Ins-30054 Net2 485 TCP/IP Ethernet Interface - Rev3

Paxton

Technical Support

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Technical help is available: Monday - Friday from 07:00 - 19:00 (GMT)
Saturday from 09:00 - 13:00 (GMT)

Documentation on all Paxton products can be found on our website - http://www.paxton.co.uk/

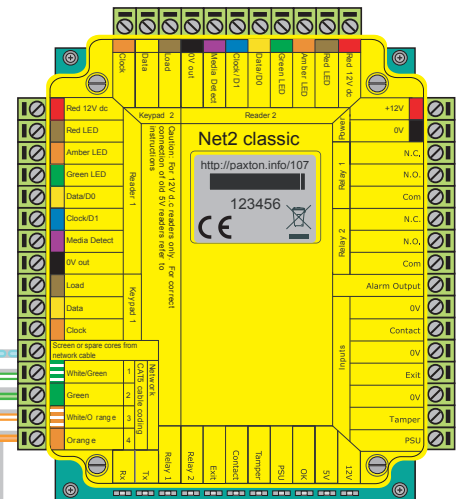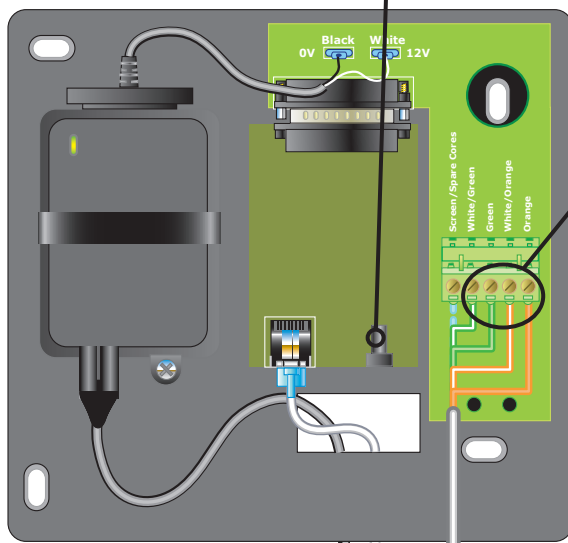## Suitability

DHCP compatible
(fixed IP recommended) ✓

Connect over LAN, WAN or VPN ✓

IMPORTANT - THIS IS A NETWORK DEVICE
Please contact your IT Administrator before installing this product

WARNING
The TCP/IP ethernet interface is powered through its 25 way D-type connector.
Do NOT apply power to the jack socket.

Fitting

Use 120 Ohm termination resistors if this
unit is at the end of the line.

Net2 classic
http://paxton.info/107
123456
CE

To next ACU

Unswitched fused spur

The interface plugs directly into
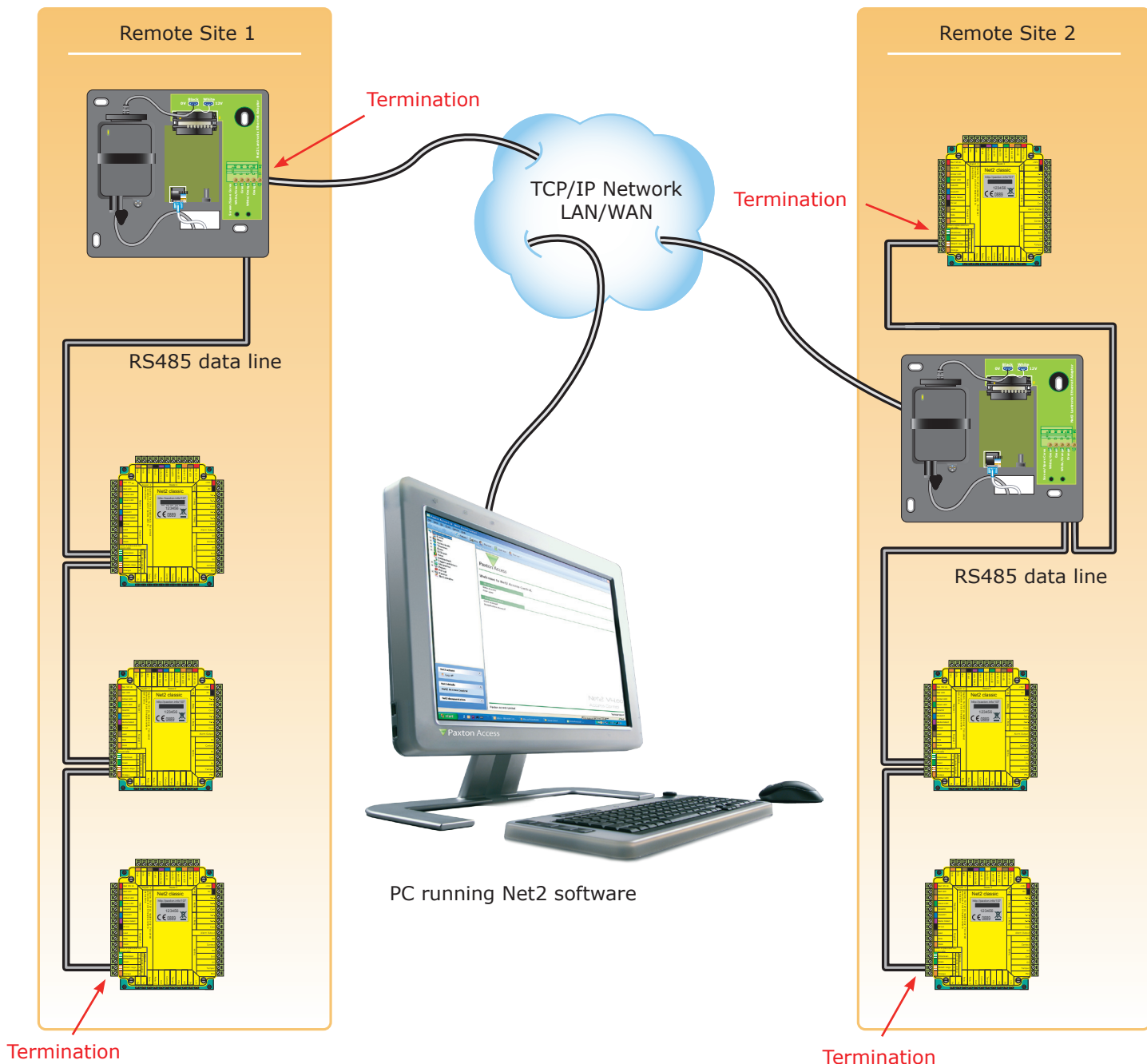the TCP/IP Ethernet network via
a standard RJ45 connection box.

