LP-52xx Series Radio Module Upgrade Guide

Catering to the 802.11 network infrastructure and Internet of Things (IoT), LinPAC radio modules offer an easy way to incorporate wireless connectivity into monitoring and control systems. Before you get started with the upgrade, make sure to turn off the LinPAC and disconnect the power cord.



1. Removing the original radio module (if any)

Follow the steps in this section to remove the wireless module.

Step 1.

Remove the enclosure.	

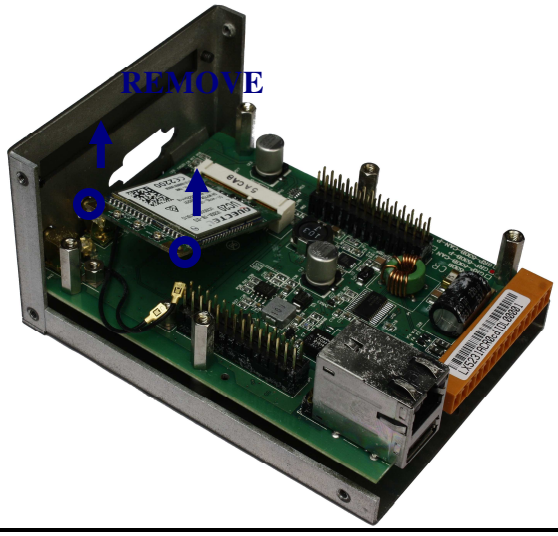
Step 2.

Remove the CPU Board.	

Step 3.

Find the original radio module and detach the antenna cables from the original radio module.	

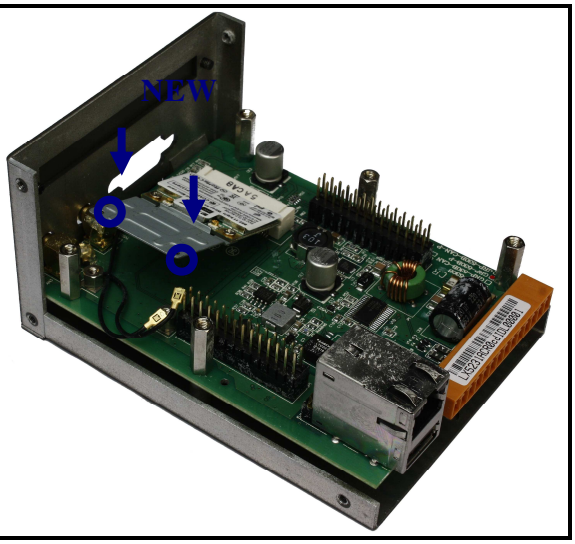
Step 4.

After the antennas have been detached, loosen the screw that secures the original radio module to the system board. Lift the original radio module from the LinPAC at a 45-degree angle.	

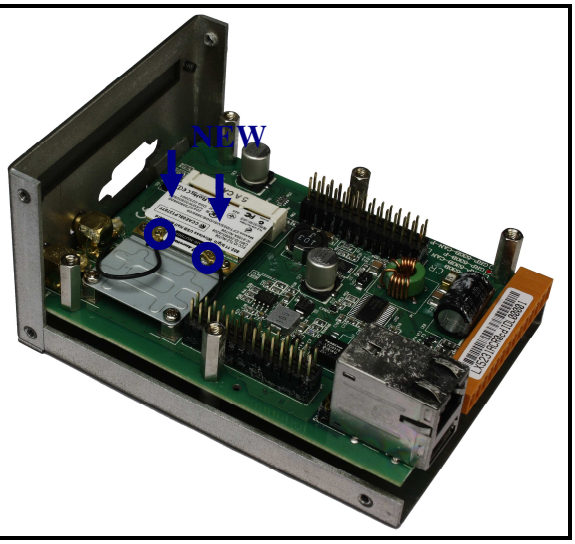
2. Replacing the new radio module

Use the steps in this section to replace the new radio module.

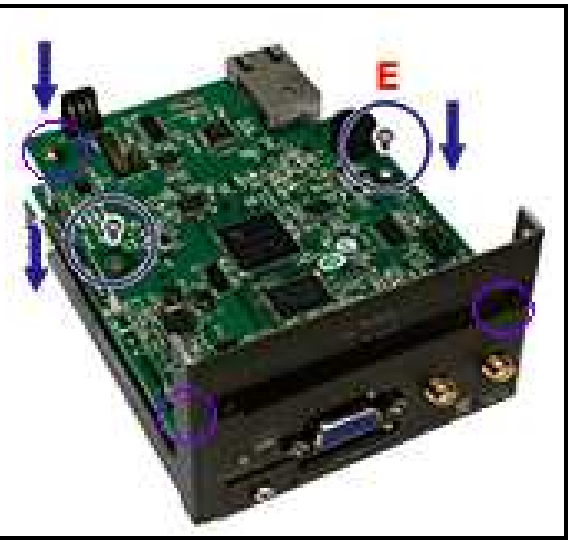
Step 1.

Insert the new radio module connector into the system board connector at a 45-degree angle, align the notch on the wireless module with the key in wireless module slot on the system board.	

Step 2.

Press the new radio module down and tighten the screw securing the module to the system board. Connect the appropriate antenna cables to the new radio module.	

Step 3.

Replace the CPU Board.	

Step 4.

Replace the enclosure.	

3. Connect to a wireless network

Follow steps in this section to configure wireless interface with Open or WPA/WPA2 encryption. Before configure wireless network we need to install the required packages.

Required Packages

wpa-supplicant, wpa-supplicant-cli, wpa-supplicant-passphrase, wireless-tools

Step 1. Configuration of wireless networks

The first task in this step is to configure the supplicant configuration file.

a. Open Wi-Fi Networks

A simple configuration file with Open Wi-Fi networks is as follows.

```
network={
    ssid="AP_SSID"
    key_mgmt=NONE
}
```

The ssid is a string of 32 characters that identifies the access point/router.

b. Wi-Fi Network encrypted in WPA/WPA2

In order to an access point that uses a password, wpa_supplicant must be configured so that it will be able to submit correct credentials to the authenticator, run the following command:

```
wpa_passphrase ssid passphrase | grep -v '#psk="' > /etc/wpa_supplicant.conf
```

ssid : The SSID whose passphrase should be derived.
passphrase : The passphrase to use.

Step 2. Connection

The wpa_supplicant tool can configure network interfaces and connect to wireless networks. Now we will actually run wpa_supplicant with the new configuration file to connect to the wireless network.

```
wpa_supplicant -B -D nl80211,ext -i wlan0 -c /etc/wpa_supplicant.conf
```

Step 3. Obtain IP address from DHCP server

To get a DHCP lease we use the dhclient command, for example:

```
dhclient wlan0
```