

TOYE CORPORATION

TOYE

ACCESS CONTROL SYSTEMS

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Digi XTend-PKG Wireless RF Modems

1.1 Pigtail Wiring TOYE Access BUS to BASE/Master DB-9 Connector

Wire Color	Bus Line	DB-9 Pin#
Red	A -----	2
Orange	B -----	8
Blue	C -----	7
Purple	D -----	3
Black	Ground/Shield -----	5

Dip Switch Settings for BASE/Master

Dipswitch	Position
1	OFF
2	ON
3-6	OFF

1.2 Pigtail Wiring TOYE Access BUS to REMOTE/Slave DB-9 Connector

Wire Color	Bus Line	DB-9 Pin#
Red	A -----	3
Orange	B -----	7
Blue	C -----	8
Purple	D -----	2
Black	Ground/Shield-----	5

Dip Switch Settings for REMOTE/Slave

Dipswitch	Position
1	OFF
2	ON
3-5	OFF
6	ON

Note: This setup is for a one Master to many Slaves.

2.1. *Software compatibility*

XCTU is compatible with the following operating systems:

- Windows XP/Vista/7/8 (32 or 64 bits versions)
- Mac OS X v10.6 and higher versions (64 bits only)

2.2. Hardware system compatibility requirements

These are the minimum hardware system requirements to properly run XCTU:

Property	Minimum	Recommended
CPU	Dual-core processor	Quad-core processor
RAM memory	2 GB	4 GB
HDD space	500 MB	1 GB

2.3. Hardware interface requirements

PC – Radio module interface

PC hardware USB Port

USB to Serial converter, RS-232 mode

Serial extension cable, 9 pin D-SUB, M-F

2.3.1. Connecting the Xtend-PKG radio module to the PC

1. Connect the serial extension cable between the RS-232 converter's 9-pin plug and the radio module's 9-pin socket.

Caution: Do not apply power to the radio module until after the Dipswitches have been set for Programming.

2. Set Dipswitch 1 and 2 to their **Programming** positions as shown below.

Dipswitch number 1 2 3 4 5 6

Programming RS-232 mode

Base: **ON** **off** off off off off
Remote: **ON** **off** off off off **ON**

Default RS-422 mode

Base: **off ON off off off off**

Remote: **off ON off off off ON**

Caution: Be certain to restore the **Default RS-422 mode** switch settings after device programming is complete.

