or disconnecting to another device, the entire website can be protected with a password.

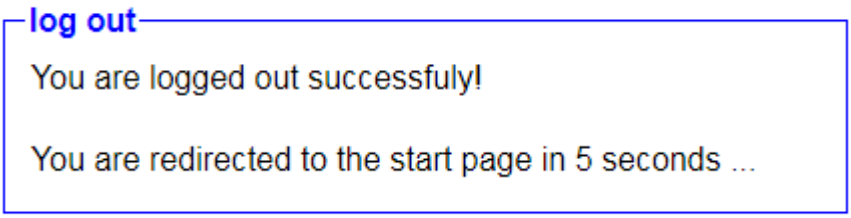
The password is assigned on the “Configuration” page. If an empty password is entered, as is the case when delivered, there will be no password query and you can access all pages directly.

If you have set up a password, you will be asked to enter a password in the following login window:

Once you enter the password and click “Login,” you will be redirected to the page you originally wanted to visit.

For security reasons, we recommend that you log out after completing work on the device. For this purpose, there is now an additional menu item “Log out” in the menu:

After you have clicked on the entry, the following message will be displayed and after 5 seconds you will be redirected to the homepage, which will again trigger a password request:



A notice:
If you restart the device, reset the factory settings or perform a firmware update, you do not need to log out of the device. The device automatically logs out all users.

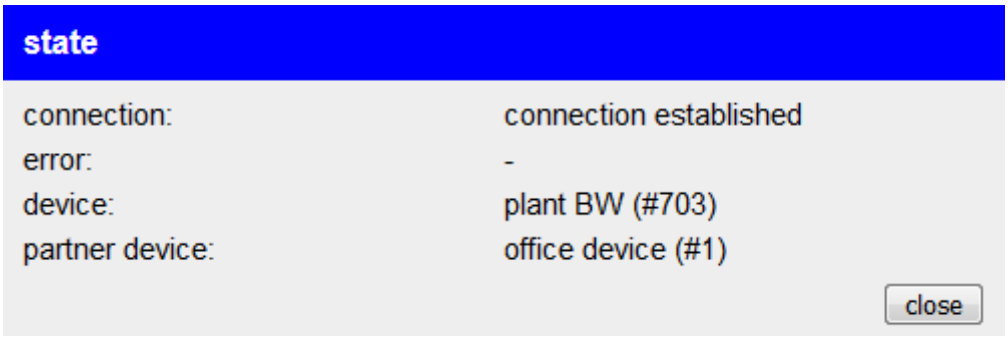
4.3.3 Overview page

The Overview page is the home page of the device and allows you to quickly diagnose the device status, manage the connection to a partner device, and configure and check the addresses of the peripheral/network devices of your own device and the partner device.

For a better overview of the page, the information is divided into individual dialogs that can be opened by clicking on the respective light blue button. To close an open dialog, all you have to do is click on the “Close” button or on an area outside the dialog. The individual dialogs are explained in more detail below.

A notice:
Depending on the installed options, the configuration and the status of the device, not all dialogs may be available.

4.3.3.1 status



The most important information about the device and its connection is displayed in the “Status” dialog:

Connection: The current status of the device or connection.

Mistake: The last error that occurred in the device.

Device: The name, if any, and the number of the own device.

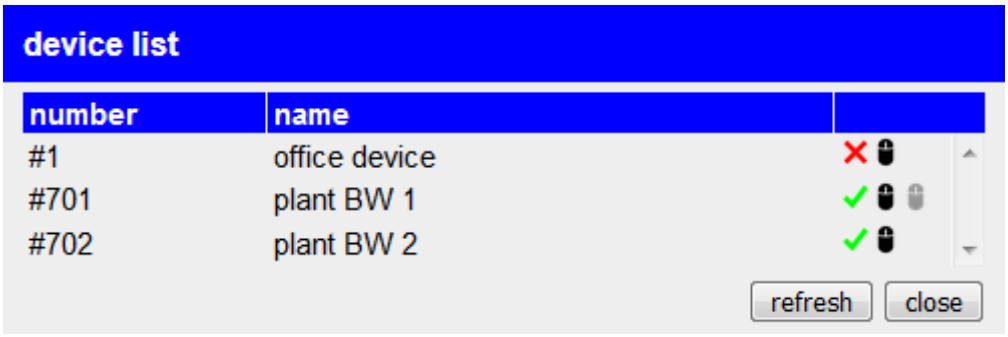
Partner device: The name, if any, and the number of the Device to which you are currently or most recently connected exists or has passed.

A notice:
If the remote maintenance option is not installed in your device or you do not use remote access, the text “not used” will be displayed under “Connection” as soon as the device is ready for operation.

4.3.3.2 device list

By opening the “Device list” dialog, all devices that are in your CONNECT cloud are automatically retrieved. After a few seconds, a table with the devices found will be displayed.

About the symbols ✓ and ✗, which are displayed in the last column of the table, you then have the option of establishing a connection to a device or disconnecting an existing connection.

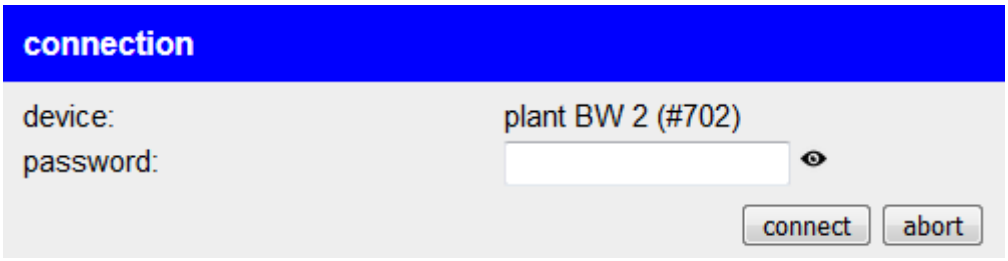


The symbols and , which are also displayed in the last column, make it possible to start or open the remote configuration for a device or to stop it again. Using Remote Config, you have the ability to view and control another device's web server, just as if the device were located directly on your network.

You can also manually reload the list of devices using the “Update” button.

A notice:
If you have deactivated the remote access setting, this dialog is not available.

If you would like to establish a connection to a device, the symbol will appear after clicking on it another dialogue:

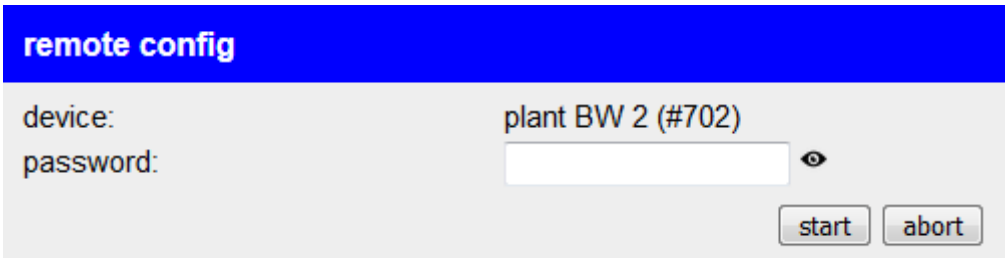


The name, if available, and the number of the device to which a connection is to be established are displayed again in the dialog. You will also be asked to enter the password to establish the connection. You can then click on the “Connect” button to establish the connection to the device.

A notice:
If you are already connected to a device and now want to connect to another device, the previous connection will be automatically disconnected.

Important:
By establishing and disconnecting connections via the device list, the automatic connection establishment is temporarily deactivated. After a restart or, if necessary, changing the configuration, it will be activated again.

If you would like to start the remote configuration for a device from the list, click on the symbol a dialog is also displayed:

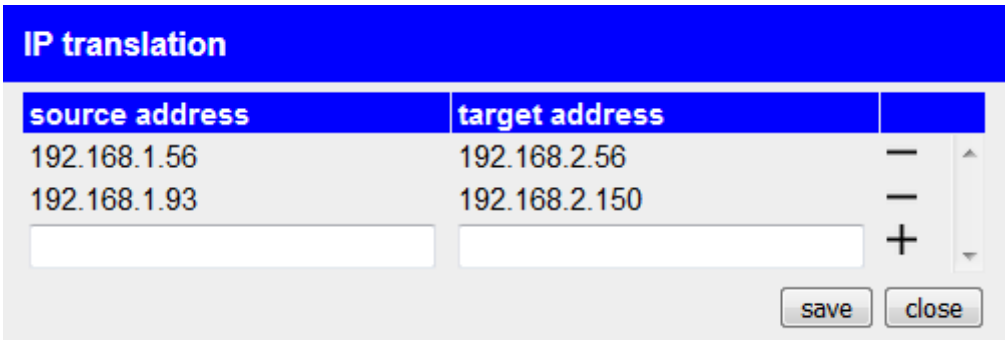


Here too, the selected device will be displayed again and you will be asked to enter the password. You can then click on the “Start” button. If the remote configuration could be started, a new window will then open in which the web server of the selected device is displayed.

A notice:
If the remote configuration for a device has already been started but not ended, it will be ended first. Parallel access to multiple devices via remote configuration is not possible.

Important:
If the remote configuration was started successfully but no window opens automatically, please make sure that your browser does not block pop-ups.

4.3.3.3 IP implementation



If the IP switch option is available and activated in your device, you have the option to set the IP address conversions for the peripheral interface devices in the “IP Conversion” dialog. The source address is the original IP address of the devicethe peripheral interface. The target address describes the address into which this IP address should then be converted.

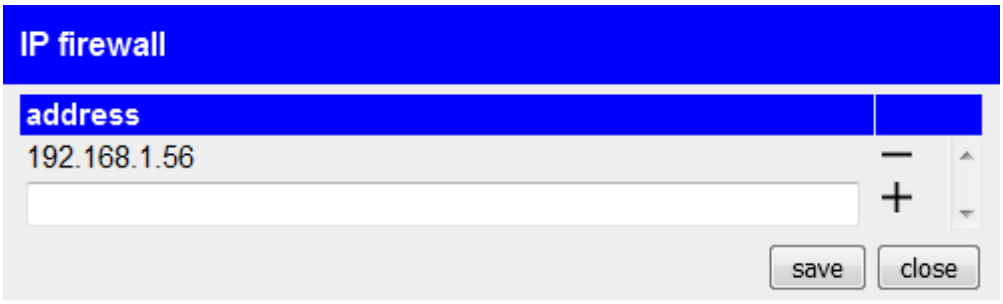
To add a new entry to the table, you must select the bottom row and finally click the icon┼click.

To delete an entry that has already been created, all you have to do is click on the symbol─click in the respective line.

Once you have completed your configuration, you still need to click on the “Save” button to apply the settings.

Important:
If a peripheral device whose IP address is implemented can also be reached via the tunnel by the partner device's devices, you must also enter the target address of this device in the "Addresses" dialog.

4.3.3.4 IP firewall



If the IP switch option is installed and activated in your device, you have the option in the “IP Firewall” dialog to allow devices on the peripheral interface to access the router interface and, if available, the network or Internet behind it to grant. To do this, you simply need to enter the IP addresses of the devices for which this access is permitted in this dialog. All other devices are denied this access. It doesn't matter whether an IP conversion is also configured for these IP addresses or not.

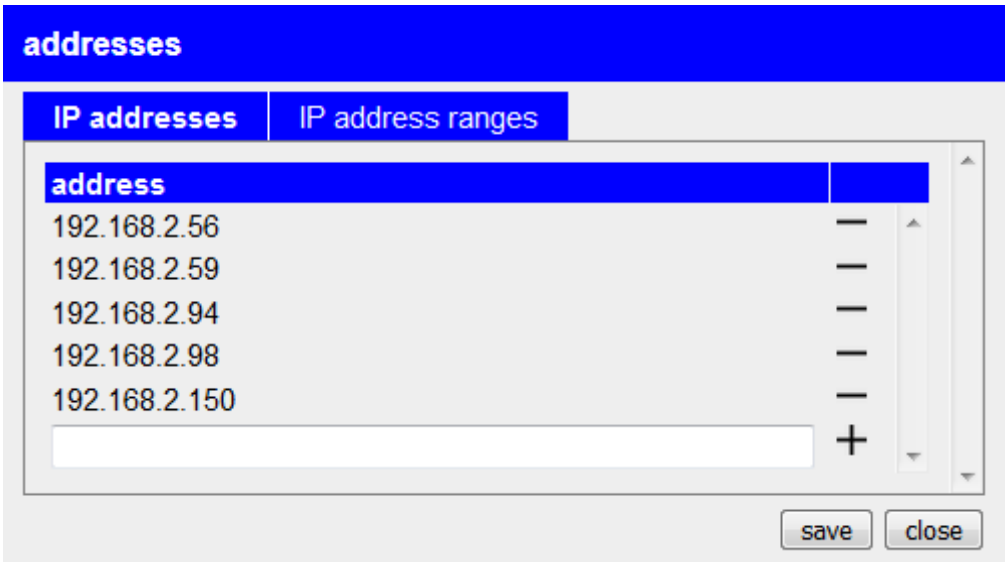
To add a new entry to the table, you must select the bottom row and finally click the icon┼click.

