



# REPEATIT

## Quick Installation Guide

### 1. Support

On our web site, <http://www.repeatit.se>, you can find the latest upgrades of all firmware, more detailed manuals where all features are described, product news, FAQ and other information related to the products. A direct link to product specific information will be found under "Maintenance" in the product software.

For support not answered by our web please contact your reseller.

### 2. Installation

The Repeatit Subscriber Unit (SU, also called radio modem) should always be mounted on the highest possible place with clear line of sight to the base station (or Access Point). Usually, this means that you should mount the radio modem on the top of your roof or at the TV antenna pole.

#### 2.1 General information

When connecting/disconnecting the SU to a computer, it is important to follow the instructions in this document.

#### System Requirements

- One available Ethernet port
- Web browser (Internet Explorer or Mozilla for example)

#### Items included in the box

- RS/3 Subscriber Unit
- Power over Ethernet (PoE) adaptor (indoor use only)
- crossed Ethernet cable
- outdoor antenna holder
- Quick Installation Guide

#### Items NOT included in the box

- Straight outdoor Ethernet cable

#### 2.2 Hardware installation of the Subscriber Unit

Connect the PoE adaptor to a power socket. The SU is connected to the PoE adaptor's P+Data out socket with a straight Ethernet cable. The PC shall be connected to the Data in socket on the PoE adaptor via the short, crossed Ethernet cable.

#### 2.3 Computer settings

The client computer needs a network card that is properly installed. The network card shall use DHCP configuration, which means that an IP address automatically is assigned when the computer is connected to the subscriber unit.

#### 2.4 Subscriber Unit settings

When the subscriber unit is delivered, its IP address is set to 192.168.50.1. The built in DHCP server delivers IP-addresses in the range 192.168.50.2-100.

### 3. User interface

The subscriber unit is configured in a browser window. Start your browser and type the following line in the address field:

<http://192.168.50.1>

Press Enter. A login window is shown. The default login settings are:

User name: admin Password: public

User name: user Password: public

Type the user name and the password in the provided fields and press OK. In the browser window, all relevant radio modem settings can be monitored. The two different usernames gives access to different levels of configuration. The admin tab is only accessible if you login as "admin". The WEB interface has 7 different tabs, the default tab that is shown is the status tab. To switch tab left click with the mouse over the desired tab.

### 4. Quick start guide

This quick start guide can be used with the following condition:

- The wireless network you want to connect to has a DHCP server (it gives you an IP address automatically).

If this condition is false, check the detailed manual for guidance.

#### 4.1 Basic tab

Under this tab, the connection to the wireless network (the base station) is configured. This tab differs depending on which SU that is used. For SU2410bg, the only Frequency that can be selected is 2,4 GHz. For SU5410a, 5 GHz is the only possible frequency. For SU5411abg either of these frequencies can be selected.

SSID:	BSSID:	Channel/Freq:	RSSI:	Mode:
Post	00:10:b1:6b:34:ff:c2	56 (5.28 GHz)	30	AP
Sector1	00:10:b1:6b:4d:4d:73	140 (5.7 GHz)	10	AP
RPT_Office_A	00:10:b1:6b:37:db:18	124 (5.62 GHz)	8	AP

**Radio Settings**

Frequency: REG11B5800 You need to apply changes to this parameter before channel list is updated.

Rate: AUTO MODE If not supported, auto will be used.

SSID: RPT\_Office\_A eg. "MyMaster".

BSSID (optional): eg. 00:11:22:33:44:55

DATA VLAN: 0 eg. 0-4096, 0 means untagged

Force: no Active scans is not allowed on certain reg. Domains

activeScan: no

Preamble: short If the AP uses Long preamble choose "long" here. Default = "short"

Antenna: Primary antenna is the integrated antenna if CPE has one

Site Summary | Help

Status: Modem is associated to RPT\_Office\_A (00:0b:0b:37:bb:16)  
Signal strength: 144dBm 42% Refresh

Packet statistics				
	Packets	Errors	Dropped	Bytes
Received	60	0	0	5678
Transmit	16	0	0	4764

### Standard settings:

- Frequency: The frequency range should be provided by your ISP (Internet Service Provider).
- Rate: AUTO Mbit
- SSID: See the "How to connect to a network" description below.
- DATA VLAN: 0

When all changes are made, press the Apply button.

### How to connect to a network:

Ensure that the correct frequency range is chosen. Press the Site Survey button and wait 20-30 seconds until the scan is performed. The network that your service provider has set up should be visible in the Site Survey window. Click the SSID of the network that you want to connect to. The selected SSID will automatically appear in the SSID field under Radio Settings. Press the Apply button. The modem restarts.

