

# Adding Mx210 module to PR103 project

### 1. Pre requirements

For this you will need couple of things :

- 1. Newest ALP version (at the time of writing this document, that is 2.6.348.0)
- 2. akYtec Tool PRO
- 3. micro USB cable
- 4. Ethernet cable

If you don't know which **version of ALP** you have, then go to **HELP-About software**, as shown on picture 1.1, to find it out.

Y akYtec ALP								
File View Device Service Plugins	Help							
• C C C C C C C C C C C C C C C C C C C	✓ Automatic update check Check for updates							
	Help							
	Version history							
	About software							
Variable Box 🗜 🗖 🗙 Main program								
Search III Q 100% -								

Picture 1.1

If you have figured out that you don't have **required version of ALP**, you need to **update it**, but update function is working only on version 2.6 and newer, so you need to download 2.6 from our **web site** and then go to **HELP-Check for updates**, as shown on picture 1.2, to try and update it.

Y akYtec ALP	
File View Device Service Plugins	Help
: P P B B I P A S A	✓ Automatic update check
	Check for updates
:▶ 웹 ⊷ ₩	Help
	Version history
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Variable Box 🕂 🗖 🗙 Main p	program
Search	35 ⊕ 100% ▼
T1	

Picture 1.2

Now power up devices and connect them with Ethernet cable, connect PC to PR103, create project for it.



# 2. Checking current IP address of PR103

Now open **Device configuration**. To go to **Device configuration** click on **icon** shown on picture 2.1.



Picture 2.1 Device configuration icon

Now, in the **Device configuration** window, go to **Network settings**, and then click on **Read** button, as shown on Picture 2.2.

IP address       102.11.122       < none >         Subnet mask       255.255.0.0       < none >         Gateway       102.11.1       < none >         New IP address       102.11.122       < none >         New subnet mask       255.255.0.0       < none >         New gateway       102.11.1       < none >         DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address       Minimum value: 0.0.0.0       Maximum value: 255.255.255.255.255.255.255.255.255.255		Name	ID	Variable					
Subnet mask       255.255.0.0       < none >         Gateway       10.2.1.1       < none >         New IP address       10.2.11.122       < none >         New subnet mask       255.255.0.0       < none >         New gateway       10.2.1.1       < none >         DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address       Minimum value: 0.0.0.0       Maximum value: 255.255.255.255.255.255.255.255.255.255		IP address	10.2.11.122	< none >					
Gateway       10.2.1.1       < none >         New IP address       10.2.11.122       < none >         New subnet mask       255.255.0.0       < none >         New gateway       10.2.1.1       < none >         DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address       Minimum value: 0.0.0.0       Maximum value: 255.255.255.255         Modbus register: 26		Subnet mask	255.255.0.0	< none >					
New IP address       10.2.11.122       < none >         New subnet mask       255.255.0.0       < none >         New gateway       10.2.1.1       < none >         DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >	ngs	Gateway	ateway 10.2.1.1						
New subnet mask       255.255.0.0       < none >         New gateway       10.2.1.1       < none >         DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >		New IP address	10.2.11.122	< none >					
New gateway       10.2.1.1       < none >         DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address         Minimum value: 0.0.0       Maximum value: 255.255.255         Modbus register: 26		New subnet mask	255.255.0.0	< none >					
DHCP       Service button       < none >         DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP eddress         Minimum value: 0.0.0         Maximum value: 255.255.255         Modbus register: 26		New gateway	10.2.1.1	< none >					
DNS server 1       0.0.0.0       < none >         DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address         Minimum value: 0.0.0.0         Maximum value: 255.255.255         Modbus register: 26		DHCP	Service button	< none >					
DNS server 2       0.0.0.0       < none >         Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address         Minimum value: 0.0.0.0         Maximum value: 255.255.255         Modbus register: 26		DNS server 1	DNS server 1 0.0.0.0						
Connection status       no connection       < none >         Cloud connection       Off       < none >         IP address         Minimum value: 0.0.0         Maximum value: 255.255.255         Modbus register: 26		DNS server 2	0.0.0.0	< none >					
Cloud connection     Off     < none >       IP address        Minimum value: 0.0.0.0     Maximum value: 255.255.255       Modbus register: 26		Connection status	no connection	< none >					
IP address Minimum value: 0.0.0.0 Maximum value: 255.255.255 Modbus register: 26		Cloud connection	Off	< none >					
		IP address Minimum value: 0.0.0.0 Maximum value: 255.255.255.255 Maximum value: 255.255.255.255							
When saving the settings, the device will be rebooted. Read		Moubus register: 20							