To delete an entry that has already been created, all you have to do is click on the symbol─click in the respective line.

Once you have completed your configuration, you still need to click on the “Save” button to apply the settings.

A notice:
If you use the LTE connection type, this dialog is not available because no router interface is used here.

4.3.3.5 Addresses



The “Addresses” dialog allows you to configure the addresses or even entire address ranges for the peripheral devices. The address configuration is divided into several tabs, with only the “IP addresses” and “IP address ranges” tabs currently available. The respective list can be opened by clicking on the tab.

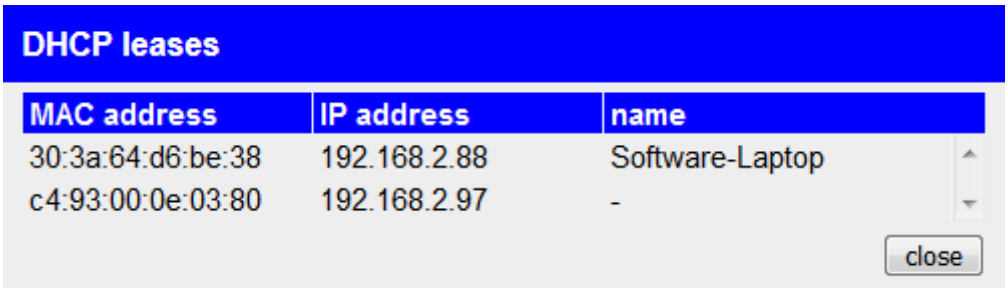
If you would like to add a new address or an address range to a list, you must fill out the last line of the table and then click the symbol+click.

To delete an entry from the list, all you have to do is click the icon—click in the corresponding line.

In order to save the changes you have made, you must finally click on the “Save” button.

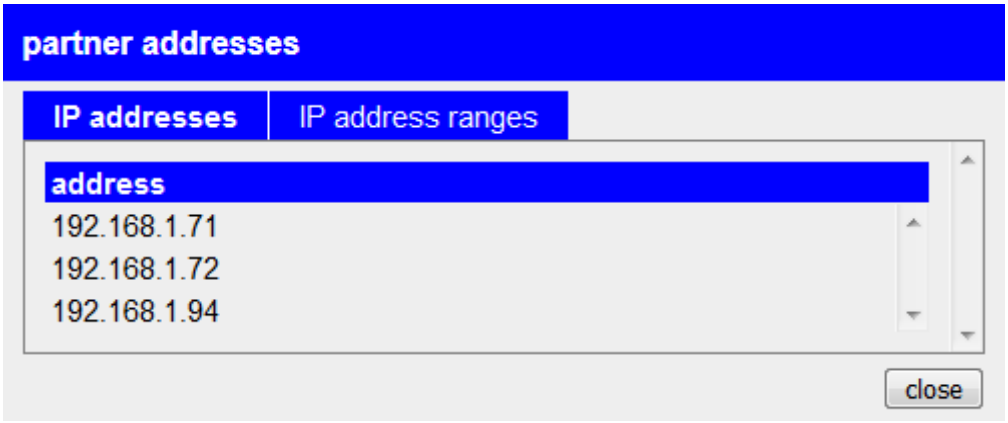
Important:
The addresses configured here must either be in the same subnet as the IP address of the device's peripheral interface or in the same subnet as the devices connected to the partner device. Otherwise no communication is possible.
Only the devices whose address is configured in this dialog and the devices that were automatically recognized using DHCP, as well as, when using the CONNECT connection type, the connected PC, are authorized to communicate via the tunnel and thus with the devices of the partner device.

4.3.3.6 DHCP leases



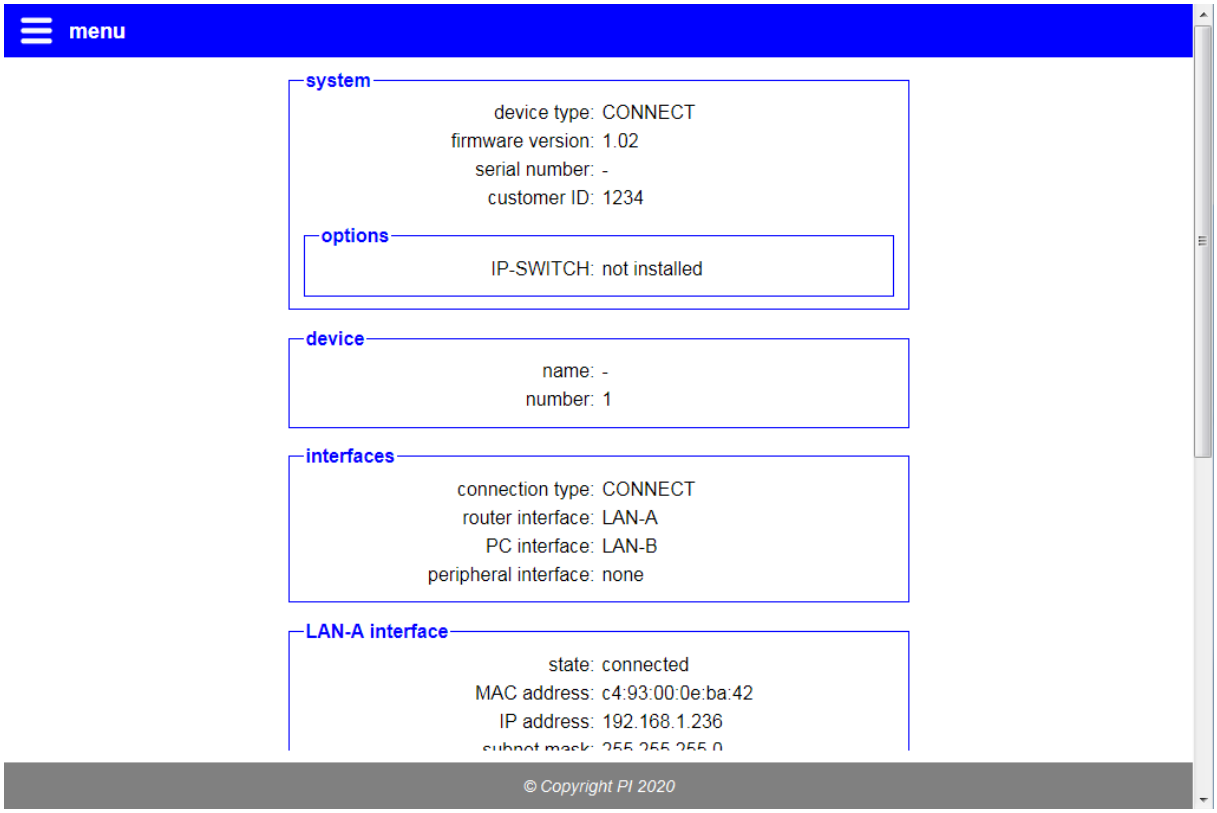
In the “DHCP Leases” dialog you will see a list of devices that have automatically received an IP address from the CONNECT device using DHCP and can therefore, in addition to the manually configured devices, also communicate with the devices of the partner device via the tunnel. The table shows both the MAC and the assigned IP address of the device as well as, if available, the device name provided by the device.

4.3.3.7 Partner addresses



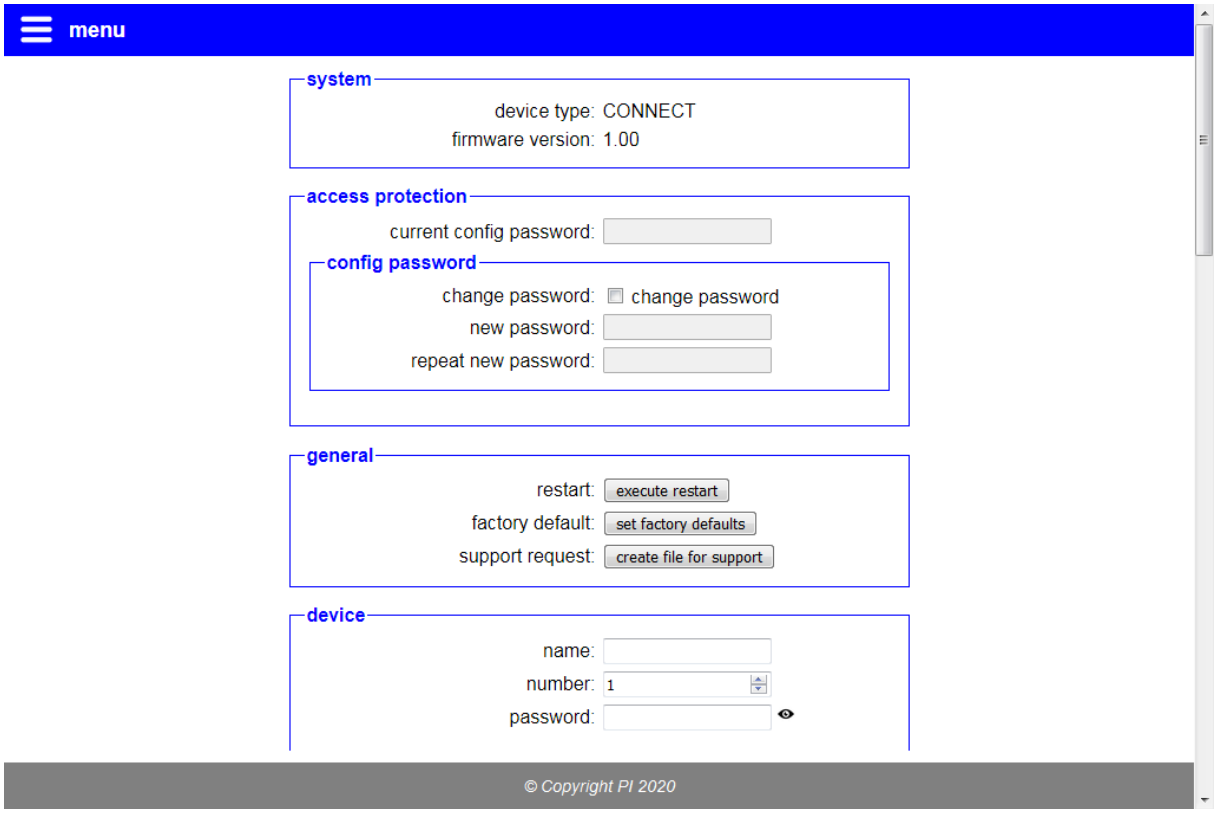
The “Partner Addresses” dialog is displayed as soon as there is a connection to another device for the first time and shows all addresses and address ranges of the network devices of the currently or most recently connected partner device. The structure can be compared to the “Addresses” dialog, but with the difference that no configuration is possible in this dialog.

4.3.4 Status page



The “Status” page shows various status information about the device as well as the device’s settings and network interfaces. This information may be helpful if you, for example, For example, you want to check whether the device has established an LTE or WLAN connection and how good the signal level is. If you have problems with the device, this information may also be helpful for support.

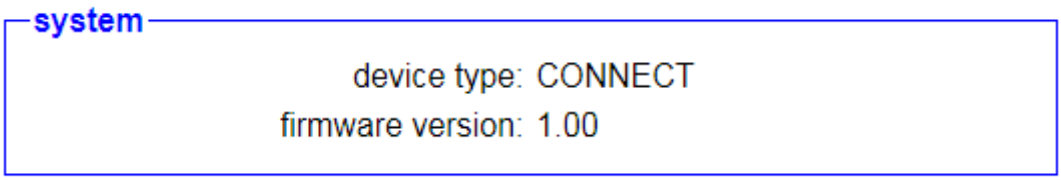
4.3.5 Configuration page



On the configuration page (“Configuration” menu item), you have the opportunity to make various settings in order to adapt your device as you wish. The configuration options are divided into groups and are explained in more detail in the following points.

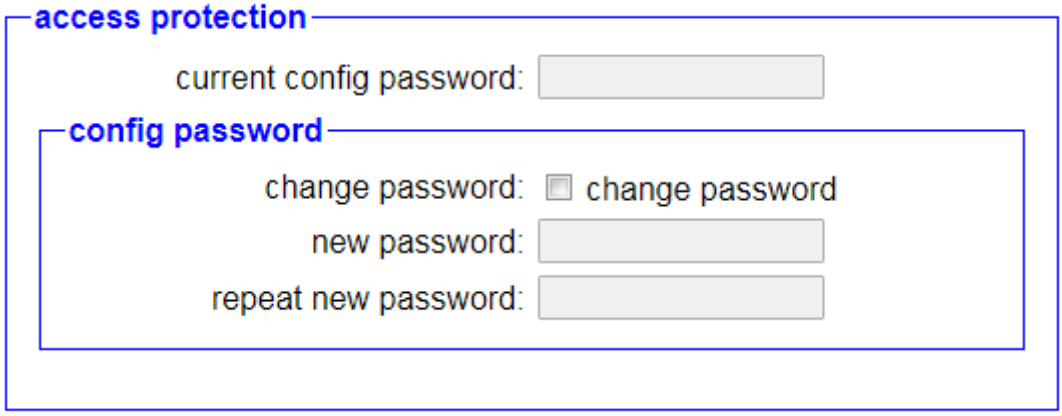
A notice:
Depending on the device type, device options, and your configuration, not all groups and settings may be available.