IMPORTANT
Apply power to the unit after connecting the RJ45 plug
to a network point.

This device requires Net2 v4.07 or later to operate.
Earlier Net2 software is not compatible with this unit.
If your PC can only support Net2 v3 software, please
contact Technical Support for further advice.

The Net2 TCP/IP Ethernet Interface allows a Net2 data line to be controlled from a PC running the Net2 Server across a TCP/IP Ethernet network.

There is a 1 km maximum length for a data line. This can be increased by using Net2 RS485 high speed repeaters (477-836) or by creating multiple data lines using several Ethernet connections controlled from the one PC.

The data line must be wired in a single daisy chain. The data converter may be located anywhere along the data line. 120 ohm terminating resistors must be linked across each data pair at the beginning AND end of the line. This can be done on many units with a switch or jumpers. If not, free resistors are provided with the converter.

Remote Site 1

Termination

TCP/IP Network
LAN/WAN

Remote Site 2

Termination

RS485 data line

RS485 data line

Termination

Termination

PC running Net2 software

Diagnostic LED's

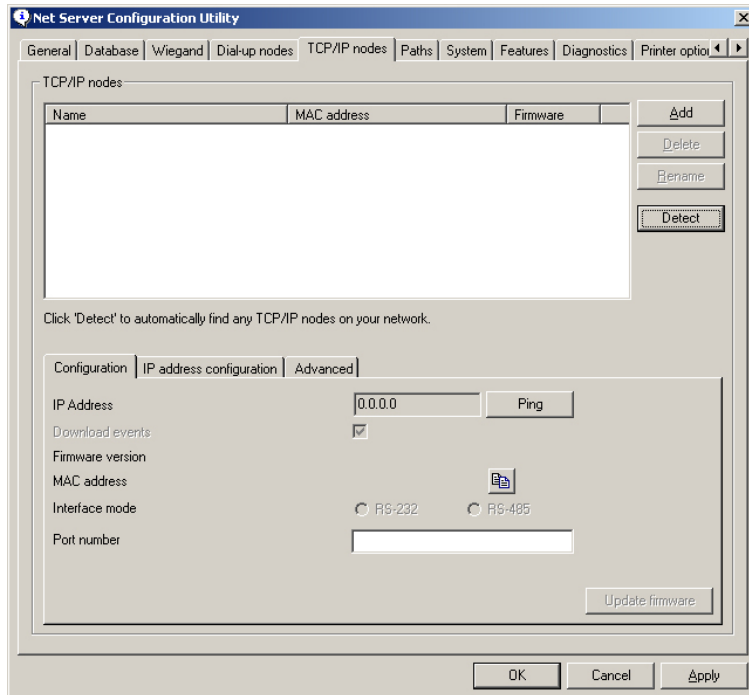**Led Key**
- Channel Status
- Diagnostic (red)
- Duplex (yellow = Half : green = Full)
- Speed (yellow = 10 Mbit/s : green = 100 Mbit/s)
- Power LED