Picture 2.2 Network settings of PR103

Your **IP address, Subnet mask and Gateway** should have changed their **ID** compared to state before clicking **Read** button, as shown on picture 3.3.



Name	ID
IP address	192.168.1.99
Subnet mask	255.255.0.0
Gateway	192.168.1.80
New IP address	10.2.11.122
New subnet mask	255.255.0.0
New gateway	10.2.1.1

Picture 3.3 Network settings parameters after clicking Read button

Take a picture or screenshot of your network settings.

## 3. Setting up Mx210

First connect micro USB cable to Mx210 module. Note: it is best to **close ALP** now, because they will be "fighting" for that COM port and at the end you will not be able to see Mx210.

Nowe we need to open akYtec Tool PRO, in **Interface** field select COM port and then click **Find** button. At the end your device should be on the list, as shown on the picture 3.1.

1. Network parameters     Interface   COM6   Protocol   Protocol   aktrace   Auto   Orinection Protocol   Connection setup   Auto   Tist address   247   First address   247   Fird device   Address   1   Last address   247     Setter all     Destet all     Name   Address   1   Last address   247     Setter all     Address   1     Address   1     Address   1     Address     3.     Add devices	(°			Ad	d devices			- 🗆 🗙
nterface COM6  COM6  COM6  COM6  COM6  COM6  COM6  COM6  COM7  COM7 COM7 COM7 COM7 COM7 COM7 CO	1.	Network parameters					Select all	Deselect all
COM6 <ul> <li>MK210-311 S/N 67610231232657436</li> <li>1 (COM6)</li> <li>g1.1.4</li> </ul> Protocol <ul> <li>Connection Protocol</li> <li>Connection setup</li> <li>Auto</li> <li>Find all devices</li> <li>1</li> <li>List address</li> <li>247</li> <li>Find device</li> <li>Address</li> <li>1</li> </ul> Image: Triangle and the set of the set o	Interface			Name		Address	Version	
Protocol atYtec Auto Detection Protocol Connection setup Auto Find all devices First address 1 Last address 247 Find device Address 1 Find 2. Add device 3. Add devices Cancel	COM6		-	MK21	)-311 S/N 67610231232657436	1 (COM6)	g1.1.4	
akYtec Auto Detection Protocol  Connection setup Auto Find all devices First address 247  Find device Address 1  Find 2.  Add device  Add device  Add device  Cancel	Protocol							
Connection setup Auto	akYtec Auto Det	tection Protocol	•					
Auto Find all devices First address 247 Find device Address 1 Find 2. Address 1 Addres 1 Address 1 Address 1 Address 1 Addres	Connection set	up						
Find all devices   First address   247   Image: Second state of the second state	Auto		•					
First address 1 Last address 247  Find device Address 1  Find  C.  Add devices Cancel	Find all dev	vices						
1   Last address   247   • Find device   Address   1   Find   2.     3.     Add devices     Cancel	First address							
Last address 247   Find device Address 1  Find  C.  Add devices Cancel	1							
247 • Find device Address 1 Find 2. Add devices Add devices Cancel	Last address							
Find device Address 1  Find  2.  Add devices Cancel	247							
Find device Address  T  Find  C.  Add devices  Add devices  Cancel  Add devices  Cancel								
Address 1 Find 2. Add devices Cancel	Find device	e						
Image: Trind       2.       3.       Add devices     Cancel	Address							
Find 2. 3. Add devices Cancel	1							
2. Add devices Cancel	Ele d	1						
2. 3. Add devices Cancel	Find	1						
3. Add devices Cancel	2.							
3. Add devices Cancel								
3. Add devices Cancel								
3. Add devices Cancel								
Add devices Cancel						3	3.	
Add devices Cancel								
							Add devices	Cancel