4.3.5.1 system



The “System” group only displays some information about the device. No settings can be made here yet. Updating the firmware or software is possible via the “Firmware Update” or “Software Update” page.

4.3.5.2 Access protection



In the “Access protection” block you have the option to set the password that is required to access the device’s web interface. To do this, you must first tick the “Change password” box and then enter your previous password in the “Current config password” field for verification. Then you just have to enter the new password twice. The repeated entry is for your own safety and to avoid typing errors.

A notice:
An empty password, as is the case in the factory setting, means that access is possible without a password prompt.

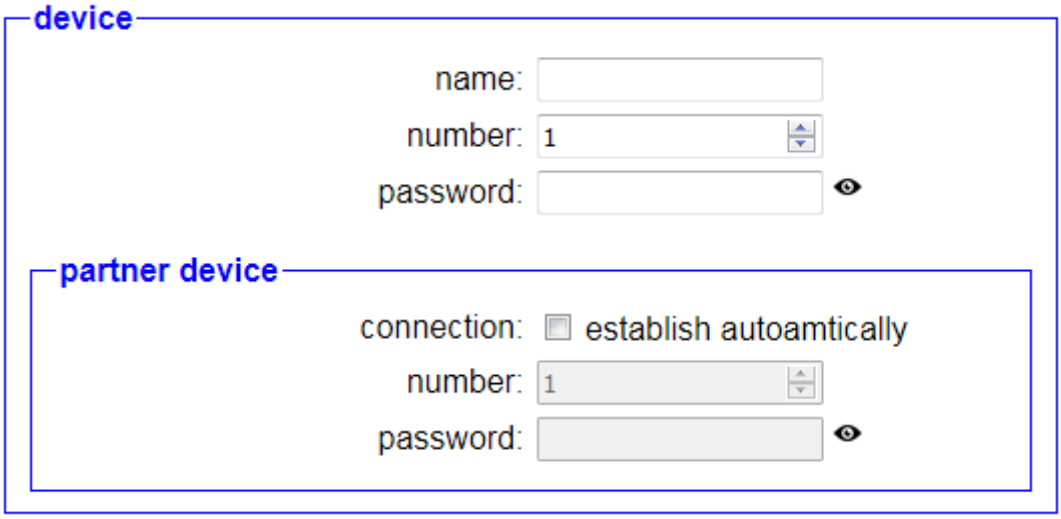
4.3.5.3 General

The General section allows you to restart your device and reset all settings to factory defaults. All you have to do is click on the respective button.

You can also use the “Create file for support” button to create a .bin file that contains the configuration and status of the device. This information may be helpful for support if you have any questions or problems.

Important:
By triggering factory settings, all settings you have made on the device will be lost. Before you can use the device again, you must commission it again.

4.3.5.4 Device



The “Device” group contains some general settings for networking the device in the CONNECT cloud:

Surname: The name of the device. This only serves to easier identification.

Number: The unique number of the device.

Password: The password of the device used to set up a Connection to this device is required.

In the sub-block “Partner device” you can set the automatic connection to another device from your CONNECT cloud:

Connection: Indicates whether the device connects automatically a device from your CONNECT cloud.

Number: The number of the device to which a connection is being made should be built.

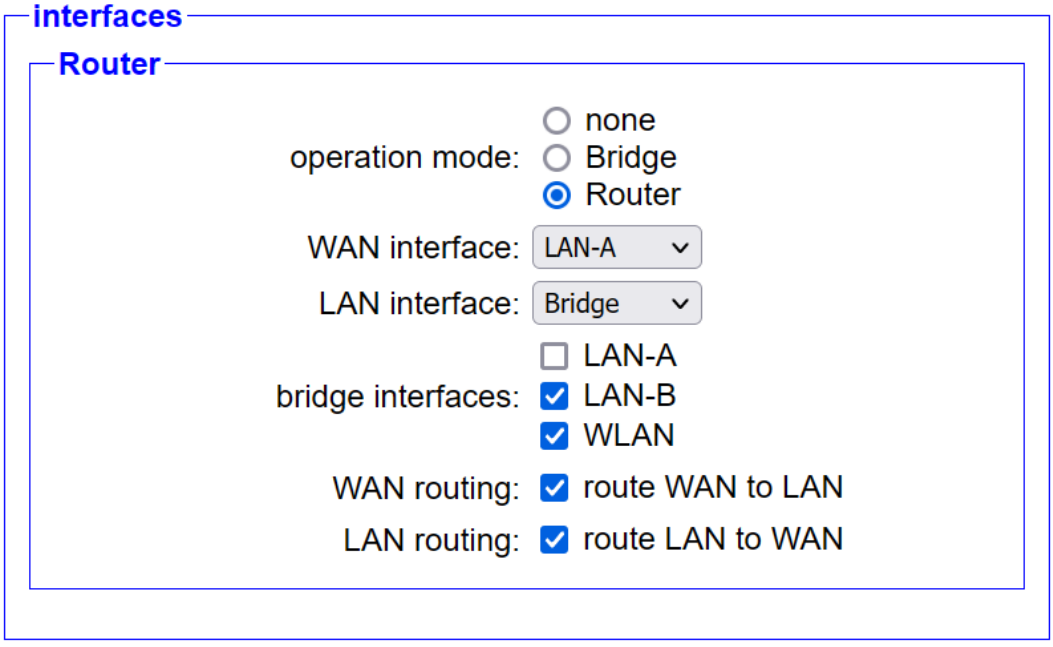
Password: The password of the device to which you are connecting should be built.

A notice:
These settings, apart from the device name, are only displayed if the remote maintenance option is installed in your device.

Important:
Each device needs its own unique number. Using the same number for multiple devices is not possible.

4.3.5.5 Interfaces

The settings in the “Interfaces” block differ depending on the options installed in the device. Please also note that combinations of several options are possible.

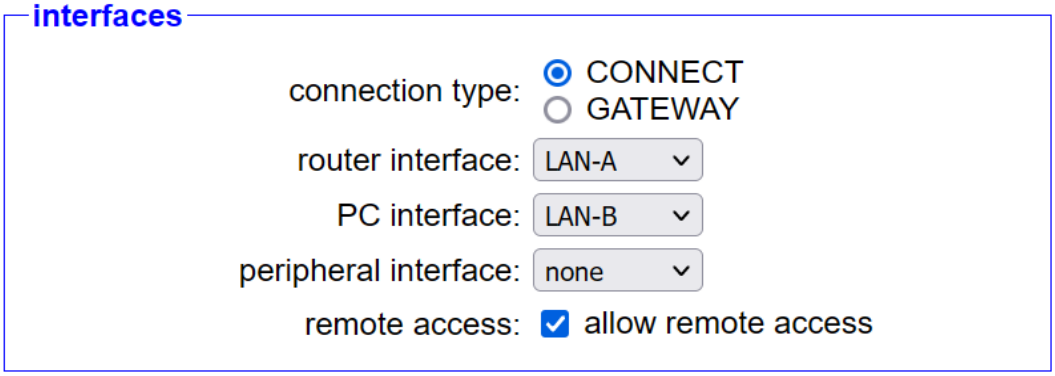


If the router option is installed in your device, specify the operating mode of the device and the use of the network interfaces in the “Router” sub-block:

Operating mode:	None	The bridge and router function of the device are deactivated.
	Bridge	The device connects several Interfaces to one shared network.

	Router	The device routes between the WAN interface network and the network of one or multiple LAN interfaces.
WAN interface:	The interface where the removed Network (e.g. Internet) is connected.	
LAN interface:	The interface on which the local network is connected. At the Multiple selections of “Bridge” can be made interfaces are used.	
Bridge interfaces:	The interfaces that lead to one shared network should.	
WAN routing: the	Specifies whether access to the devices in LAN from WAN should be possible.	
LAN routing: the	Specifies whether access to the devices in WAN from the LAN should be possible.	

Important:
The WAN and LAN interfaces must necessarily be different.



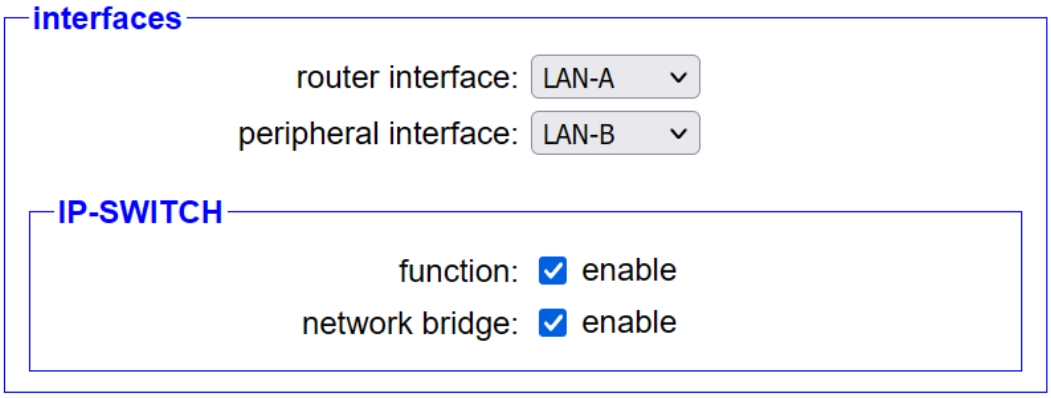
If the remote maintenance option is installed in your device, specify the type of connection to the Internet and the use of the network interfaces in the “Interfaces” block:

Connection type:	local	The remote maintenance function of the device is deactivated.

	CONNECT	The device is between the network and the PC connected and used the parameters from the PC an internet connection to build.
	GATEWAY	The device has its own IP address and uses it for a connection to the build internet.
	LTE	The device uses the LTE Modem to build an internet connection.
Router interface:	The interface on which the network is connected the gateway or proxy server for the Internet connection is connected.	
PC interface:	The interface on which the PC is used for the automatic detection of internet Parameter is connected.	
Peripheral interface:	The interface on which the network Devices connected via the tunnel devices of the partner device communicate should be connected.	
Remote access:	Specifies whether access is from or to a other device from your CONNECT cloud should be possible.	

A notice:
The local connection type is only available if the router option is installed.
The LTE connection type is only available on CONNECT devices with an integrated LTE modem.

Important:
The router and PC interfaces must necessarily be different. The peripheral interface, on the other hand, does not necessarily have to be different from the router or PC interface.



If the IP switch option is installed in your device, first specify which interfaces should be used in the “Interfaces” block:

Router interface: The interface on which the devices come from the network of the peripheral interface reached with a converted IP address can be.

Peripheral interface: The interface on which the devices used by the Network reached the router interface can be connected.

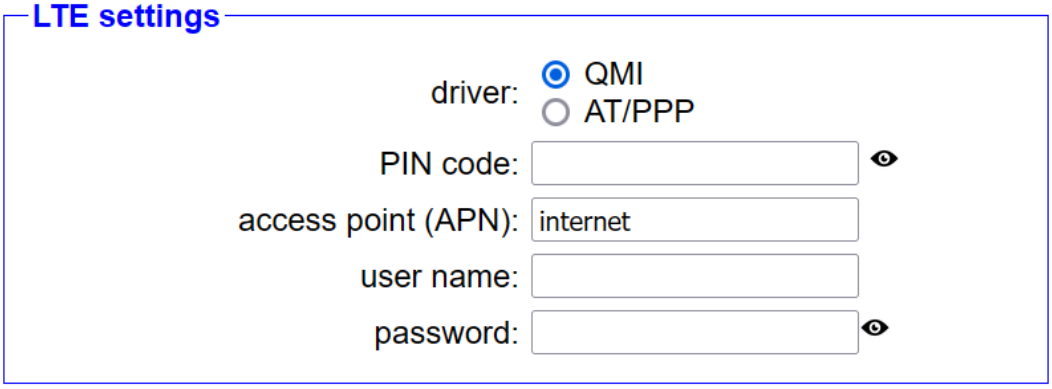
Furthermore, you can specify general settings for the option in the sub-block “IP-SWITCH”:

Function: Specifies whether the IP switch option is available Converting IP addresses is used shall be.

Network bridge: Specifies whether between the router and Peripheral interface a network Bridge should be active. By activation this setting will contain all packages for which does not implement the IP address possible or configured is passed on.

Important:
If the IP switch option is used, the router and peripheral interfaces must be different.