When connecting to a LAN

The IP address should be assigned a fixed value, or should be given a DHCP reservation. Unreserved IP addresses issued by DHCP servers are not guaranteed to be constant, leading to potential failure of communication between Net2 software and the device.
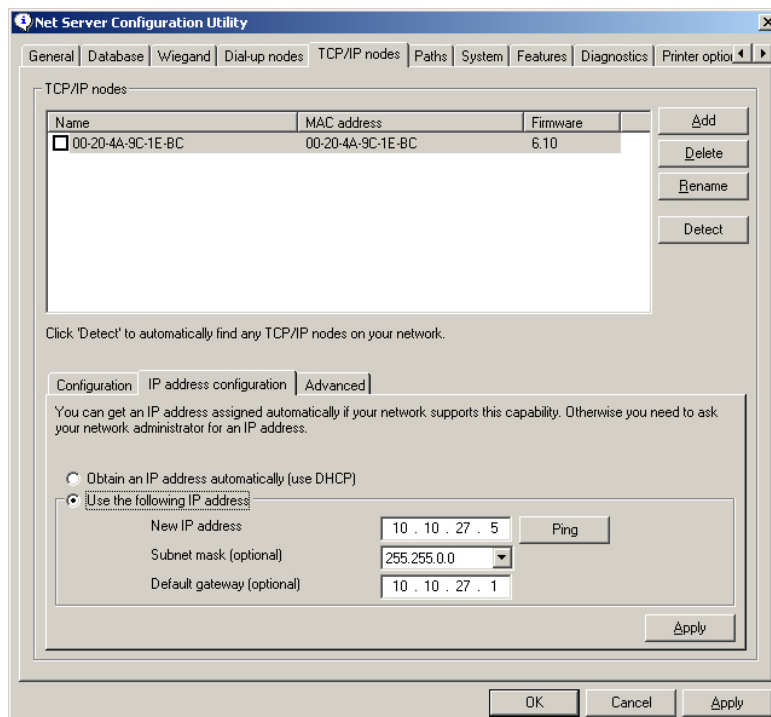
Run the Net2 Server Configuration Utility (Start/Programs/Net2) and Click on TCP/IP nodes.

Click on **Detect** and the MAC address of the device(s) will appear in the table. You must then use the "IP address configuration" tab to manually assign the IP address, subnet mask and gateway.

Be aware that if the IP address that you give the device is not in the same IP range as the PC, the device will no longer respond until you connect to it with a PC that is in the same IP range.

Some firewall/virus protection software and other wireless hardware can block the IP detection process. Disable these and try to detect the device again. Please contact Technical Support if you require further advice.

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 IP address of the PC or the IP address of the device 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:-

9999	TCP		10001	TCP		30718	UDP

If you still cannot detect the MAC address of the device, call our Technical Support Help line.

Connecting to a WAN or different subnet mask

If you are connecting this device to a remote subnet which is different from the Net2 software PC, the standard detect mechanism cannot work across the network routers between them. The IP address, along with the correct subnet mask and gateway for the remote subnet have to be set. Either do this on the local subnet with the existing Net2 PC, or use a PC on the remote subnet once the device is installed.

The PC that has the Net2 server installed must be able to access the IP address range on the WAN/remote site. This may require the routers and gateways to be configured between the networks. Again, this would be done by the Network administrator of that site. Make sure the ports listed above are open on all intermediate routers.

Once installed, create a record with the **Add** button (if none was created during initial set up) and you should then be able to detect its MAC by entering the IP address in the Configuration screen Ping box.

Naming TCP/IP Ethernet interfaces

The rename button can be used to give an interface a meaningful name in the system. This can be especially useful when more than one interface is used. The name will appear in the doors screen within Net2 showing which ACU's are connected to which data line, helping in any future fault finding process.

TCP/IP Loopback test

The following test should be run if there are problems setting up the IP configuration of the interface. This test sends data to the device and checks this against the data it receives back. This confirms that the network is working correctly.

The Net2 server program must be shut down during this test.

Remove any wires from the RS485 data line connector and create a hardwired data loop as follows. Connect the Orange to White/Green and Green to White/Orange. To run the test, go to Net2 Server Config Utility/TCP/IP Nodes/Advanced and click on Loopback test. If the test fails, connect the unit directly to the PC with a crossover cable and test it again. Should this still fail, please call Technical Support for further advice.

Specifications			C E
Electrical	Min	Max	
Voltage	11V DC	14V DC	
Current		250 mA	
Environment	Min	Max	
ACU per data line	1	200	Max 500 per system
Data lines per PC	1	100	Net2 v4.14
Ethernet network speed		100 Mbit/s	
Ethernet bandwidth requirement		200 kbit/s	
DHCP support (fixed IP recommended)			Yes
RS485 network speed		115.2 kbit/s	
Operating temperature	-20 °C	+55 °C	
Waterproof	NO - If used externally, it must be protected in a plastic weatherproof housing		
Dimensions	Width	Height	Depth
	170 mm	175 mm	40 mm

This product is not suitable for retail sale. All warranties are invalid if this product is not installed by a competent person.