

Net2 APN-1066-US

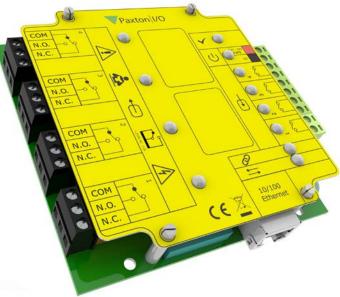
Installing an I/O board

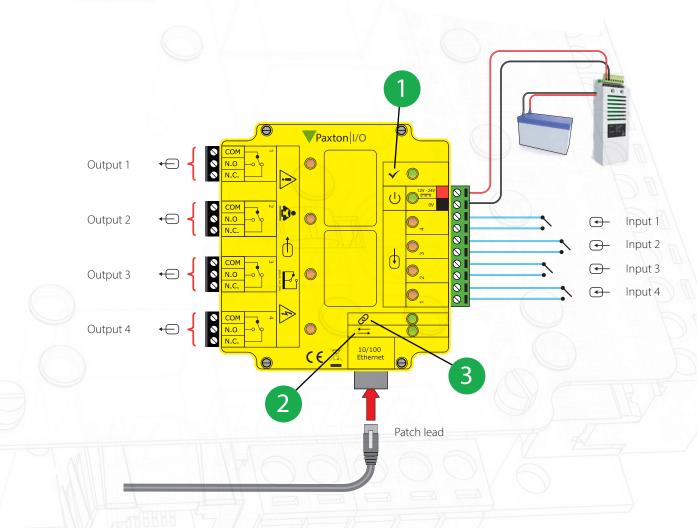
I/O boards can be used for any number of applications in conjunction with Net2 Triggers and Actions. For further information on Triggers and Actions see: APN-1067 - Using triggers and actions. < http://paxton.info/507 >

Installing the hardware

There are 4 inputs and 4 outputs on the I/O board. The input pair must be wired across clean contacts (switch or relay). The outputs are 13A / 240V AC voltage-free relays and can be used for any purpose.

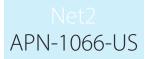
Once the I/O board has been installed, ensure that the network connection is in place and connected to the LAN before the unit is powered up.





OK LED, the OK LED will pulse on and off once the board is configured in the Net2 software.

Server link LED



Important

For the I/O boards to operate correctly there needs to be permanent communication between the Net2 Server and the boards.

The IP address should be reserved by the IT administrator and fixed in the server.

Software configuration

If you detect the MAC address but the device now shows 'Not Responding', check the IP address to make sure it is still in range with the PC or network. If it is not, you should either change the PC's IP address or the Ethernet interface's IP address so they are both again in the same range. Our Technical team can talk you through this if you need help.

If the MAC address does not appear when you click 'Detect' then you will need to check that the following ports are open:-

6480	ТСР
6481	UDP
6482	UDP
6483	UDP

Detect - This will automatically detect all I/O boards on the local network.

Identify - Identifies an I/O board by sounding its on-board sounder.

Remove - Deletes an I/O board.

The main display lists I/O boards on the network, displaying a green tick if communicating with it, the name of each board, the MAC address and IP address. Place a check in the box of the I/O boards that you wish to communicate with and Apply. Double clicking on a board will display its settings. The boards name can be amended, and any changes need to be applied to save.

A reservation should be made in the DHCP server, to ensure that the same IP address is issued each time, should the unit be reset. (Fixed IP) Consult your network administrator on detail of how to reserve IP addresses.

Each I/O board has four inputs and outputs; these can be edited in the relevant Inputs and Outputs tabs. By double clicking on the name this will allow you to change the name to give it meaning. e.g. Window contact.

The current settings of the I/O board are displayed in the table.



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Net2 Access Control Image: Events Image:	Ē	1st floor 10 Board IP Configuration Inputs Name Use DHCP	1st floor		
Coord		IP Address Subnet Gateway Information	10 . 10 . 255 . 72 255 . 255 . 0 . 0 ▼ 10 . 10 . 3 . 22 Item Status MAC Address Use DHCP IP Address Subnet	Detail configure 00-08-06-0F-88-82 No 10.10.255.72 255.255.0.0	1
Net2 actions Identify IO board R Log off	۲		Galeway Version	10.10.3.22 1.2.0009	
Net2 details	۲				
1st floor					
Net2 documentation	*				

If you wish to connect to an I/O board which is located on the far side of a router it will not automatically be detected, you will need to enter the IP settings manually.

Add the board by clicking Manually add I/O board in the Net2 actions menu. Enter the MAC address printed on the board, followed by the IP address, Subnet and Gateway.

Detection of the I/O boards

Select 'I/O boards' in the left hand tree diagram.