4.3.5.6 LTE settings

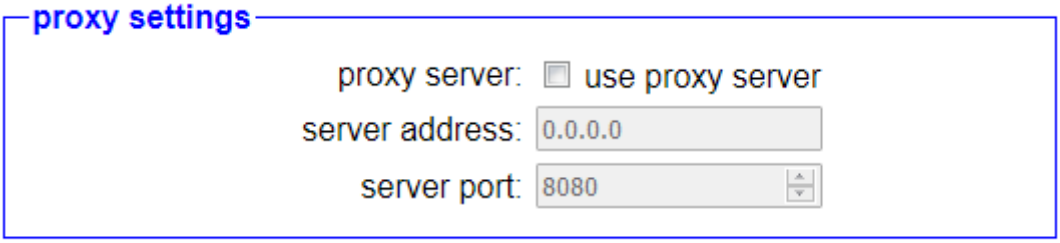


The settings in the “LTE Settings” group affect the cellular connection of the integrated LTE modem on the CONNECT-LTE, CONNECT-II-LTE and CONNECT-CONTROL devices:

Interface:	Indicates whether the interface is to be used should.*(CONNECT CONTROL only)*
Driver:	The internally used communication driver between the device and the LTE modem.*(at Problems with the connection should be due to AT/PPP be converted; at CONNECT CONTROL not available)*
Pin:	The pin number used to unlock the SIM Card is required (optional).
Access point (APN):	The name of your provider's access point. *(internet → standard APN for many providers; automatically detected with CONNECT-CONTROL)*
User name:	The username to log in to the provider for the configured access point (optional).
Password:	The password for logging in to the provider for the configured access point (optional).

A notice:
By default, QMI is used as the communication driver for the LTE modem. If an internet connection cannot be established despite good signal quality, we recommend switching to the AT/PPP driver. If you use a SIM card from Telekom, we generally recommend the AT/PPP driver.

4.3.5.7 Proxy settings



In the “Proxy Settings” group you have the option of specifying a proxy server that should be used to establish the Internet connection:

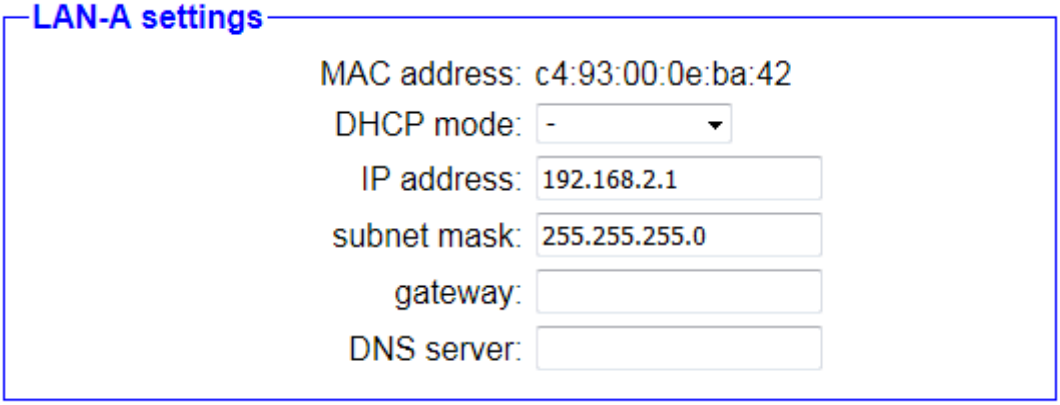
Proxy server: Indicates whether the Internet connection is via a Proxy server should be established.

Server address: The IP address of the proxy server.

Server port: The TCP port of the proxy server.
(8080 → often used port for proxy servers)

A notice:
These settings are only displayed if GATEWAY is selected as the connection type, as they are only relevant in this mode.

4.3.5.8 LAN-A / LAN settings



The settings in this group affect the network connection of the device for the LAN-A interface (for CONNECT and CONNECT-II) or LAN interface (for CONNECT-CONTROL):

MAC address: The MAC address of the interface (this can be cannot be changed).

DHCP mode: - The device is over the set Address available.

	Client	The device obtains an IP address from a DHCP server.
	server	The device is over the set Address available and provides others IP addresses available to devices.
IP address:	The IP address of the device.	
Subnet mask:	The subnet mask of the device.	
Gateway:	The IP address of the gateway (optional).	
DNS server:	The IP address of the DNS server (optional).	
WAN port:	Indicates whether the WAN port is also available for the LAN interface should be used. Through this you then have 4 instead of 3 LAN ports. One separate configuration of the WAN interface but then no longer possible. *(CONNECT CONTROL only)*	

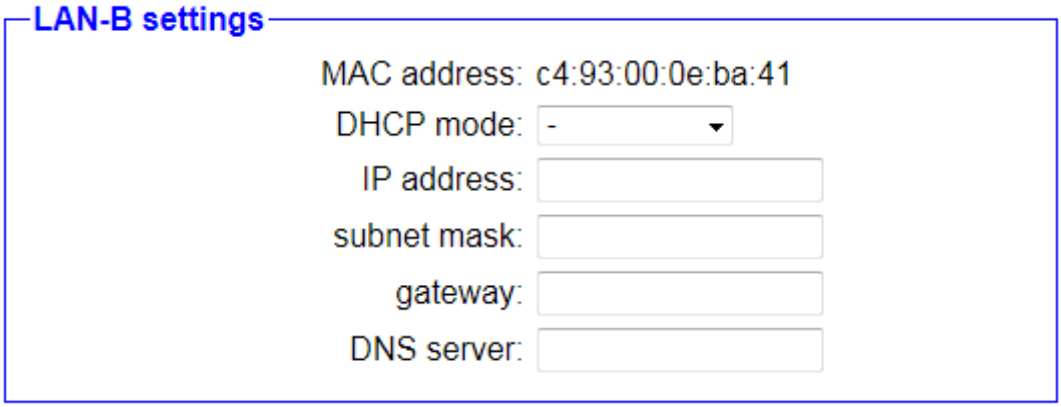
A notice:
If you do not want the web interface to be accessible via this interface, simply deactivate the DHCP mode and leave the IP address and subnet mask fields empty.

Important:
If you use the interface as part of the bridge interface or the connection type CONNECT is set in your device and the interface is used as a router interface, these settings are not available.
When the CONNECT-CONTROL device is delivered, the device creates its own WLAN network. This network belongs to the LAN ports and therefore also to the settings of the LAN interface.

4.3.5.9 LAN-B / WAN settings

The settings in this group affect the network connection of the device for the LAN-B interface (for CONNECT and CONNECT-II) or WAN interface (for CONNECT-CONTROL):

Interface: Indicates whether the interface is to be used should.*(CONNECT CONTROL only)*

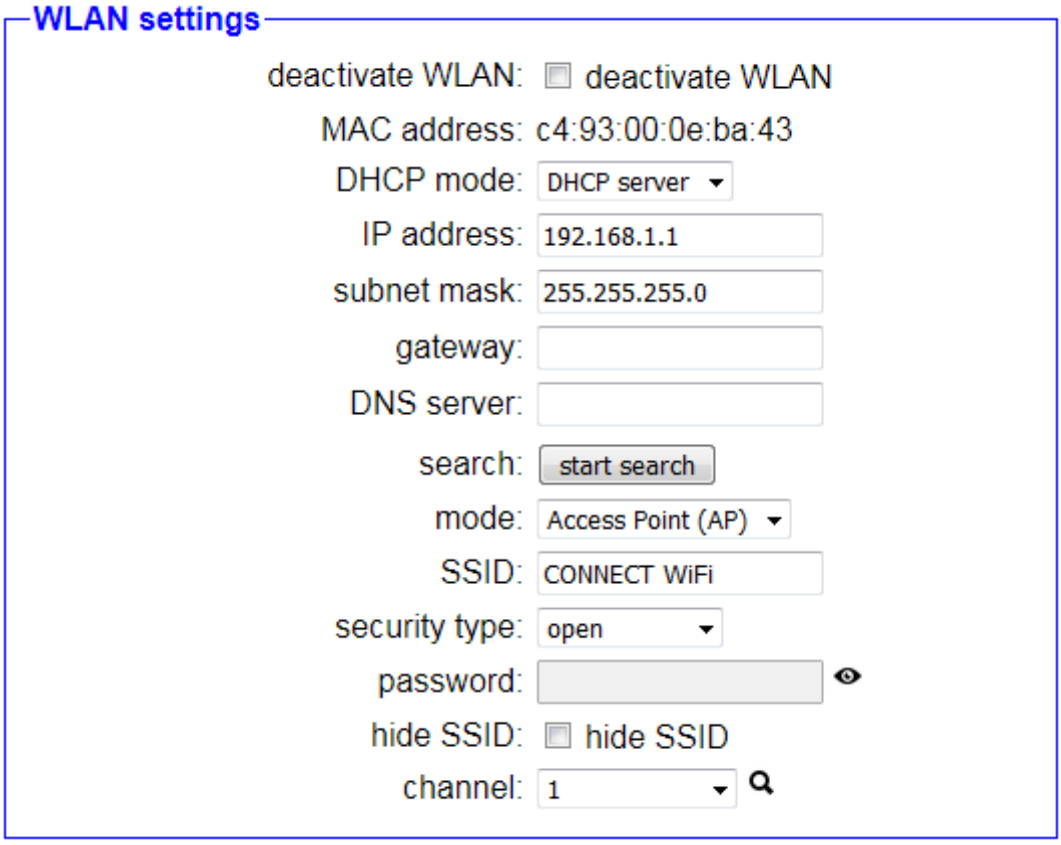


MAC address:	The MAC address of the interface (this can be cannot be changed).	
DHCP mode:	-	The device is over the set Address available.
	Client	The device obtains an IP address from a DHCP server.
	server	The device is over the set Address available and provides others IP addresses available to devices.
IP address:	The IP address of the device.	
Subnet mask:	The subnet mask of the device.	
Gateway:	The IP address of the gateway (optional).	
DNS server:	The IP address of the DNS server (optional).	

A notice:
If you do not want the web interface to be accessible via this interface, simply deactivate the DHCP mode and leave the IP address and subnet mask fields empty. Alternatively, with CONNECT-CONTROL devices you can simply deactivate the use of the interface.

Important:
If you use the interface as part of the bridge interface or the connection type CONNECT is set in your device and the interface is used as a router interface, these settings are not available. If you have a CONNECT CONTROL device and the setting that the WAN port should be used for the LAN interface, then these settings are no longer available either.

4.3.5.10 WiFi settings



The configuration for the WLAN interface can be set in the “WLAN Settings” group:

Disable WiFi: Indicates whether the WLAN interface is disabled shall be.

Interface: Indicates whether the interface is to be used should.*(CONNECT CONTROL only)*

MAC address: The MAC address of the interface (this can be cannot be changed).

DHCP mode:

-	The device is over the set Address available.
Client	The device obtains an IP address from a DHCP server.
server	The device is over the set Address available and provides others IP addresses available to devices.

IP address: The IP address of the device.

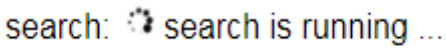
Subnet mask: The subnet mask of the device.

Gateway: The IP address of the gateway (optional).

DNS server:	The IP address of the DNS server (optional).	
Mode:	Access point	The device provides its own WiFi network available.
	Client	The device connects to an existing WLAN Network.
WDS mode:	Specifies whether WDS mode is used for Wi-Fi interface should be used.	
SSID:	The SSID / name of the WiFi network.	
Security_level:	The security level/encryption of the WiFi network.	
Password:	The password used to log in on WiFi network is necessary.	
Hide SSID:	Specifies whether to hide the SSID (only relevant if the mode is access point).	
Channel:	The channel of the WiFi network. *(Auto channel → Best WiFi channel is selected)*	

If you are not sure about the WiFi settings of your existing WiFi network, you have the option of searching for existing WiFi networks. To do this, simply click on the “Start Search” button.

The following message now appears:



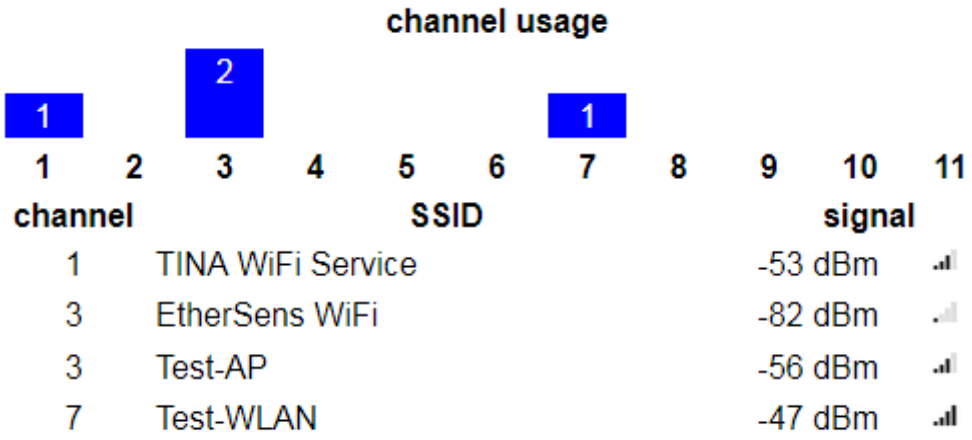
After a few seconds, you will see the list of Wi-Fi networks found:

BSSID	SSID	security	channel	signal
c4:93:00:09:34:bd	TINA WiFi	open	1	
00:1e:c0:1a:83:67	EtherSens WiFi	WEP	3	
c0:56:27:9d:98:db	Test-WLAN	WPA2	7	

To apply the settings of a Wi-Fi network, all you have to do is click on a table entry. All necessary fields (mode, SSID, security level and channel) are then pre-filled. Of course, you still have to enter the password yourself, if you have one.