3. Apply power to the radio module.

3. Working with XCTU

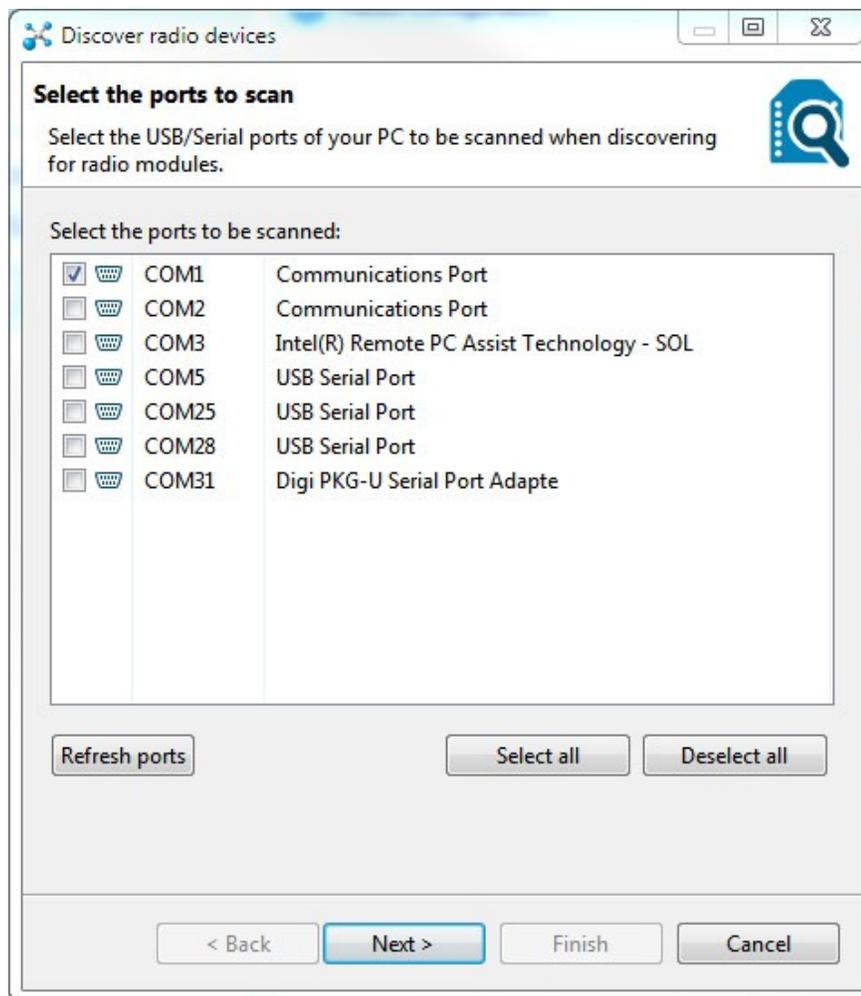
4.1.2. Discovering radio modules

Follow these steps to discover radio modules connected to your PC:

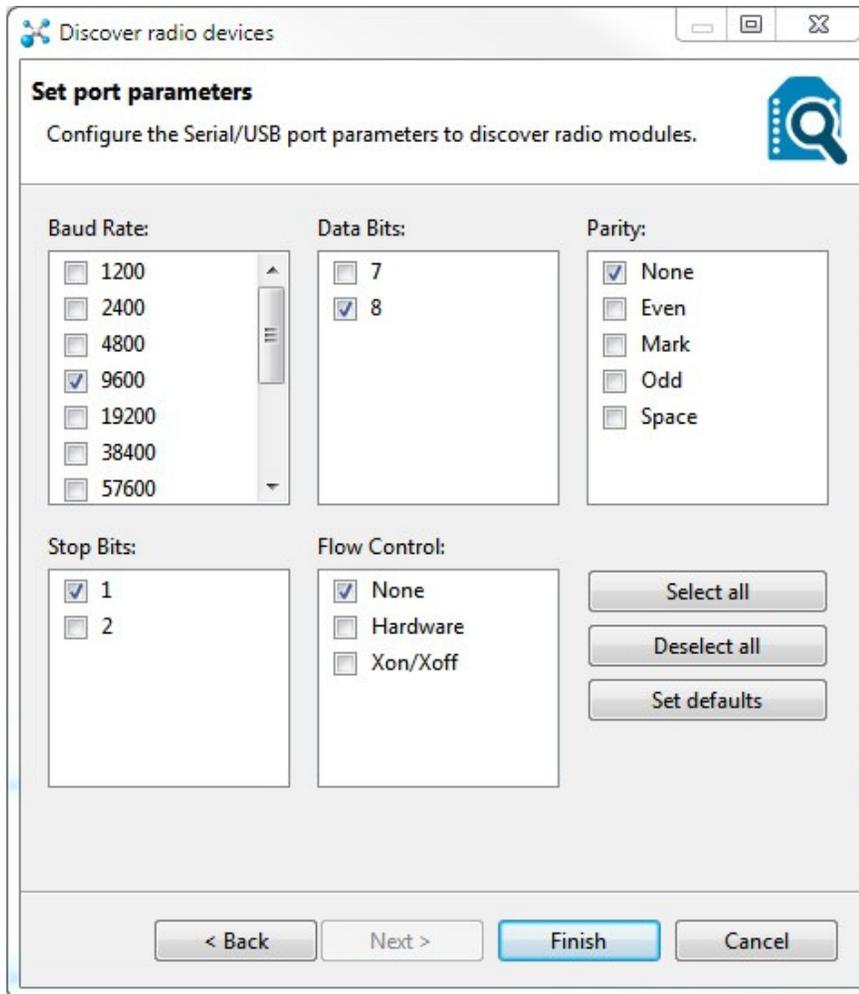
1. Click the **Discover radio modules** button from the toolbar.



