

# BARIONET

# 100

## Quick Install Guide Version 2.0

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### **IP Automation Controller with Modbus / TCP and SNMP Support**

#### **Package contents**

- a Barionet 100
- b 3wire bus cable

#### **Mounting, Wiring and Setup**

Slide the device upwards onto the DIN rail. Push it up and towards the rail until it snaps onto the upper rail edge. For wiring information please refer to the second page. Before powering the device please read the user manual available on [www.barix.com](http://www.barix.com).

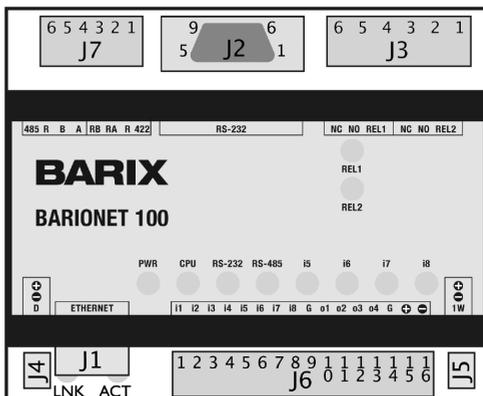
#### **Firmware**

This device comes preloaded with standard firmware.  
Alternative firmware can be downloaded from [www.barix.com](http://www.barix.com).

#### **Support**

For support please contact your local dealer or visit [www.barix.com](http://www.barix.com).

## Top view



### J1 LAN port 10/100 (RJ45)

Pin	Description
1	TX+ (Transmit data)
2	TX- (Transmit data)
3	TxD (Receive data)
6	GND (Receive data)
7	RTS (Ready to send)
8	CTS (Clear to send)

Left LED Link, right LED Activity (speed/color code see manual)

### J2 RS-232 serial port

Pin	Description
2	RxD (Receive data)
3	TxD (Transmit data)
5	GND (Ground)
7	RTS (Ready to send)
8	CTS (Clear to send)
1,4,6,9	not connected

### J3 Relay outputs (250VAC, 5A)

Pin	Description
1	Relay 2 common
2	Relay 2 normally open
3	Relay 2 normally closed
4	Relay 1 common
5	Relay 1 normally open
6	Relay 1 normally closed

### J4 Power bus

Pin	Description
1	Power +9..30 VDC (out 1A max.)
2	Ground (GND)
3	Defaults (for factory defaults reverting see manual)

### J5 Dallas 1-wire® bus

Pin	Description
1	Power +9..30 VDC (out 1A max.)
2	Ground (GND)
3	1-wire data

### J6 I/O and Power (4Watt max.)

Pin	Description
1..4	Input 1..4 Analog 0..5 VDC or Digital (close to Ground)
5..8	Input 5..8 Digital (close to Ground)
9	Ground for Inputs
10..13	Output 1-4 Digital (Open Collector 0..24 VDC, 100 mA)
14	Ground for Outputs
15	Power In + 9..30VDC
16	Power In -

### J7 RS-422/485 port (det. screw term. block)

Pin	422	485
1,6	Shield	Shield
2	RXA	Not used
3	RXB	Not used
4	TXA	A
5	TXB	B

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### 3 Setting temporary IP address using ARP command

This procedure will work only in a local network. After this procedure the temporary IP will be active only until restart/reboot. After a restart the procedure has to be repeated.

#### STEP 1

Either use a network cable to link the Barionet and the PC directly, or connect the Barionet to the PC via your network switch and power the device. Make sure that you have a valid static IP address configured on your PC (e.g. 192.168.0.2)

#### STEP 2

Windows : For a command window, click on «Start», click on «Run..», in the «Open» field type cmd , click on «OK».  
OSX / Linux : Open a terminal window.

#### STEP 3

Please proceed to step 4 if you linked the PC directly to the device in step 1. To ensure that you use a free IP address (not already used by another device in the network) please use the Ping command. To verify availability in this example we assume the PC to have the IP address «192.168.0.2» and want to check if «192.168.0.6» is free. Type **ping 192.168.0.6** and hit the «Enter» key. You should get no reply which gives you reasonable assertion that the «pinged» IP is available.

