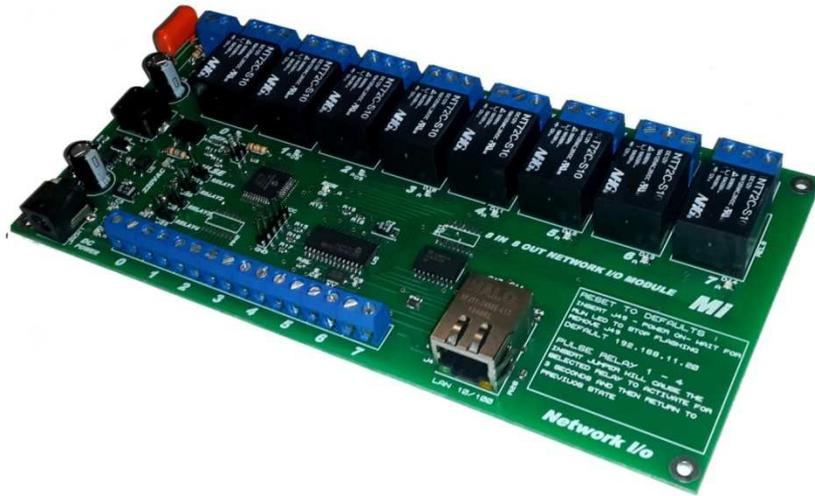**Mi**

Innovative Electronics for a changing world

Manual

1.System description

2.Physical dimensions

The Network I/o module is an 8 channel input and 8 channel output relay board with Ethernet connectivity.

The module was designed to remotely switch power and check status of inputs via an Ethernet network.

POWER SUPPLY:

Power is supplied to the board via the on board DC jack – 12V @ 1Amp adapter or 12 V Battery system /

INPUTS :

8 potential free inputs is available, the user should only make an electrically free contact on each input to activate the input *** do not supply a voltage on these inputs***

OUTPUTS :

8 Isolated relay outputs is available with led indication on board indicating the relay status.

The relay outputs is electrically free outputs, so the user can switch different voltages eg. AC or DC through different relays. Normally **open**, normally **closed** and **common** contacts are available on the output terminals for each relay.

NETWORK SETTINGS:

By placing J49 near micro processor across both pins and then apply power to the board , the run led will flash a couple of times and then illuminate steady , the jumper can now be removed and placed over one pin of J49 again.

The board is in default state now : IP address 192.168.11.20

Using a web browser connect to the default 192.168.11.20 address:

Home screen will be displayed

The home screen will be refreshed automatically every 3 seconds from the board to show updated or changed information

Reload : Click on Reload if user want to force a page refresh

VDC : Indicates the DC voltage level supplied to the board : user can monitor battery Voltage in case of the dc supply when connected to a battery

INPUTS :

Indicates the input status for each input channel if active or not.

OUTPUTS :

Indicates the status of output Relays. When a relay is toggled the browser will send code to the device, once received the specific relay will change state, the board will then update the browser with the status of the relay. (eg. Its not possible to have a on command displayed in browser with a relay actually being in the off position. The browser gets updated from the board)

OUTPUT 0 to 3 :

NORMAL MODE:

In Normal mode the relay will only change state in case of an command received from the browser (called normal mode)

PULSE MODE:

Just below the processor on the board is 4 jumpers marked relay 0 to 3 pulse mode. By placing the jumper across both pins of the jumper selector the channel is placed into pulse mode. This can be done without re-starting the board – be careful not to short anything else on the board.

The home page will indicate which channels is in pulse and normal mode

In pulse mode by toggling the relay status, the relay will change state for 3 seconds and then return to the previous state. This can be used for instance where a wireless radio device gives the connection to a site where the Network I/o module is installed and the user wants to reset the radio device without locking himself out permanently , the radio will reboot in 3 seconds.
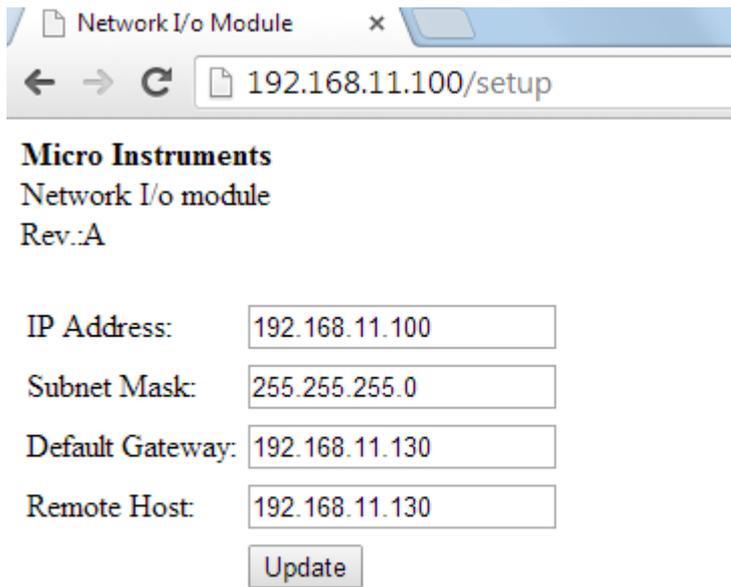
220V:

Indicates the current status of the mains 220vac supply if it is present or not.

If the board is powered from a battery supply the user can monitor the 220vac supply. User have to connect Live and Neutral to the terminal marked 220vac.

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Network settings page:

Clicking on IP address setup will display the setup page

The user can change the Network related settings and click on update.

The unit will then restart with the new Network settings. This will be saved in non volatile memory and will be called up every time the board is re-started or re-powered.

If the IP address is changed to a new IP address but still in the same range the unit will upon a click on submit, save the new Network settings and auto direct to the new IP address and display the home status screen automatically.

2. Physical Dimensions of pcb

(L) = 194mm

(W) = 97mm

(H) = 20mm

Weight = 0.465 Kg