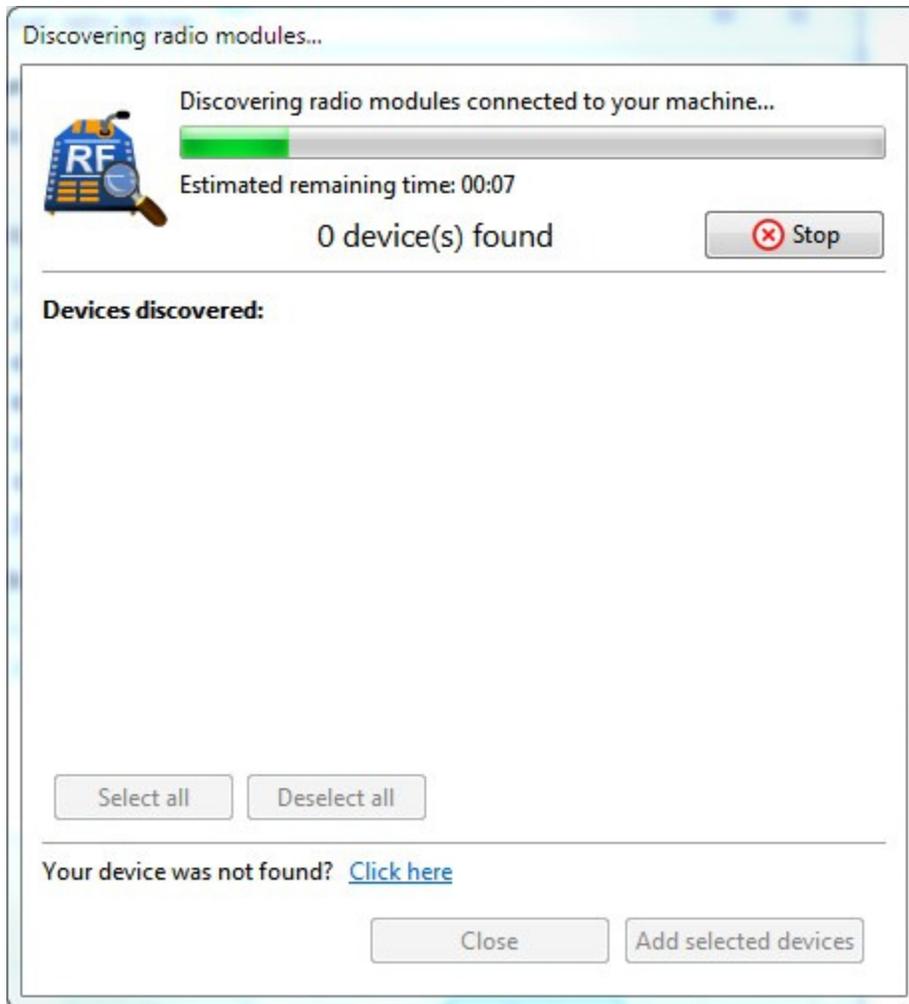
The Discover radio devices dialog box will open.