#### STEP 4

Look for the Barionet's MAC address printed on a label on the bottom of the device (12 hex digits, separated by a hyphen every 2 digits). Type into the windows command window

```
arp -s 192.168.0.6 00-08-E1-00-B1-77
```

or on a OSX or Linux system type into the terminal

```
arp -s 192.168.0.6 00:08:E1:00:B1:77
```

and hit the «Enter» key (replace the digits according to your devices MAC address). You must have administrative rights to be able to do so (sudo on OSX / Linux).

#### STEP 5

Now we have to make the Barionet listen to the IP address «192.168.0.6» using the Telnet command. To do so type into the command window **telnet 192.168.0.6 1** and hit the «Enter» key (the number «one» must be there for this command to work correctly !!!). The Barionet will immediately refuse the connection on port 1, but will be available for browser access as long as the device stays powered.

#### STEP 6

To check if the Barionet is responding you can use the ping command again. To do so type **ping 192.168.0.6** and hit the «Enter» key. If you do get a reply the IP address 192.168.0.6 can be used to access the Barionet using a web browser. Please go back to section «2 Network configuration by web browser» to configure a static IP address. If you do get «request timed out» then please repeat step 5 carefully (you most likely mistyped the telnet command) or repeat the entire procedure. If the ARP method does not work for you, refer to the user manual for further methods.

### 4 Troubleshooting

- If the power status LED (PWR) stays dark check the power cabling (installation step 2).
- Check if the LINK LED (on J1) is lit, if it is not then check your network cabling.
- If you have doubts about the current device settings you can revert the device to its factory defaults by following the procedure explained in the manual.

For information about our products, manuals, technical documentation, latest firmware, support and access to the user forum please visit [www.barix.com](http://www.barix.com).

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## BARIX

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# 1 Installation

## STEP 1

Plug a standard (straight) network cable (not included) into the network port (J1) of the Barionet and the other end into your hub or switch.

You can also use a crossover network cable (not included) for a direct connection to your PC.

## STEP 2

To power the device wire the positive terminal of your power supply (9..30 VDC, not included) to pin 15 (Power In +) and the negative terminal to pin 16 (Power In -) of connector J6.

## STEP 3

Connect your power supply to an electrical outlet.

## STEP 4

The LNK LED will light up green signalling established link. The ACT LED will blink while Barionet acquires an IP address, (if no DHCP server is available this can take up to 5 minutes).

See the next page for the ARP command procedure, or use the "Barix Discovery Tool" Java application (download the latest version from [www.barix.com](http://www.barix.com)) on your computer (Windows, Mac or Linux) and click the "Get" button to find out which IP address the device has obtained (see picture at the bottom of the page). Make sure that the Ethernet address (MAC) matches your device (see label on the bottom of the device).

Now that you know the IP address proceed to the next section "Network configuration by web browser".

If you were not able to obtain the device's current IP address with the previous steps see section "Troubleshooting".

# 2 Network configuration by web browser

Most Barix applications require no configuration but use DHCP to configure network settings dynamically. If you need to use static (fixed) network settings follow steps 1 to 3, otherwise continue from step 4.

## STEP 1

Open your web browser.

## STEP 2

Enter the IP address of the Barionet and press Enter (Example: 192.168.0.12). Click on the Configuration button, then go to Advanced Settings/Network.

IP Address	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>	(0.0.0.0 for DHCP)
Netmask	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>	(0.0.0.0 = default)
Gateway	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>	(0.0.0.0 for no gateway)
DNS Server	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>	(0.0.0.0 for none)
DHCP Hostname	<input type="text"/>	

## STEP 3

In order to make the application work (e.g. "Digital I/O and Serial Tunnel") the following parameters must be set (check with your network administrator):

- static IP address (the default «0.0.0.0» sets automatic discovery: BootP, DHCP) and netmask

If you your devices are connected via routers also:

- Gateway IP address

Hit the «Apply» button to save all changes. The device will reboot with the configured IP address.

## STEP 4

To complete the application setup, download the firmware documentation from [www.barix.com](http://www.barix.com). Download the product manual for additional information about the hardware installation, technical and mechanical details as well as instructions on updating or changing the loaded application and firmware.