If you want to configure your CONNECT device as an access point (AP), it can be useful to find out which WiFi channel is currently the least busy. You have the option of displaying channel utilization. To do this, simply click on that icon behind the channel selection list.

Once you click on the icon, a loading icon will appear instead of the magnifying glass. After a few seconds, the channel utilization should now be displayed. This then looks e.g. B. as follows:



A notice:

If you do not want the web interface to be accessible via the WLAN interface, simply deactivate the DHCP mode and leave the IP address and subnet mask fields empty. With CONNECT CONTROLAlternatively, you can simply deactivate the use of the interface on devices.

Important:

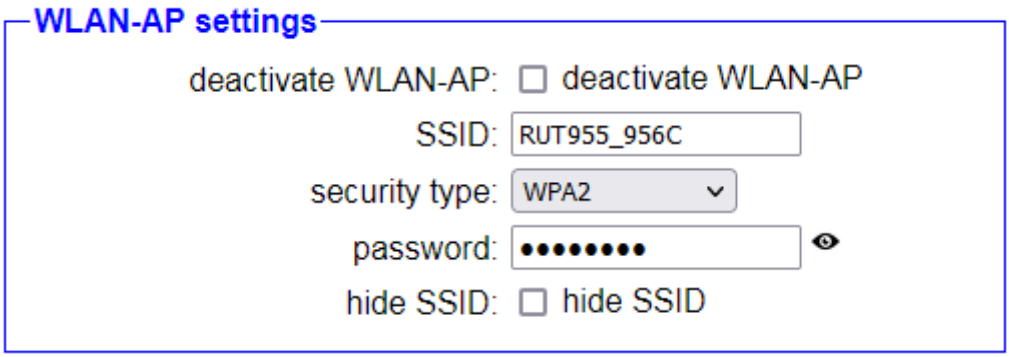
If you use the interface as part of the bridge interface or the connection type CONNECT is set in your device and the interface is used as a router interface, the IP settings of the WLAN interface are not available.

The WLAN interface cannot be deactivated if it has been selected as one of the interfaces of the CONNECT device.

With the CONNECT connection type, the access point mode is invalid if the WLAN interface is to be used as a router interface. However, the client mode is invalid if the interface is to be used as a PC interface.

When using the interface as a router interface, the access point mode is not valid. However, if the interface is used as a PC interface, the client mode is not valid.

The WDS mode in client mode may only be activated if you are sure that your access point also supports this mode. Otherwise you will no longer be able to reach the device via WiFi.



If you have selected the Client mode in the WLAN settings, you have the option in the subgroup “WLAN AP settings” to configure an additional WLAN network that works in access point mode:

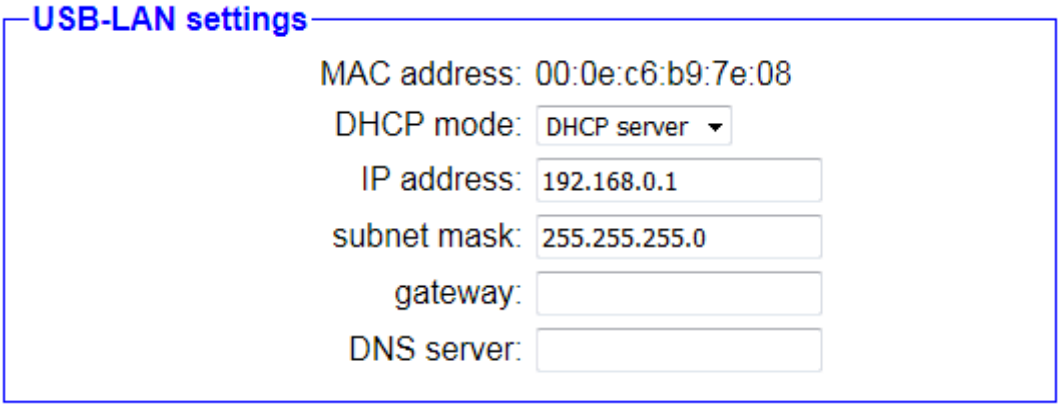
Deactivate WLAN AP:	Indicates whether the WLAN AP is disabled shall be.	
DHCP mode:	-	The device is via the address set can be reached.
	Client	The device obtains an IP Address from a DHCP Server.
	server	The device is via the address set can be reached and provides other devices with IP Addresses available.
IP address:	The IP address of the device.	
Subnet mask:	The subnet mask of the device.	
Gateway:	The IP address of the gateway (optional).	
DNS server:	The IP address of the DNS server (optional).	
	(DHCP mode, IP address, subnet mask, Gateway and DNS server not included CONNECT CONTROL)	
SSID:	The SSID / name of the WLAN network.	
Security_level:	The security level/encryption of the WiFi network.	

Password:	The password used to log in on WiFi network is necessary.
Hide SSID:	Specifies whether to hide the SSID.

A notice:
Two completely independent networks can be configured using the WLAN and WLAN AP settings. Only the global deactivation of WLAN and the set channel applies to both networks.
With CONNECT-CONTROL, the WLAN AP interface is one of the three LAN interfaces and therefore has the same IP parameters as the LAN interface.

Important:
If you use the interface as part of the bridge interface or the connection type CONNECT is set in your device and theInterface is used as a router interface, the IP settings of the WLAN AP interface are not available.
The WLAN AP interface cannot be deactivated if it is selected as one of the interfaces of the CONNECT device.
It is not possible to use the interface as a PC interface.
Please note that the network of the WLAN AP interface is only available if there is a connection to the network configured on the WLAN interface.

4.3.5.11 USB LAN settings



The settings in the “USB LAN settings” group affect the network connection of the device for the LAN interface of the separately available “Ethernet via USB” adapter:

MAC address:	The MAC address of the interface (this can be cannot be changed).	
DHCP mode:	-	The device is over the set Address available.
	Client	The device obtains an IP address from a DHCP server.
	server	The device is over the set Address available and provides others IP addresses available to devices.
IP address:	The IP address of the device.	
Subnet mask:	The subnet mask of the device.	
Gateway:	The IP address of the gateway (optional).	
DNS server:	The IP address of the DNS server (optional).	

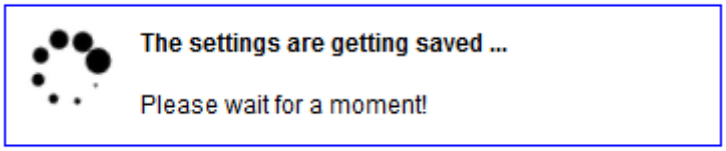
A notice:
This group is only displayed if an “Ethernet over USB” adapter is connected to the device. The adapter is available separately and can only be used with the standard version devices and the CONNECT-II-LTE device.
If the web interface should not be accessible via the USB LAN interface, simply deactivate the DHCP mode and leave the IP address and subnet mask fields empty.

Important:
If you use the interface as part of the bridge interface or the connection type CONNECT is set in your device and the interface is used as a router interface, these settings are not available.

Important:
Changing some settings may require you to disconnect an existing connection to a partner device and re-establish network connections. Only make changes to the configuration if it does not disrupt operation and then check the status of the device. When using the CONNECT

connection type, Internet communication must also take place from the PC so that the CONNECT can recognize the parameters from the PC.

If you would like to save the configuration, you must click on the “Apply configuration” button located at the bottom of the page. The following message then appears:



If your device is not responsive again within the next 5 seconds, the following message will appear:

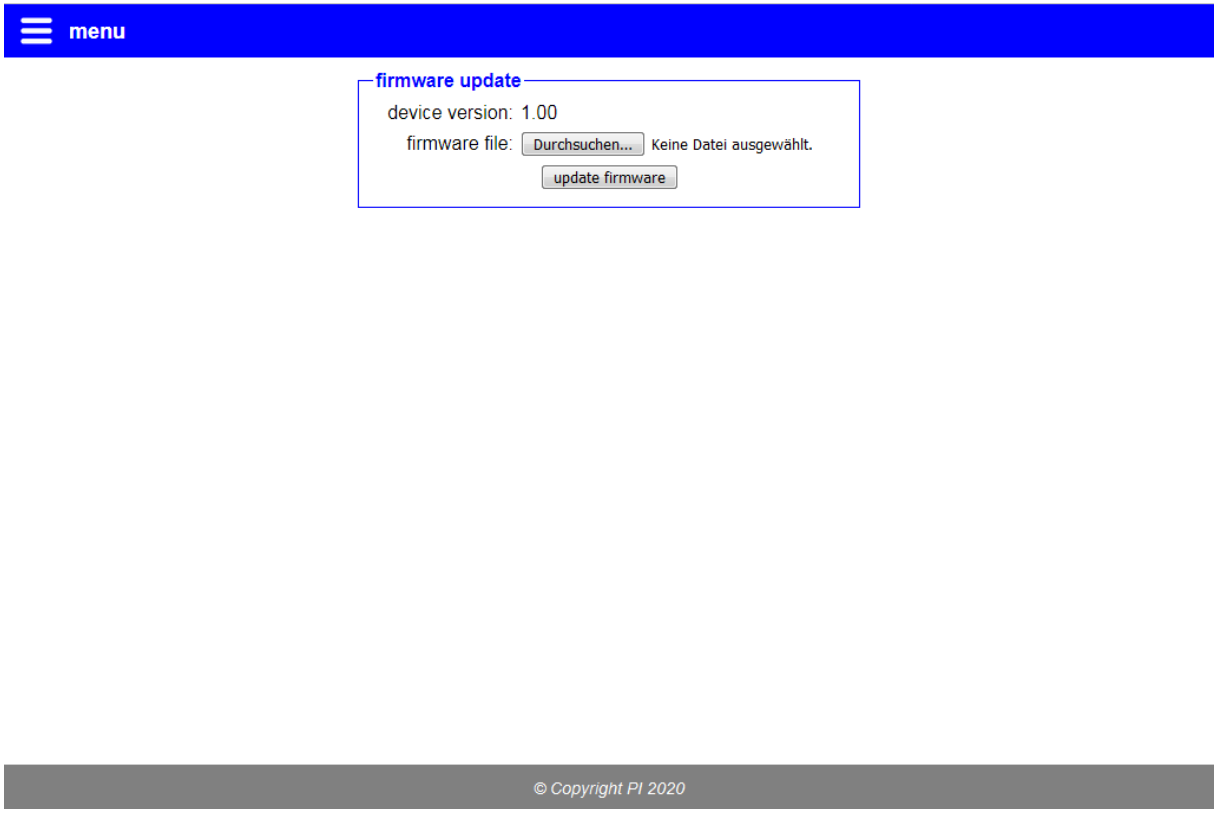
This message informs you that the device is currently no longer accessible at the current address (e.g. because you have changed the IP address, the WLAN network or the operating mode) and at which address the device will be available after Acceptance of the settings can be achieved. The site will continue to attempt to connect to the device (possibly using the new IP address).

If the automatic reconnection still does not work after about 1 minute, please make sure that your computer is connected to the device via the correct interface. If necessary, also check the WLAN connection and the IP settings of your PC.

A notice:
As soon as the device is accessible again after saving the configuration, you will be redirected to the device's home page.

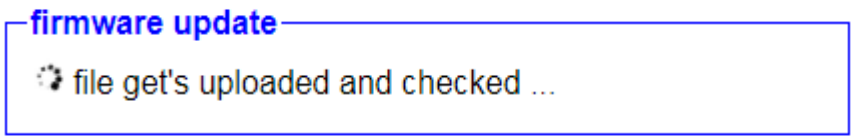
Important:
If you have activated a DHCP client in the device, this interface will not be automatically redirected to the home page because the IP address of this interface is still unknown.

4.3.6 Firmware/Software Update page

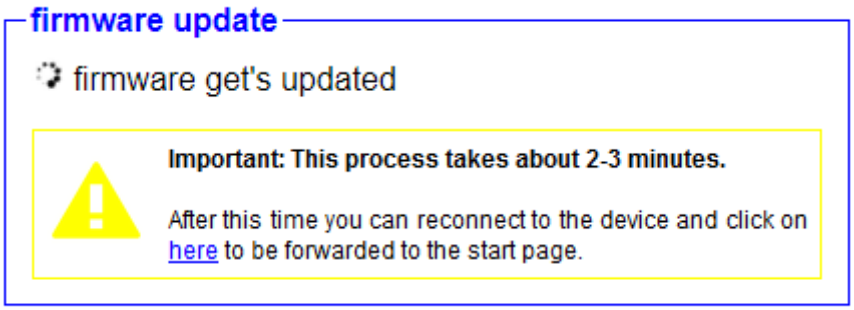


To update the device's firmware or software, you can click on the "Firmware update" or "Software update" entry in the menu. On the page you will see the current version available in your device and have the option to select a file.