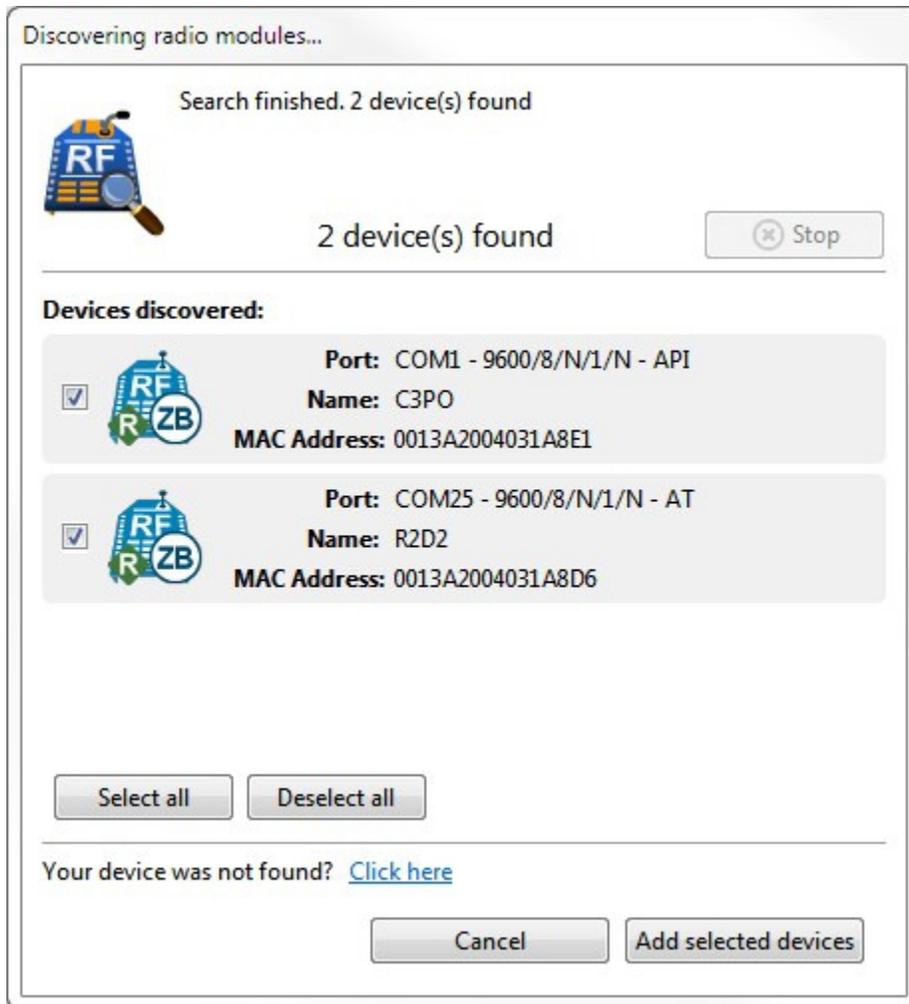
2. Select the serial ports in which you want to look for radio modules, then click **Next**.
3. Check all the settings you want to try in the discovery process in order to discover radio modules.



4. Check the Baud Rate 1200 and Parity Even boxes. When ready, click **Finish** to start the process.

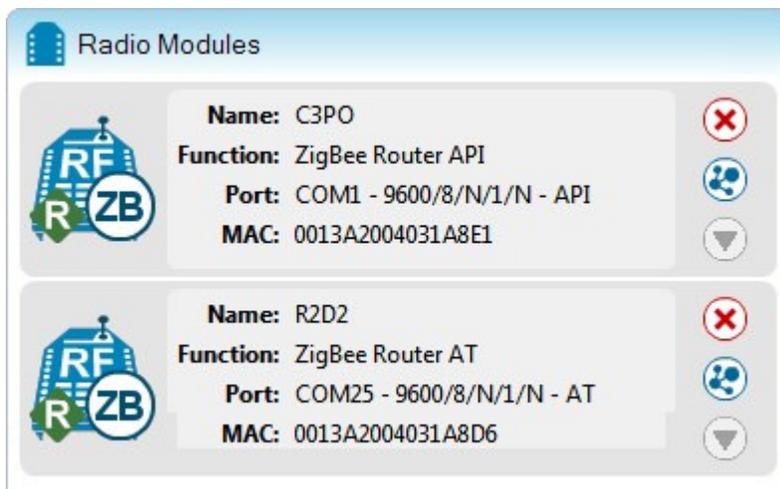


5. As radio modules are found, they will appear in the discovery process dialog box. You can stop the process at any time by clicking the **Stop** button if the module or modules you were looking for are already found.