Picture 3.1

Go to **Network** then **Ethernet** and now insert **IP address, Subnet mask and Gateway** of **PR103**, but change last number of the IP address. At the click **Write parameters.** (new parameters should be inserted into fields which start with NEW)



🗞 🗋 🗖 🛱				akYtecToolPı		
File Project						
Add Delete IP devices devices addresses	∫ /rite mete	Fa ers se	tory Watch tings list Real-time Passu	word Calibration Save log Day data		
- MV210-101	Nan	ne		Value		
Address: 1 (COM6)	•	Analog	g inputs			
S/N 85254230932482514	•	Real ti	me clock			
	4	Netwo	ork			
		⊿ Etł	hernet			
			IP address	192.168.1.15		
			Subnet mask	255.255.0.0		
			Gateway	192.168.1.80		
			DNS server 1	8.8.8.8		
			DNS server 2	8.8.4.4		
			New IP address	192.168.1.15		
			New subnet mask	255.255.0.0		
			New gateway	192.168.1.80		
		_	DHCP	Service button		
	*	Batter	y			
	Modbus Slave		us Slave			
	<b>*</b>	Status     Data logging				
	*					
	1	NIP				
	1	MQTT				
	۲ [	SNMP				



To check are new parameters correctly implemented, you need to power down device (**power cable and micro USB**) and then power it back on. (you don't need to close **Tool PRO**).Result is shown on picture 3.2.

Change Modbus Slave address to your desire and click on Write parameters.

Close akYtec Tool PRO.

#### 4. Back to PR103

Open ALP, create project for PR103 and connect micro USB to PR103.

Open device configuration go to Device-Master, create slave (by right click of mouse on Master) and then insert:

- 1. Interface (Ethernet)
- 2. Address (of slave)
- 3. IP address (of slave)
- 4. Protocol (TCP/IP)

It should look like on picture 4.1 and for the end, create variables that you need.



Device configuration										-		×
Device     Analog inputs		Name	Device-1		Proto	col TCP/	/IP	·				
<ul> <li>Analog outputs</li> </ul>	In	terface:	Ethernet	•	Retries, m	nax. 3						
<ul> <li>Fast digital inputs</li> </ul>				_								
<ul> <li>Digital inputs</li> </ul>	A	ddress:	1		Status variable < not select >		t select >					
Programmable LEDs (Fn)	Re	esponse	100		Start query < not select >							
Digital outputs												
Program	IP a	address:	192.168.1.15		Byte or	der: 🗹 Ch	ange byte or	ler	Change regi	ister order		
Modbus Slave		Port	502				2	1	4	3		
		ron.										
RS485-2					Comm	ent						
Battery	0											
Device status	+ ×											<b>^</b>
Data logging							_	Name		Variable		
Real time clock	Name	Туре	Register	Bit	Functions	Period	Comment	-				
Date and time variable	Variable	REAL	4100		0x03	100		Type		REAL	~	
⊟-Master	Variable-1	INT	4067		0x03	100		Regist	er	4100		
Device-1, Ethernet, 1	<u> </u>											
Password												
Clock												
Network settings								Modb	us function	0x03	~	
Extension modules								Readi	na neriod ms	100	~	
								neuun	ng period, mo			
								By cor	nmand	< not select a	>	
												•
											Close	
• •											crose	

Picture 4.1

Upload project to PR103 and if everything is all right, then **Ethernet LED** on Mx210 should start blinking, ash shown on picture 4.2. (Variables created for Mx210 have to be used)

END.



Picture 4.2