Once you have selected the firmware file (this is a file with the extension .bin) or software file (this is a file with the extension .ipk), you can click on the button to start the update process . The following message then appears:



If the file has been uploaded and recognized as valid firmware or software, the following message will appear next:

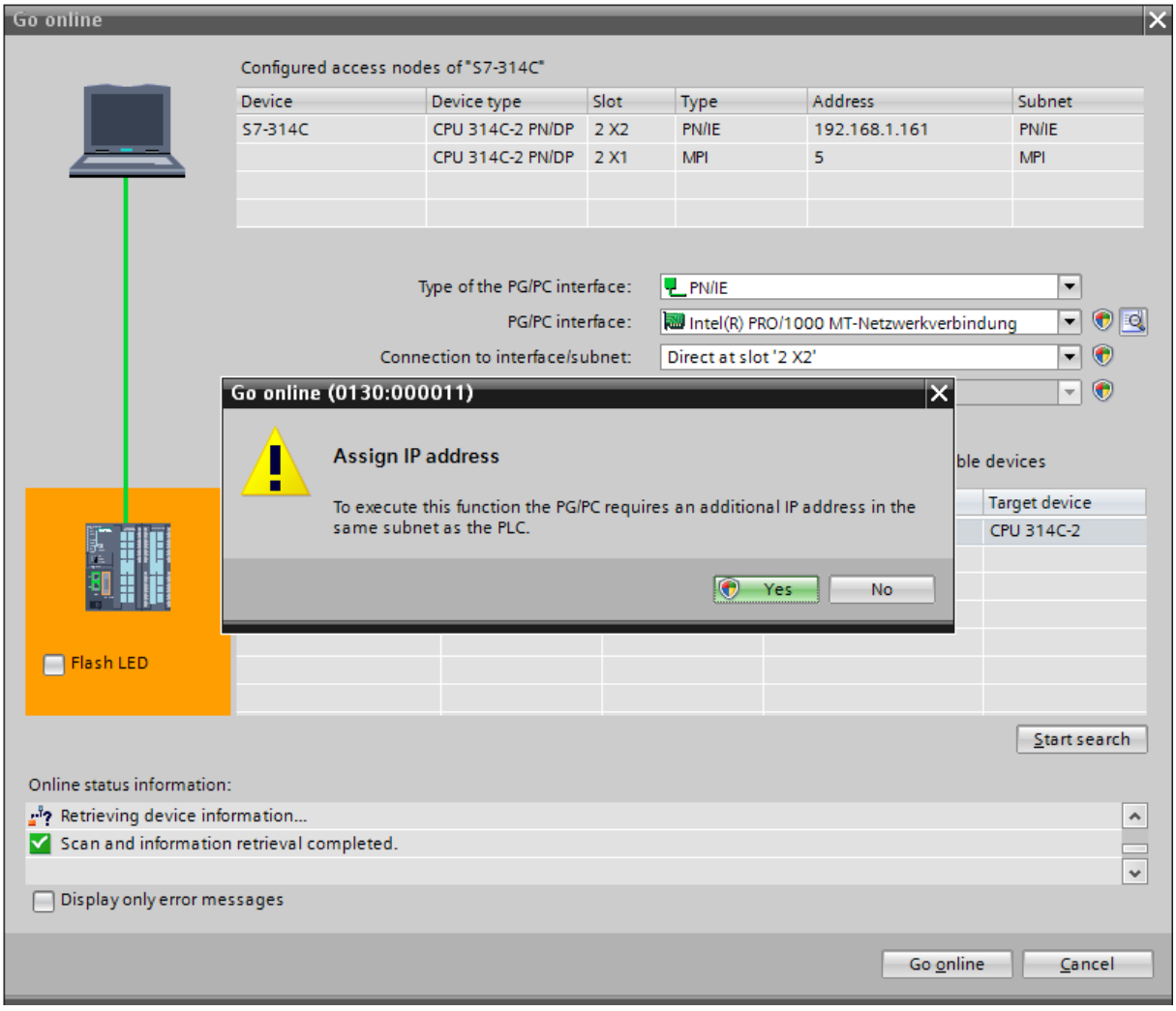


The update takes approx. 1-3 minutes. Then you should, iflf your computer, tablet or phone does not do this automatically, reconnect to the device's Wi-Fi network. Of course, this only applies if the web server accesses the device via WLAN. This step is not necessary for a software update on CONNECT-CONTROL devices. Once the process is complete, you should be automatically redirected to the device's home page. If the forwarding does not work after a firmware update, you also have the option of clicking on the link in the text.

5 Application instructions

5.1 Access to a participant via the TIA portal

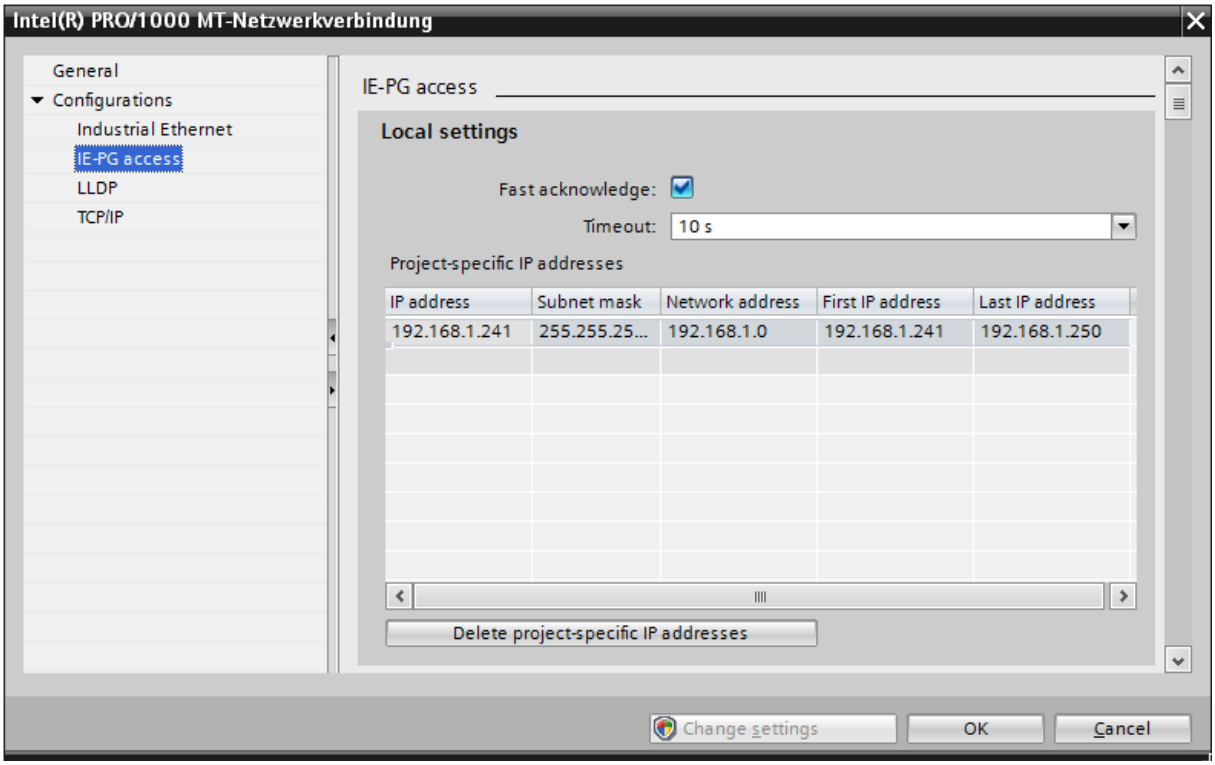
With the help of the CONNECT device and the TIA portal, you also have the option of accessing a remote participant, such as: B. a control or an operating device to access remotely e.g. B. to call up the diagnosis or transfer a change. If the local device and your PC are not in the same subnet, a message appears that another IP address needs to be added:



You must click “No” on this message. Communication is only possible if your CONNECT device and your PC are correctly parameterized.

If you accidentally clicked “Yes” there, no communication is possible and the temporary communication generated by the TIA portalThe IP address must first be deleted again.

To do this, expand the “Online access” list in the project navigation (in the project view), search for your network card and open its properties. In this dialog you now have to navigate to the entry “Configurations” → “IE-PG access”. There you should see the temporary IP address created:



Now click on the “Delete project-specific IP addresses” button. You can then close the dialog and reconnect with the participant.

6 Technical data

6.1 CONNECT

Supply voltage:	24V DC +/- 20% (via removable plug) USB (out ofPC/power pack, only for table housing)
Power consumption:	2 watts
Advertisement:	Web browser Status LEDs
Operation/configuration:	Web browser
Interfaces:	2 x 10/100BaseTX RJ45 Ethernet socket 1 x antenna socket RP-SMA(f) (2.4 GHz IEEE 802.11 b/g/n)
Operating temperatur:	0 - 55°C
Housing:	Plastic table case*or* Plastic terminal housing for DIN rail mounting
Dimensions:	Table case: 115 x 95 x 30 mm Terminal housing: 114 x 100 x 22.3 mm

6.2 CONNECT LTE

Supply voltage:	24V DC +/- 20% (via removable plug)
Power consumption:	12 watts
Advertisement:	Web browser Status LEDs
Operation/configuration:	Web browser
Interfaces:	2 x 10/100BaseTX RJ45 Ethernet socket 1 x antenna socket RP-SMA(f) (2.4 GHz IEEE 802.11 b/g/n) 1 x antenna socket RP-SMA(f) (FDD LTE /TDD LTE / TDSCDMA / UMTS / GSM)
Operating temperatur:	0 - 55°C
Housing:	Plastic table case*or* Plastic terminal housing for DIN rail mounting

Dimensions:	Table case: 115 x 95 x 30 mm Terminal housing: 114 x 100 x 22.3 mm

6.3 CONNECT II

Supply voltage:	24V DC +/- 20% (via removable plug) USB (from USB power supply 5V)
Power consumption:	9 watts
Advertisement:	Web browser Status LEDs
Operation/configuration:	Web browser
Interfaces:	2 x 10/100/1000BaseTX RJ45 Ethernet jack 2 x antenna socket RP-SMA(f) (2x2 MIMO / 2.4 GHz IEEE 802.11 b/g/n + 5 GHz IEEE 802.11ac)
Operating temperatur:	0 - 55°C
Housing:	Plastic table case
Dimensions:	115x95x30mm

6.4 CONNECT II LTE

Supply voltage:	24V DC +/- 20% (via removable plug)
Power consumption:	19 watts
Advertisement:	Web browser Status LEDs
Operation/configuration:	Web browser
Interfaces:	2 x 10/100/1000BaseTX RJ45 Ethernet jack 2 x antenna socket RP-SMA(f) (2x2 MIMO / 2.4 GHz IEEE 802.11 b/g/n + 5 GHz IEEE 802.11ac) 1 x antenna socket RP-SMA(f) (FDD LTE /TDD LTE / TDSCDMA / UMTS / GSM)
Operating temperatur:	0 - 55°C
Housing:	Plastic table case
Dimensions:	115x95x30mm

6.5 CONNECT CONTROL

Supply voltage:	9-30VDC
Power consumption:	7 watts
Advertisement:	Web browser Status LEDs
Operation/configuration:	Web browser
Interfaces:	4 x 10/100BaseTX RJ45 Ethernet socket (3 x LAN,1xWAN) 2 x antenna socket RP-SMA(f) (2.4 GHz IEEE 802.11 b/g/n) 2 x antenna socket SMA(f) (FDD LTE / TDD LTE / 3G / 2G) 1 x antenna socket SMA(f) (GNSS / GPS) 1 x RS485 port via plug contact 1 x RS232 port via D-Sub 9-pin female 2 x digital input (1 x 0-3V, 1 x 0-30V) 1 x analog input (0-24V) 1 x digital output (open collector, 30V, 250mA) 1 x SPST Digital Relay Output 1 x USB 2.0 female type A 2 x SIM card tray
Operating temperatur:	-40 – 75°C
Housing:	Metal housing for table or wall mounting
Dimensions:	106x80x46mm

A notice:
The CONNECT-CONTROL hardware corresponds to the RUT955 from Teltonika Networks.

7 Approvals

TCB **TCB**

GRANT OF EQUIPMENT AUTHORIZATION

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

Timco Engineering, Inc.
**849 NW State Road 45
P.O. Box 370,**
Newberry, FL 32669

Date of Grant: 09/05/2017
Application Dated: 09/01/2017

Quectel Wireless Solutions Company Limited
7th Floor, Hongye Building,
No.1801 Hongmei Road, Xuhui District
Shanghai, 200233
China

Attention: Johnny xiang

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: XMR201708EC25E
Name of Grantee: Quectel Wireless Solutions Company Limited
Equipment Class: **Licensed Non-Broadcast Station Transmitter**
Notes: **LTE Module**
Modular Type: **Single Modular**

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	22H	824.7 - 848.3	0.239	0.004 PM	1M14G7D
	22H	829.0 - 844.0	0.232	0.004 PM	9M03G7D
	22H	825.5 - 847.5	0.195	0.004 PM	2M76W7D
	22H	829.0 - 844.0	0.192	0.005 PM	9M03W7D
	22H	826.4 - 846.6	0.222	0.001 PM	4M13F9W
	27	2502.5 - 2567.5	0.2	0.003 PM	9M04G7D
	27	2510.0 - 2560.0	0.199	0.004 PM	17M9G7D
	27	2502.5 - 2567.5	0.183	0.003 PM	9M04W7D
	27	2510.0 - 2560.0	0.18	0.004 PM	17M9W7D
	27	2562.5 - 2647.5	0.219	0.003 PM	9M06G7D
	27	2565.0 - 2645.0	0.216	0.004 PM	17M9G9D
	27	2562.5 - 2647.5	0.18	0.003 PM	9M02W7D
	27	2565.0 - 2645.0	0.0178	0.003 PM	17M9G9D

Output power listed is conducted. Single Modular Approval for mobile RF Exposure condition. This module can only be used with a host antenna circuit trace layout design in strict compliance with the OEM instructions provided. The antennas used for this transmitter must be installed to provide a separation distance of at least 20-cm from all persons, must have gain of not more than 1.0 dBi, and must not be co-located or operating in conjunction

with any other antenna or transmitter, except in accordance with FCC multi-transmitter product guidelines. Approved for OEM integration only. The grantee must provide OEM integrators, or end-users if marketed directly to end-users, with installation and operating instructions for satisfying FCC multi-transmitter product guidelines. This grant is valid only when the device is sold to OEM integrators and the OEM integrators are instructed to ensure that the end user has no manual instructions to remove or install the device. This device contains functions that are not operational in U.S. Territories; this filing is applicable only for U.S. operations.