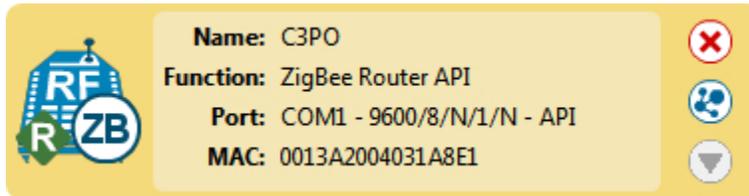
- Finally, check the radio modules you want to add to the list and click the **Add selected devices** button.

The modules should now be displayed in the devices list.

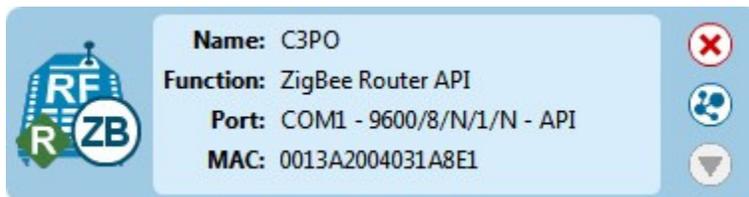


4.2.1. Selecting a module to work with it

In order to work with a radio module you must select it from the list of devices. When you hover over a module, the background color will change to yellow.



If you select it, the background will change to blue. This way you will always know which radio module is selected.



Selecting a radio module will refresh the contents of the working area, displaying the information or actions you can perform over the selected module. Remember that the contents of the working area depend on the active working mode.

4.3. Configuring your module (Configuration mode)

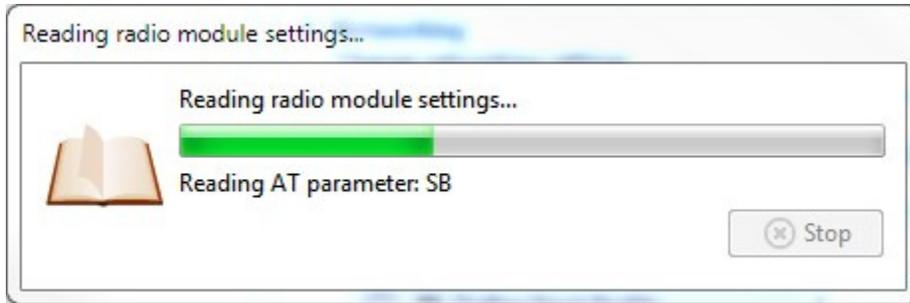
Once you have a radio module added to the list of devices, you can configure it. To do so, the first thing you need to do is to change to the Configuration working mode in the toolbar.



This working mode is selected by default when opening the tool.

Then select the radio module you want to configure from the list of devices.

XCTU will load the firmware information of the selected radio module and display the settings that compose that firmware in the working area. Then it will automatically read the values fill all the fields.



The contents of the Configuration working mode are divided into three sections:

4.3.1. Configuration toolbar



The configuration toolbar contains all the configuration actions you can perform with the selected radio module and the firmware settings:

4.3.1.1. Reading module settings



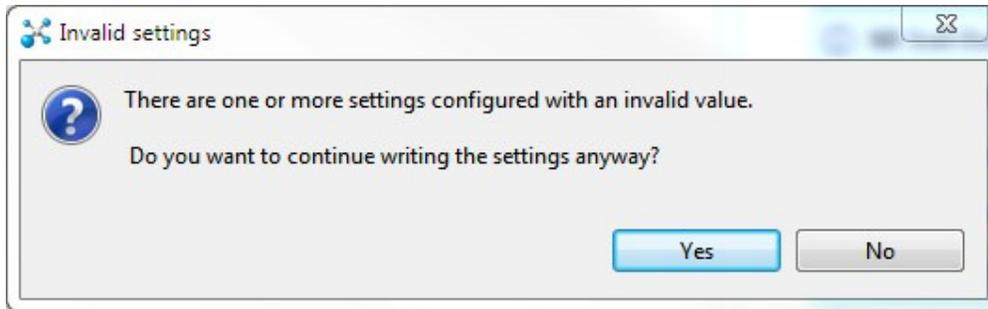
If you click the **Read module settings** button, the firmware settings will be read from the selected radio module and their values will be refreshed.

4.3.1.2. Writing module settings **Caution: do not write (change) any of the settings.**



If you have changed the value of any firmware setting, clicking the **Write module settings** button will write the new values to the radio module.

If a setting is configured with an invalid value, XCTU will ask you to continue with the process and, if you select **Yes**, it will attempt to write all the values, including the invalid ones. **This is not a normal situation.**



4.3.1.3. Loading default firmware settings **Caution:** do not load defaults.



The **Load default firmware settings** button allows you to load the default values established by the firmware.

4.3.1.4. Updating firmware

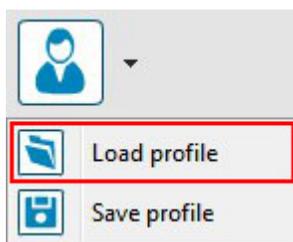


4.3.1.5. Configuration profiles

A configuration profile contains the information and settings values of a radio firmware. XCTU offers the ability to save and write configuration profiles to the radio module. This feature is useful in a production environment when the same parameters need to be set on multiple radios.

4.3.1.5.2. Loading a profile

To load a configuration profile, go to the **Profiles** drop-down menu and select **Load profile**.

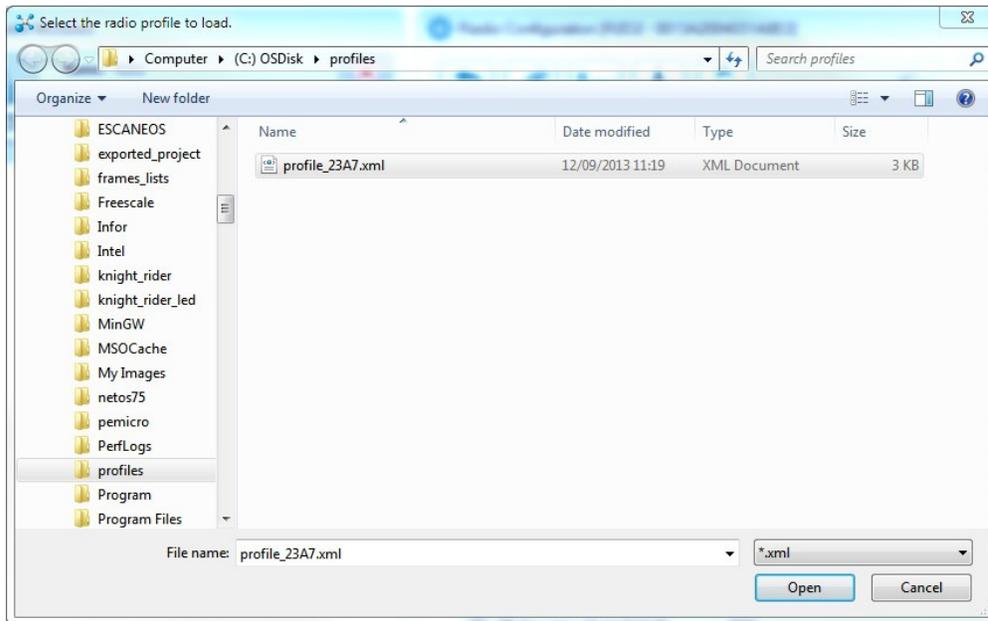


A new **Open file** dialog will pop-up asking you for the configuration profile file to load. Look for a previously saved configuration profile and click **Open**.