Net2 Access Control	IO Boards					
Events Events Users Constructed and the served ser	Name	MAC Address	IP Address	Version	Status	
Net2 actions Detect IO boards Manually add IO board Cog off						
Net2 details 🔹 🛞 IO Boards						
Net2 documentation 😵	•	III				4
	Detect	tify Reset	Remove Re	eplace		Apply



Detect - Clicking on this button will detect all I/O boards on the local network.

Identify - Clicking this button will cause the on-board sounder to 'beep' helping to locate this I/O board.

Reset - Clicking on this button will return the user settings to the factory default values.

Remove - Deletes an I/O board from the list.

Replace - This feature will enable an I/O board to be easily replaced. Once the new I/O board is online, a wizard will copy all the settings from the old unit into the new I/O board.

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Search Se	IO Boards					
🖾 Events	Name	MAC Address	IP Address	Version	Status	
🕀 😫 Users	☑ IO Board 000BD60FD61B	00-08-D6-0F-D6-18	10.10.255.48	0.00.000	Is not configured	
🕀 🍟 Access levels						
🕀 🖖 Timezones						
🕀 📕 Doors						
🛨 📒 IO Boards						
Triggers and Actions						

I/O boards that have been detected will be displayed with their MAC address.

<u>File View Go T</u> ools <u>O</u> ptions <u>H</u>	<u>l</u> elp					
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Vet2 Access Control Events Events Vers Access levels Timezones IO Boards VO Board - Main Gate Triggers and Actions	IO Ni IP Si	Board - Main Gate Board IP Configuration In ame c e DHCP Address binet	1/0 Board - Main Gate	>		
Friggers and Actions	1972	ateway iormation	0.0.0.0 Item Status	Detail Configured		
Net2 actions	*		MAC Address Use DHCP IP Address Subnet Gateway Version	00-0B-D6-0F-D6-1B No 10.10.254.8 255.255.0 0.0.0 1.2.0025		
Net2 details	*					
Net2 documentation		Identify Reset]	4	<u> </u>	Apply

Double click on an entry and it will bring up its configuration screen. The name can be changed as required and then click Apply.

To ensure that the I/O board always has the same IP address, it is recommended that you obtain a fixed/ reserved IP address from the network administrator.

Uncheck the DHCP option and enter the IP address in the text boxes using the '.' to move between fields.

Click Apply. The I/O board will store and use this new fixed address.

Net2 APN-1066-US

			r 📙 Open door 🤶 New	user 🔹 🊯 Timesheet 🔹	
Net2 Access Control	-	I/O Board - Main G			
🕵 Events 👥 Users		10 Board IP Configuration	n Inputs Relays		
😫 Users 🔚 Access levels		Name	I/O Board - Main Gate	X.	
Timezones	-	Use DHCP			
Doors	-	IP Address			
3 💹 IO Boards			10.10.254.8		
🔋 1/0 Board - Main Gate		Subnet	255.255.0.0	<u> </u>	
🎷 Triggers and Actions		Gateway	0.0.0.0		
Beports		Information	Item	Detail	
			Status MAC Address	Configured	
Net2 actions	۲		Use DHCP	00-08-D6-0F-D6-18 No	
Identify IO board			IP Address	10.10.254.8	
Log off			Subnet	255.255.0.0	
AN LOG ON			Gateway Version	0.0.0.0	
	\$		version		
Net2 details	*				
I/O Board - Main Gate					
Net2 documentation	*				

If the I/O board is connected to a different IP range to the PC, it will not be detected. You must therefore make a manual entry in the I/O table so that it can be registered.

Right mouse click the I/O Boards icon in the tree view and then select Manually add I/O board.

<u>F</u> ile <u>V</u> iew <u>G</u> o <u>T</u> ools <u>O</u> ptions <u>H</u> elp		💷 Enter IO Board Settings	- • •
🔶 Back 🗸 📄 🗸 💽 Refresh 🚍 Print 🧕		If you wish to connect to an IO the far side of a router, then you	
Net2 Access Control		settings manually.	
🖾 Events 🛛 👘 Name			
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🕀 🕒 Timezones		IP Address	0.0.0.0
🕀 📑 Doors		Subnet	255.255.0.0 ▼
D Boa Detect IO boards	Th	Gateway	0.0.0.0
Manually add IO board			OK Cancel

Fill in the fields and click OK to create an entry in the I/O table. The MAC is entered as 12 characters with no spaces.

Click on Detect and the unit should display a tick to show it is responding.

If you detect the MAC address but the device now shows 'Not Responding', you must check the IP address, to make sure it is still in range with the PC or network. If it is not, you should either change the PC's IP address or the I/O board's IP address so they are both again in the same range. Our Technical team can talk you through this if you need help.