## 4.2 Status

When all settings have been done under the Basic tab, the Status tab shall be accessed. By clicking the Refresh button on the upper left side, the signal strength can be monitored. In order to get a good connection, signal strength of 100% is recommended. This corresponds to an RSSI value of 33. Usually, a good connection is established if the RSSI value is 25 or higher (signal strength of 75%). If the signal strength is lower than this, try to adjust the receiver antenna in order to maximize the RSSI value.

The screenshot shows the modem's status page. At the top left is a 'Refresh' button. Below it is a 'Packet statistics' table:

	Packets	Errors	Dropped	Bytes
Receive	0	0	0	0
Transmit	0	0	0	0

Below the table are sections for 'Connection Method' (Method: ROUTING), 'LAN TCP/IP settings' (LAN HW address: 00:00:24:C9:14:B4, LAN IP address: 192.168.50.1, Netmask: 255.255.255.0), and 'WAN TCP/IP settings' (WAN HW address: 00:0B:6B:35:01:06, VLAN: 0, Method: Use DHCP on WAN, IP address: 0.0.0.0, Netmask: 0.0.0.0, Gateway: 0.0.0.0, Primary DNS: 0.0.0.0, Secondary DNS: 0.0.0.0). At the bottom are buttons for 'DHCP Release', 'DHCP Renew', and 'Refresh'.

When the signal strength is optimized, click the Refresh button in the lower, right corner of the screen until your modem has received an IP address from the network. When this is done, the connection is established and the connection is configured.

Measure with CPE signal lead on the back of the unit. The middle led is by default set to Puls method and shows the signal in 7 steps.

- No pulse Not associated
- 1 pulse 1 -9 dB signal
- 2 pulses 10 -14 dB signal
- 3 pulses 15 - 19 dB signal
- 4 pulses 20 - 24 dB signal
- 5 pulses 25 - 29 dB signal
- 6 pulses +30 dB signal

## 4.3 Encryption

If the wireless network uses WEP or WPA encryption, the keys or pass phrase must be configured in the modem. To adjust encryption

settings, access the tab security. Under Encryption Settings, change the selection from Disabled to either WEP 128-bit, WEP 64-bit, WPA1 or WPA2 depending on what details you ISP has given you.

### WEP 64 and 128-bit:

The WEP-key consists of hexadecimal numbers (0-9 and A-F), and the length of the key is depending on the chosen key-size. If a 64-bit key size is chosen 10 hexadecimal values should be entered. If 128-bit key size is given 26 hexadecimal values should be given. Also choose if the authentication type should be open system or shared key. If shared key is used the base station challenges the CPE for the correct WEP-key. Check your ISP information for the correct setting.

### WPA1 and 2:

The modem supports both WPA1 and WPA2 with PSK (Pre Shared Key) and encryption algorithms TKIP and AES/CCMP. Choose the correct WPA and encryption method according to your information from the ISP. Enter the correct pass phrase, which should be between 8 and 63 characters long. (Only use alphanumerical characters and avoid country specific characters like å, ä and ö). In some cases - your ISP will supply a key of 64 hexadecimal characters. To store and apply the settings, press Save Settings.

## 5. Technical data

Technical data for subscriber units:

- Power supply Power over Ethernet, 48 V
- Radio Standards IEEE 802.11a, 802.11b, 802.11g
- Temperature range -20°C - +55°C
- Certification CE certified according to:  
EMC-directory (89/336/EEC)  
R&TTE (1999/5/EC)

## 6. Our Guarantee

Repeatit AB, Vretenvägen 10, S-171 54 Solna, Sweden, guarantee that our products do not have any defects regarding material or function upon delivery. All of Repeatit's products are covered by a 12 month international guarantee.

If during the time of guarantee the product displays any defects regarding material or function, the products should be returned to your reseller, who will, according to their own judgment, either repair or replace the product according to the following conditions:

### 6.1 Conditions

1. The guarantee is only valid in combination with an original receipt issued by the reseller at the date of delivery or sales. The receipt needs to contain the product's serial number or similar identification.
2. If Repeatit repairs or replaces the product, the repaired or replaced product will be covered by the original guarantee during the remainder of the guarantee period. During repair, some parts might be replaced. These parts are then the property of Repeatit AB.
3. The guarantee does not cover normal wear and tear, faulty usage or handling, or other usage other than the one described by Repeatit AB. The guarantee does not cover defects caused by accidents.
4. The guarantee is not valid if service is performed on the product by a Repeatit non-authorized person or company.
5. The guarantee is not valid if any products that are not Repeatit original accessories are used with the product.
6. There are no guarantees, written or oral, other than this printed guarantee.

