

BARIX

BARIONET 1000

IP & Wi-Fi Automation Controller

Quick Install Guide Version 1.1

Package contents

- a Barionet 1000
- b Two female terminal blocks
- c Sticker with Wi-Fi and LAN MAC addresses

Mounting on a DIN Rail

Slide the device upwards onto the DIN rail. Push it up and towards the rail until it snaps onto the upper rail edge.

Before powering the device please read this quick install guide and mind the polarity of the power supply (see picture on page 2).

Firmware

This device comes preloaded with a default OpenWrt image with drivers for the Barionet Hardware. A Python and Lua Interpreter are pre-installed.

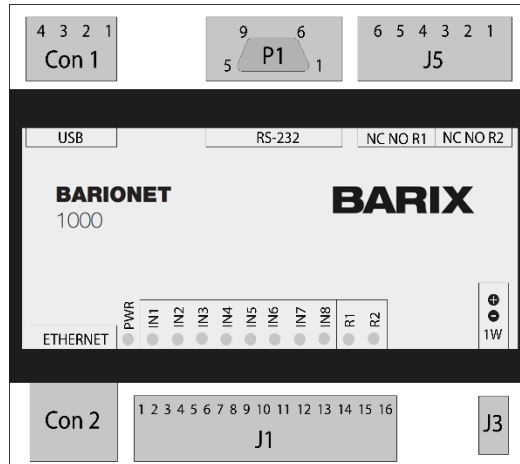
Newer or alternative Firmware can be downloaded from www.barix.com/downloads or from https://wiki.openwrt.org/toh/barix/barix_barionet_1000

Alternative firmware can also be developed and compiled by the user.

Support

For support please contact your local distributor or visit www.barix.com

Top view



Con 1 (2x USB Host)

Pin	Description
1	VCC (+5V)
2	D ⁻ (Data -)
3	D ⁺ (Data +)
4	GND

J5 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

J1 I/O and Supply Input

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

P1 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)
1,6,9	not connected

CON 2 Ethernet (RJ45)

Pin	Description
1	TX + (Transmit data)
2	TX - (Transmit data)
3	RX + (Receive data)
4	NC
5	NC
6	RX - (Receive data)
7	NC
8	NC
Left LED Yellow - Activity	
Left LED Green - Link / Speed (Blinking)	

J3 Dallas 1-wire® bus

Pin	Description
1	(DO NOT CONNECT)
2	Ground (GND)
3	1-wire data

1. Connecting to power and initialisation

The Barionet 1000 needs a DC supply voltage of 9V to 30V, 4Wmax. Please mind the polarity. When powered up, all LEDs will turn on while the power (*PWR*) LED will blink (blue). When the device is initialised, all LEDs besides the power led (blue) will turn off (assuming no active IO is connected).

2. Access the Device

Connecting via Ethernet

Plug the ethernet cable from your computer directly to the Barionet 1000.

Next, configure your computer to a static IP on the range **192.168.66.X (for example, .100)** and subnet mask to **255.255.255.0**

With the Barionet 1000 default configuration its LAN IP address is set to **192.168.66.1**.

Default username and password: **root/(blank)**

The root user has NO password set, so make sure you set one !

BarixBarionet

No password set!

There is no password set on this router. Please configure a root password to protect the web interface and enable SSH.
Go to [password configuration...](#)

Authorization Required

Please enter your username and password.

Username

Password

Powered by [LuCI Master \(git-17.048.25667-9726e26\)](#) / OpenWrt Designated Driver 49999

Connecting via Wi-Fi

The device works in AP mode by default and creates a Wi-Fi network with a name consisting of "Barionet_" and the four last digits of its MAC address (for example, Barionet_0A15). The network security key/passphrase is "**barionet**".

Connect your PC to this Wi-Fi network. In this network, the Barionet works as a DHCP server and uses the IP Address 192.168.166.1 itself. For your PC, an IP address in the 192.168.166.x range will be assigned if you connect via that interface.

Establishing an SSH connection

Use ssh or a similar client (for example, PuTTY, port 22, SSH option) and establish a connection as user root to the IP address of the Barionet (192.168.66.1 if connecting via Ethernet and 192.168.166.1 if connecting via Wifi)

The root user has NO password set, so make sure you set one !

3. Changing settings via LuCI web interface

Opening the LuCI interface

To use the LuCI web interface please access the Barionet via browser by its IP address (192.168.66.1 or 192.168.166.1)

Changing Network settings

In the LuCI web interface you will find all relevant settings, so you can set other IP addresses, enable/disable DHCP for each network port (Wifi or Ethernet), and also disable the wifi interface.

Make sure you don't lock yourself out if you change the settings !

4. Mounting USB devices

In the LuCI interface go to *System* → *Mount Points* menu.

Scroll down and select "Add" on Mount Points view.

Select the *UUID* of the external flash drive inserted into the Barionet 1000 USB port.

Select option -- *custom* -- under *Mount Point* drop down menu and provide a name (e.g. /mnt/usbflash).

To validate click on *Save & Apply* and wait a few seconds.

The new mounted unit should now be visible when going to *System* → *Mount Points*

5. IO access from scripts or programs

The IO ports are accessible through the standard OpenWrt IO device files.

Some testing and sample scripts are in the /root directory, which can be used to quickly read inputs or set outputs. Please refer to the IO Map (you can find it in the documentation and also in the device's /root directory , file "iomap.rtf")

6. Reset to factory defaults

On the LuCI web interface go to the *System* → *Backup/Flash Firmware*

Under *Backup/Restore* select *Reset to defaults: Perform reset*.

At this point, the device will reboot and apply default settings.

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