GCF™
Global Certification Forum

CERTIFICATE

The Global Certification Forum Ltd advises that
Quectel Wireless Solutions Co., Ltd.

Has successfully demonstrated compliance
to the GCF certification requirements of GCF CC(2)

For
Quectel EC25-E
Module

On
2017-03-02

GCF CC Version:	Status:	GCF Ref. Number:
3.64.0	New	6309

This certificate has been issued by the Global Certification Forum in accordance with the requirements of the GCF PRDs.
For the actual status of a device certification, refer to the GCF web site.

Global Certification Forum (GCF) Ltd
www.globalcertificationforum.org Email: secretariat@globalcertificationforum.org
Registered Office: 20-22 Bedford Row, London WC1R 4JS, UK. Company Number 6594830. VAT Number: GB 948 2259 92.

To **Quectel**

Forward to Brian Conrad <brian.conrad@quectel.com>; Sammy Zhu <sammy.zhu@quectel.com>; Sherlock Zhao <sherlock.zhao@quectel.com>; Vincent Alcouffe <vincent.alcouffe@quectel.com>; Edward Huang <edward.huang@quectel.com>; Yolanda Tang <yolanda.tang@quectel.com>; Michal Gadaj <michal.gadaj@quectel.com>; Grzegorz Bazyluk <grzegorz.bazyluk@quectel.com>

From Grzegorz Nowak (Deutsche Telekom AG)

Contact E-Mail: grzegorz.nowak03@t-mobile.pl

Date 28th of June 2018

Subject **Full Certification for Quectel EC25-E module**

Dear Quectel team,
Deutsche Telekom issues a **full certification** for your **EC25-E module**:

Concept Class	Multi-mode M2M module
Deutsche Telekom (DT) Certification Date	28.05.2018
DT Responsible Entity / Contact	IDU-TIV / Grzegorz Nowak
Certified Deutsche Telekom Affiliates*	AL, AT, CZ, DE, GR, HR, HU, ME, MK, NL, PL, RO, SK*
Chipset Firmware Version	EC25EFAR02A08M4G

* Please refer to the OEM Certification Report for Deutsche Telekom Affiliate Country Codes

This product is granted a full technical certification.
Key requirements for full certification are met:

- No-harm to network / communication efficiency – **radio policy manager** – chapter 8 (e.g. GSMA TS.34)
- GCF certification granted
- No P1 (high priority) issues

Deutsche Telekom will keep talking with Quectel about all P2 (medium priority) issues resolving.

Kind regards,
Deutsche Telekom AG

Digitally signed by Wayne Gilbert
Date: 2018.06.29 08:25:09 +02'00'

Grzegorz Nowak
IoT Device Verification & Engineering

Wayne Gilbert
TIV Access (ITS-IVA)

Address Deutsche Telekom AG
Landgrabenweg 151, 53227 Bonn
Contact + 49 228 181-0, E-Mail: info@telekom.de
Supervisory Board Prof. Dr. Ulrich Lehner (Chairman)
Board of Directors Timotheus Höttges (Chairman),
Reinhard Clemens, Niek Jan van Damme, Thomas Dannenfeldt, Srinivasan Gopalan, Dr. Christian P. Illek, Dr. Thomas Kremer, Claudia Nemat
Commercial register Amtsgericht Bonn HRB 6794
Registered office Bonn

VAT ID No. DE 123475223
WEEEReg.-No. DE50478376

vodafone

Vodafone Test Certificate

This is to certify that Vodafone Group has tested the following stand-alone module and found it acceptable for use on all Vodafone and Partner networks

MANUFACTURER	:	Quectel
MODEL	:	EC25-E (HW: R1.0, SW: EC25EFAR02A07M4G)
TECHNOLOGY	:	LTE
DATE	:	22/09/2017

Nicholas Dixon
on behalf of **Stephen Packer**
Head of Platforms and Enablers (Vodafone Group Terminals)

This certificate is a statement that the module referred to above has been tested by Vodafone Group and is acceptable for use on all Vodafone and Partner networks. It is not a validation of the performance of the module other than in relation to acceptability on Vodafone networks at the time of testing. No warranty is given by Vodafone Group with regard to the module or its fitness for purpose. The use of this certificate and the Vodafone names are subject to the terms and conditions set out in the Vodafone Group Module Approval Services Agreement.

Document Reference Number: 0004

Supplier's declaration of conformity

Australian Government | acma Australian Communications and Media Authority

As required by the following Notices:

- *Radiocommunications (Compliance Labelling - Devices) Notice 2014* made under section 182 of the *Radiocommunications Act 1992*;
- *Radiocommunications Labelling (Electromagnetic Compatibility) Notice 2008* made under section 182 of the *Radiocommunications Act 1992*
- *Radiocommunications (Compliance Labelling – Electromagnetic Radiation) Notice 2014* made under section 182 of the *Radiocommunications Act 1992* and
- *Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015* made under section 407 of the *Telecommunications Act 1997*.

Instructions for completion

- ***Do not return this form to the ACMA***. This completed form must be retained by the supplier as part of the documentation required for the compliance records and must be made available for inspection by the ACMA when requested.

Supplier's details (manufacturer, importer or authorised agent)

Company Name (OR INDIVIDUAL)

Alfacomm Wireless Pty Ltd
TRADING AS

ACN/ARBN

620383066

OR

New Zealand IRDN

Street Address (AUSTRALIAN or NEW ZEALAND)

U13, 165-171 North Rocks Rd, North Rocks NSW 2151, Australia
POSTCODE **2151**
Phone: **+61 452 624 491**

Product details and date of manufacture

Product description – brand name, type, current model, lot, batch or serial number (if available), software/firmware version (if applicable)

Product name：LTE Module
Brand name: Quectel
Model : EC25-E, EC25-E MINIPCIE
Date of manufacture or importation of the original/modified item

Compliance – applicable standards and other supporting documents

Evidence of compliance with applicable standards may be demonstrated by test reports, endorsed/accredited test reports, certification/competent body statements.

Having had regard to these documents, I am satisfied the above mentioned product complies with the requirements of the relevant ACMA Standards made under the *Radiocommunications Act 1992* and the *Telecommunications Act 1997*.

List the details of the documents the above statement was made, including the standard title, number and, if applicable, number of the test report/endorsed test report or certification/competent body statement

AS/CA S042.1: 2015, AS/CA S042.4: 2015 **Report NO. : R1801A0044-R1V1, R1801A0044-R2V1, R1801A0044-R3V1, R1801A0044-R4V2**
AS/NZS CISPR 32-2015 **Report NO. : R1801A0044-E1**
AS&NZS 2772.2-2016/ARPANSA Standard RPS3-2002 **Report NO. : R1801A0044-M1**
AS/NZS 60950.1 2011 **Report NO. : R1801A0044-L1**

Declaration

I hereby declare that:

1. I am authorised to make this declaration on behalf of the Company mentioned above,
2. the contents of this form are true and correct, and
3. the product mentioned above complies with the applicable above mentioned standards and all products supplied under this declaration will be identical to the product identified above.

Note: Under section 137.1 of the *Criminal Code Act 1995*, it is an offence to knowingly provide false or misleading information to a Commonwealth entity.

Penalty: 12 months imprisonment

SIGNATURE OF SUPPLIER OR AGENT 	POSITION IN ORGANISATION **Regional Sales Manager ANZ**
PRINT NAME **Alexander Katsoulis**	DATE **June 05, 2018**

The *Privacy Act 1988* (Cth) (the Privacy Act) imposes obligations on the ACMA in relation to the collection, security, quality, access, use and disclosure of personal information. These obligations are detailed in the Australian Privacy Principles.

The ACMA may only collect personal information if it is reasonably necessary for, or directly related to, one or more of the ACMA's functions or activities.

The purpose of collecting the personal information in this form is to ensure the supplier is identified in the 'Declaration of conformity'. If this Declaration of Conformity is not completed and the requested information is not provided, a compliance label cannot be applied.

Further information on the Privacy Act and the ACMA's Privacy Policy is available at www.acma.gov.au/privacypolicy. The Privacy Policy contains details about how you may access personal information about you that is held by the ACMA, and seek the correction of such information. It also explains how you may complain about a breach of the Privacy Act and how we will deal with such a complaint.

Should you have any questions in this regard, please contact the ACMA's privacy contact officer on telephone on 1800 226 667 or by email at privacy@acma.gov.au.

ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ

1. Заявитель (изготовитель) ООО «Инностар», выполняющее функции иностранного изготовителя Quectel Wireless Solutions Co.,Ltd. на основании Договора 017-26-04 от 26.04.2017 с ним в части обеспечения соответствия поставляемой продукции обязательным требованиям и в части ответственности за несоответствие поставляемой продукции обязательным требованиям

Зарегистрировано в МФИНС № 46 по г. Москва от 27.10.2014, ОГРН 5147746278257, ИНН 9715003302

Адрес: 127549, г. Москва, Алтуфьевское шоссе, д.60, Тел: (495) 418 18 19

в лице Главного специалиста Э.В. Кордонского, действующего на основании Доверенности №2 от 11.01.2017

заявляет, что Оборудование модуль сотовой связи EC25-E, Технические условия ТУ QT-26.30-001-58392743-2017 (Далее по тексту – оборудование)

Производства Quectel Wireless Solutions Co.,Ltd., 7th Floor, Hongye Building, No.1801 Hongmei Road, Xuhui District, Shanghai 200233, China **на заводах:** Flextronics. address: No. 268 Suhong Zhong RoadSuzhou SIP, Jiangsu, Китай; Post code: 215027; Qisda. address: 169 ZHUJIANG ROADб SUZHOU NEW DISTRICT, Китай, Post code: 215129; SINTAVE. address: Ferry Road Qisha village, Shatian Town ,DongGuan, Китай

соответствует Правилам применения абонентских станций (абонентских радиостанций) сетей подвижной радиотелефонной связи стандарта GSM–900/1800, Утв. приказом Мининформсвязи России от 19.02.2008 № 21 Правилам применения абонентских терминалов систем подвижной радиотелефонной связи стандарта UMTS с частотным дуплексным разносом и частотно–кодовым разделением радиоканалов, работающих в диапазоне частот 2000 МГц. Утв. приказом Мининформсвязи России от 27 августа 2007 г. № 100; Правилам применения абонентских терминалов систем подвижной радиотелефонной связи стандарта UMTS с частотным дуплексным разносом и частотно-кодовым разделением радиоканалов, работающих в диапазоне частот 900 МГц, Утв. приказом Минкомсвязи России от 13.10.2011 № 257, Правилам применения абонентских терминалов сетей подвижной радиотелефонной связи стандарта LTE и его модификации LTE-Advanced. Утв. приказом Минкомсвязи России № 128 от 06.06.2011г.

и не окажет дестабилизирующее воздействие на целостность, устойчивость функционирования и безопасность единой сети электросвязи Российской Федерации.

2. Назначение и техническое описание:

2.1. Версия программного обеспечения: Версия ПО: R02A Предустановленное ПО: отсутствует.

2.2. Комплектность: модуль сотовой связи EC25-E.

2.3. Условия применения на сети связи общего пользования Российской Федерации: в качестве абонентской станции (абонентской радиостанции) в сетях подвижной радиотелефонной связи стандарта GSM 900/1800, в качестве абонентского терминала систем подвижной радиотелефонной связи стандарта UMTS 900/2000; в качестве абонентского терминала систем подвижной радиотелефонной связи стандарта LTE.

2.4. Выполняемые функции: прием/передача данных, голоса, коротких сообщений.

2.5. Ёмкость коммутационного поля для средств связи, выполняющих функции систем коммутации: Не выполняет функции систем коммутации.

2.6. Схемы подключения к сети связи общего пользования с обозначением реализуемых интерфейсов, протоколов сигнализации: Связь осуществляется путем организации радиоканала между оборудованием и базовой станцией, подключённой к мобильному центру коммутации GSM 900/1800, UMTS 900/2000, LTE.

2.7.1. Электрические (оптические) характеристики:

Питание от источника постоянного тока 3.3В - 4.3В.