The following configuration profiles are provided for TOYE RS-422 Systems connected with Extend-PKG Radio Modules.

For Host modules, **“Toye_Host.xml”**

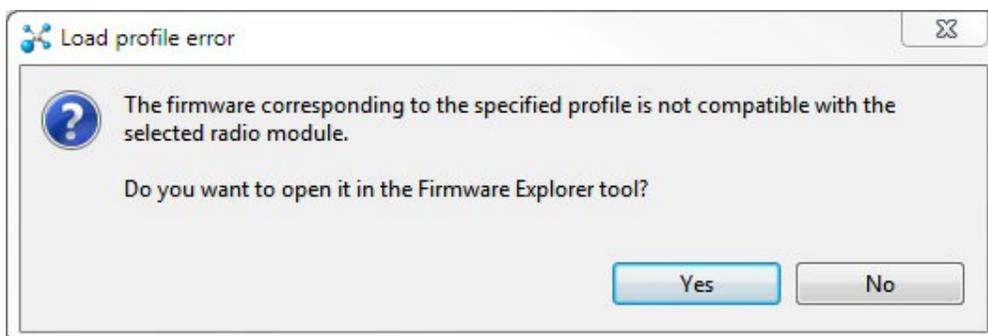
For Remote modules, **“Toye_Remote.xml”**



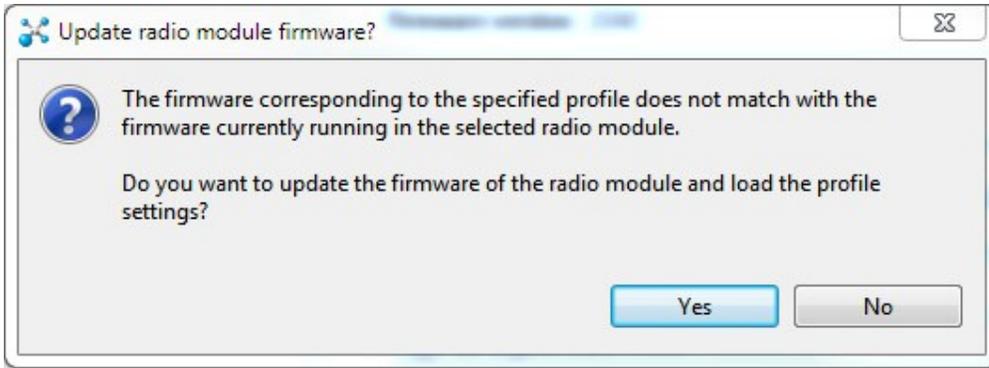
XCTU will try to load the selected profile.

If the firmware of the profile you are loading is not compatible with the radio module, XCTU will ask you to open it in the Firmware Explorer tool. See topic [5.6. Firmware Explorer tool](#) for more information about this tool.

Caution: This is not a normal situation. The following procedures should only be attempted by advanced users.



If the firmware of the profile you are loading does not match the firmware running in the radio module but it is compatible with the module, XCTU will ask you to update the firmware of the module, so the profile can be loaded correctly.



finally, if the firmware of the profile you are loading and the firmware running in the radio module match, the settings saved in the profile will be loaded but not written in the radio module.

To save the profile settings in the module, click the **Write module settings** button of the configuration toolbar.



The Xtend-PKG radio module firmware has now been programmed with the proper configuration profile settings for use with a Toye Access Control System hardware network.

Disconnect the power from the XTend-PKG radio module.

Ensure that the Dipswitches have been reset to their default RS-422 settings.

Default RS-422 mode Dipswitch settings:

Dipswitch number 1 2 3 4 5 6

Base: *off ON off off off off*

Remote: *off ON off off off ON*