If the MAC address does not appear when you click Detect, ensure that the following ports are open on all devices between this unit and the Net2 PC:-

_					-
	6480	ТСР	6482	UDP	
/m	6481	UDP	6483	UDP	

If you need to clear the IP address information and return the unit to DHCP mode, please contact Technical Support for a reset procedure.



Firmware download

Once the I/O board has been detected by Net2 the firmware version will be checked and upgraded if necessary. This may take several minutes and its progress will be seen in the Status column.

1000	Subnet	0.0.0.0		
	Gateway	0.0.0.0		
	Information	Item	Detail	
	•	Status	Updating firmware (-1% c	
		MAC Address	00-0B-D6-12-1B-08	
		Use DHCP	Yes	
		IP Address	10.10.26.50	$\sum \Pi$
		Subnet	255.255.0.0	
	10 board requires configuration.	Gateway	10.10.3.22	DHI
	Ensure the network settings are correct and click apply.	Version	0.00.000	- FR
				- Kal
				DR/

Eve	ents	2			
	Date/time	User	Token number	Where	Event
1	16/08/2012 16:25:34			I/O Board - Main Gate	10 board online
٩	16/08/2012 16:25:28			I/O Board - Main Gate	10 board not responding

The system will verify that the download was successful and then bring the I/O board online again.

Inputs and Outputs

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Net2 Access Control Events Stores Storess Timezones	* E	I/O Board - Main C IO Board IP Configuratio Below is a list of the inp Double click an item, to	n Inputs Relays	: 10 Board .such as 'Kitchen window cont	act'	
🛛 🥅 Doors		Name	Local index	IO Board	Toggle output	
a 🚺 IO Boards		Gate A1 - Open	1	1/0 Board - Main Gate	Relay 1	
📒 1/O Board - Main Gate		Gate A2 - Open	2	I/O Board - Main Gate	Relay 1	
Triggers and Actions		Gate B1 - Open	3	1/0 Board - Main Gate	Relay 1	
Thiggers and Actions	-	Gate B2 - Open	4	I/O Board - Main Gate	Relay 1	
Net2 actions	*					
Identify IO board						
Net2 details	*					
I/O Board - Main Gate						
Net2 documentation	*					
		Identify Re	eset			Apply

Simply double click on an entry to rename the item and click Apply. These names will be used in any 'Triggers and Actions' menus so be as descriptive as possible.

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	🧐 Net2 Access Control 🛛 🔽	I/O Board - Main Gate	e			
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G	🕀 🕒 Timezones					
1	🛨 📕 Doors	Name	Local index	IO Board		
	🖃 🃒 10 Boards	Gate A1 - Control J1	1	I/O Board - Main Gate		
	🖇 I/O Board - Main Gate	Gate A2 - Control J2	2	I/O Board - Main Gate		
	🕈 Triggers and Actions 🛛 🚽	Gate B1 - Control J3	3	I/O Board - Main Gate		
	1	Gate B2 - Control J4	4	1/0 Board - Main Gate		- 1
	Net2 actions					-
	Identify IO board 🖗 Log off					-
	Net2 details					
	I/O Board - Main Gate					
	Net2 documentation 😵					
		Identify Reset			Apply	
				System en	gineer 🛛 😏 Galvani	1.

The Relay names can be changed in the same way.

Triggers and Actions

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🛸 Events	*	Triggers and Actions		
🛨 😫 Users		Rule name	Туре	When is rule active
🕀 🍟 Access levels		🗹 Open Gate A1	When an input on an IO board is pressed	During the timezone:All day, every day
🕀 🕒 Timezones	Ξ	✓ Turn on Air Conditioner - Room 101	When a user is granted access through a door	During the timezone:All day, every day
E Doors				
🖃 💹 10 Boards				
I/O Board - Main Gate Triggers and Actions				
	Ψ.			
Net2 actions				
👎 Add new rule				
😤 Log off				
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2 items				
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		Add Delete E	dit	Apply
				System engineer 2 Items 🖳 Galvani 🏑
2	_			

The basic control of an I/O board is provided by 'Triggers and Actions'.

An air conditioner can be turned on remotely by the presentation of a user card to a reader.

For Triggers and Actions to function correctly, the server must be running and communicating with all control units and I/O boards. This can be confirmed by setting up a rule that sends an email or SMS to the System Engineer to investigate if the unit goes offline.

Reset procedure

- 1. Remove yellow cover
- 2. Power down unit
- 3. Press and hold reset button while powering the unit back up
- 4. Wait for 3 bleeps
- 5. OK LED flashes briefly when the board is powered back up (Note: The OK LED will remain off until the I/O board has been configured in the Net2 software.)