Заявитель _____

2.7.2. Характеристики радиоизлучения:

Наименование параметра	Значение параметра
В режиме GSM 900/1800	
Общий рабочий диапазон частот передачи/приема, МГц	880 – 915/ 925 - 960 и 1710 -1785/1805 -1880
Макс. мощность передатчика, Вт	не более 2
В режиме UMTS	
Общий рабочий диапазон частот передачи/приема, МГц	880 – 915/ 925 – 960 1920 – 1980/ 2110 – 2170
Макс. мощность передатчика, Вт	не более 0,25
В режиме LTE, FDD	
Общий рабочий диапазон частот передачи/приема, МГц	2500 – 2570 / 2620 – 2690; 1710 – 1785 /1805 – 1880; 832 – 862 / 791 – 821
В режиме LTE, TDD	
Общий рабочий диапазон частот передачи/приема, МГц	2570-2620МГц
Макс. мощность передатчика, Вт	не более 0,2

2.8. Реализуемые интерфейсы: с сетью общего пользования: GSM 900/1800, UMTS 900/2000, LTE.

2.9. Условия эксплуатации, включая климатические и механические требования, способы размещения, типы электропитания: Рабочий диапазон температур от -40°С до +85°С при относительной влажности не более 75%. Оборудование в упакованном виде устойчиво к транспортированию при температуре окружающего воздуха от -45°С до +90°С. Оборудование в упакованном виде устойчиво к хранению в течение 12 месяцев в складских отапливаемых помещениях при температуре от -40°С до +85°С и среднегодовом значении относительной влажности 60% без выпадения конденсата. Питание от источника постоянного тока 3.3В - 4.3В.

2.10. Сведения о наличии или отсутствии встроенных средств криптографии (шифрования), приемников глобальных спутниковых навигационных систем: В оборудовании имеются встроенные приемники глобальных спутниковых навигационных систем GPS и ГЛОНАСС. В оборудовании имеются встроенные средства криптографии (шифрования). Нотификация RU0000032668.

3. Декларация принята на основании протоколов испытаний модуль сотовой связи EC25-E, версия ПО: R02A. Предустановленное ПО: отсутствует. Протокол испытаний ООО «Инностар» №8, 10.11.2017 г. Протокол 47-17/5, 10.11.2017 г, проведённых в испытательном центре ООО «НТЦ «КОМСЕТ», аттестат аккредитации №RA.RU.21CC15 от 04.09.2015, Росаккредитации, бессрочно

Декларация составлена на 1 листе с двух сторон.

4. Дата принятия декларации 10.11.2017 г

Декларация действительна до 10.11.2027 г.

ЗАРЕГИСТРИРОВАНС
Регистрационный № D-MDPT-11006
от «28» 11 2017

М.П. _____ **Кордонский Э.В.**

5. Сведения о регистрации декларации соответствия в Федеральном агентстве связи

М.П. **Уполномоченный представитель Федерального агентства связи** _____ Р.В. Шередин

3A7D-D951-42ED-7BB3

변경신고 처리결과 통보서

전자민원신청번호		201617100000243417	접수일자	2016-12-06
대상기기	상호 또는 성명	주식회사 앰투앰넷	적합성평가 분야	적합인증
	기자재 명칭	LTE 이동통신용 무선설비의 기기(기타)	기본모델명	EC25-E
	적합성평가 번호	MSIP-CRI-M2N-EC25-E	적합성평가 연 월 일	2016-12-07

변경 사항	변경 전	변경 후
모델명		EC25-E-K,EC25-E-S,EC25-E-O,EC25-E-L
기본제조자	Quetel Wireless Solutions Co., Ltd.	Quectel Wireless Solutions Co., Ltd.

「방송통신기자재등의 적합성평가에 관한 고시」 제16조에 따른 적합성평가 사항의 변경신고 건에 대하여 위와 같이 변경처리 되었음을 알려드립니다.

2016년(Year) 12월(Month) 07일(Date)

국립전파연구원장 국립전파연구원장인

8AAE-8474-2651-6D70

방송통신기자재등의 적합인증서

Certificate of Broadcasting and Communication Equipments

상호 또는 성명 *Trade Name or Applicant*	주식회사 앰투앰넷
기자재 명칭 *Equipment Name*	LTE 이동통신용 무선설비의 기기(기타)
기본모델명 *Basic Model Number*	EC25-E
파생모델명 *Series Model Number*	EC25-E-L, EC25-E-K, EC25-E-S, EC25-E-O
인증번호 *Certification No.*	MSIP-CRI-M2N-EC25-E
제조자/제조국가 *Manufacturer/ Country of Origin*	Quectel Wireless Solutions Co., Ltd. / 중국
인증연월일 *Date of Certification*	2016-11-21
기타 *Others*	

위 기자재는「전파법」제58조의2 제2항에 따라 인증되었음을 증명합니다.

It is verified that foregoing equipment has been certificated under the Clause 2, Article 58-2 of Radio Waves Act.

2016년(Year) 12월(Month) 07일(Date)

국립전파연구원장 국립전파연구원장인

Director General of National Radio Research Agency

※ 인증 받은 방송통신기자재는 반드시"**적합성평가표시** 를 부착하여 유통하여야 합니다.
위반시 과태료 처분 및 인증이 취소될 수 있습니다.

สำนักงานคณะกรรมการกิจการกระจายเสียง
กิจการโทรทัศน์ และกิจการโทรคมนาคมแห่งชาติ

The Office of National Broadcasting and Telecommunications Commission

ใบรับรองเครื่องโทรคมนาคมและอุปกรณ์

(Approval Certificate for Telecommunication Equipment)

ที่ (No.) : B38655-16

ใบรับรองนี้แสดงว่าเครื่องโทรคมนาคมและอุปกรณ์ดังรายละเอียดต่อไปนี้ได้ผ่านการตรวจสอบและรับรองมาตรฐานแล้ว โดยมีเงื่อนไขปรากฏตามเอกสารแนบจำนวน 2 ฉบับ

This is to certify that the telecommunication equipment appeared hereunder has been approved with condition(s) specified in 2 Annex(es)

ตราอักษร (Brand Name)	: QUECTEL
แบบ/รุ่น (Type/Model)	: EC25-E
ชนิด (Type of equipment)	: MODULE
ประเภทเครื่องโทรคมนาคมและอุปกรณ์ (Product Description)	: Cellular Mobile (GSM/WCDMA/LTE Module)
ย่านความถี่วิทยุ (Frequency Range)	: Tx: See Annex(es) Rx: See Annex(es)
กำลังส่ง (Output Power)	: See Annex(es)
ผู้ผลิต (Manufacturer) และบริษัทในเครือประเทศอื่นๆ	: Quectel Wireless Solutions Co., Ltd., P.R. China
ผู้ยื่นขอตรวจสอบและรับรอง (Applicant)	: บริษัท อีเลคทรอนิคส์ ซอร์ซ จำกัด

ลงวันที่ 20 ตุลาคม 2559
(Date of Issue)

ลงชื่อ (Signature) .....
(นายจาตุรนต์ โชคสวัสดิ์)
ผู้อำนวยการสำนักการอนุญาตประกอบกิจการโทรคมนาคม 1
รักษาการแทนผู้อำนวยการสำนักมาตรฐานและเทคโนโลยีโทรคมนาคม
พนักงานเจ้าหน้าที่

เลขที่ 87 ซอยพหลโยธิน 8 ถนนพหลโยธิน แขวงสามเสนใน เขตพญาไท กรุงเทพมหานคร 10400 โทร + 66 2271 0151-60 ต่อ 321 โทรสาร +66 2279 2273
No.87 Soi Phaholyothin8, Phaholyothin Rd., Samsennai, Phayathai, Bangkok Thailand 10400 Tel + 66 2271 0151-60 Ext. 321 Fax +66 2279 2273

Certificate of Device
Device 적합 인증서

17-C-07

Trade Name or Applicant **상호 또는 성명**	앰투앰넷
Basic Model Number **기본모델명**	EC25-E
Manufacturer/Country of Origin **제조자/제조국가**	앰투앰넷
Type Identification **형식기호**	2017-C-10 모뎀 내장형 LTE+WCDMA
Date of Certification **인증연월일**	2017-03-10

This is to certify that the above device is approved on SK telecom's reliability test requirement.
위 단말은 SK telecom 내부 신뢰성 시험을 만족하여 인증되었음을 증명합니다.

SK telecom

https://www.sktniot.com/spd/special/mdt/net/list/certificate.do?certificate_id=17-C-07 2017-03-13

耕興股份有限公司

電信終端設備審定證明

一、申　　請　　者　：　上海移遠通信技術股份有限公司
(上海市徐匯區田州路 99 號 13 幢 401A 室)

二、製　造　廠　商　：　上海移遠通信技術股份有限公司

三、設　備　名　稱　：　EC25-E

四、廠　　牌　：　Quectel

五、型　　號　：　EC25-E

六、審　定　類　別　：　LTE900/LTE1800/LTE2500/LTE2600 行動寬頻介面【PLMN10 (105 年修訂版)、最大發射輸出功率 23.34dBm、Tx：885-915MHz、1710-1770MHz、2500-2570MHz、2570-2620MHz、2555-2655MHz、Rx：930-960MHz、1805-1865MHz、2620-2690MHz、2570-2620MHz、2555-2655MHz】；IMEI：86110703；WCDMA FDD 系統【PLMN08 (105 年修訂版)、最大發射輸出功率 22.46dBm、Tx：1920-1980MHz、Rx：2110-2170MHz】；GSM/DCS 系統【PLMN01、Tx：890-915MHz、Rx：935-960MHz、最大發射輸出功率 33.16dBm、Tx：1710-1785MHz、Rx：1805-1880MHz、最大發射輸出功率 29.37dBm】

七、審　定　日　期　：　106 年 01 月 16 日

八、審驗合格標籤式樣　：

CCAF17Z10080T1

說明：

(一) 經審驗合格之電信終端設備，送審廠商應依審定證明中所核給之審驗合格標籤式樣，自製標籤標貼或印鑄於設備本體適當位置，始得販賣。

(二) 審驗合格標籤之使用權專屬取得審定證明之人。依電信終端設備審驗辦法第 15 條規定，持有人得經由網際網路申請同意他人於同廠牌同型號之電信終端設備使用審驗合格標籤，並於次日起 30 天內，應檢具「電信終端設備審驗合格標籤或符合性聲明標籤同意使用備查表」送國家通訊傳播委員會備查。

(三) 取得審定證明之電信終端設備，有下列情形之一者，得撤銷或廢止審定證明：
1.經發現原審定設備確有變更其廠牌、型號、設計或性能，而未重新申請審驗者。
2.經確定原審定設備未依新修正技術規範公告所定實施期限及方式辦理審驗者。
3.經發現申請審驗時所檢附之資料為偽造或虛偽不實者。
4.經抽驗未能符合電信終端設備技術規範者。
5.因代理權、專利權爭議，經法院判決敗訴確定或違反其他規定致不得販賣經審驗合格之電信終端設備。

(四) 輸入或販賣未經審驗合格之電信終端設備者，依電信法第六十七條規定處新台幣三萬元以上三十萬元以下罰鍰，並得沒入其設備。

(五) 本審定證明，係依電信法第四十四條第一項規定，由國家通訊傳播委員會委託辦理。

備註：

1. 本公司係經國家通訊傳播委員會委託之驗證機構(電信管制射頻器材驗證機購認證證書號碼:NCC-RCB-05/電信終端設備驗證機構認證證書號碼:NCC-RCB-05)，核發本電信終端設備審定證明。
2. 本器材使用 Fixed External 天線，天線增益 1.47dBi/GSM900, 2.56dBi/DCS1800, 2.13dBi/LTE B3, 1.56dBi/LTE B7, 1.47dBi/LTE B8, 1.56dBi/LTE B38, 1.56dBi/LTE 2555-2655MHz, 2.56dBi/WCDMA B1。
3. 依「商品標示法」及「資訊、通信及消費性電子商品標示基準」規定，標示事項貼於商品或內外包裝上，以免違法而受處分。
4. 為方便消費者選購時容易辨識，廠商應在廣告文宣、設備外包裝及使用說明書標示該行動寬頻手機/電信終端設備具備的行動寬頻頻段(LTE700/LTE900/LTE1800/LTE2500-2600)，以避免消費爭議。
5. 本機型於行動寬頻(LTE)介面支援 Tx (上行)：885-915MHz、1710-1770MHz、LTE FDD 2500-2570MHz、LTE TDD 2570-2620MHz、LTE TDD 2555-2655MHz，Rx (下行)：930-960MHz、1805-1865MHz、LTE FDD 2620-2690MHz、LTE TDD 2570-2620MHz、LTE TDD 2555-2655MHz 等頻段，不支援 Tx (上行)：703-748MHz，Rx (下行)：758-803MHz 頻段。申請者須在廣告文宣、使用手冊、外包裝上標示清楚支援的頻段以避免消費爭議。
6. 本器材設備包含 GSM900/1800/WCDMA/FDD-LTE B3/B7/B8 /TDD-LTE B38/LTE 2555-2655MHz 無線介面。