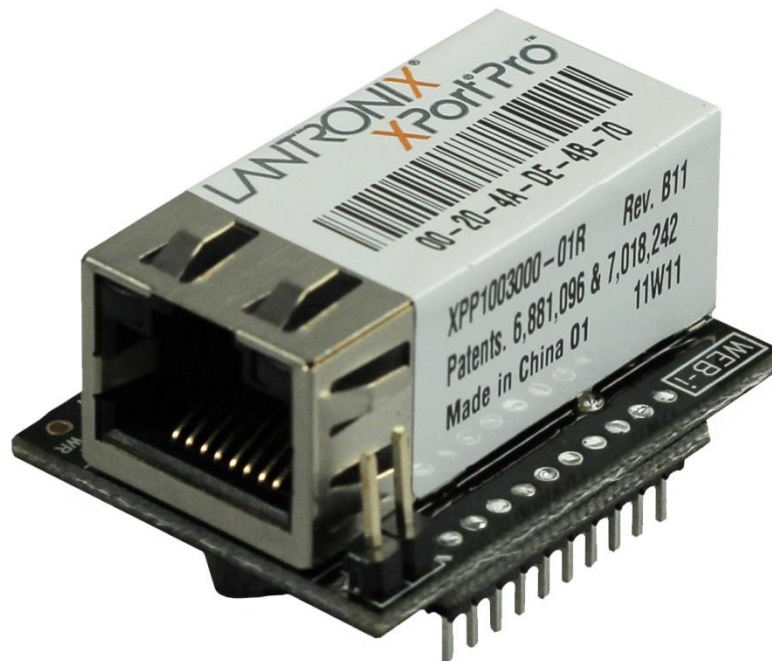# NATIONAL CONTROL DEVICES

Web-i Quic k Start Guide

Internet (Web) Interface Module

NATIONAL CONTROL DEVICES

Web-i

Internet (Web) Interface Module

NOTICE:

All customers are STRONGLY ADVISED to purchase at least ONE USB Communication Module. This communication module may be used to recover a controller or to reconfigure a controller should there be an accidental loss of communications. NCD Tech support may be unable to assist customers who do not have a USB Communications Module available for troubleshooting purposes.

Purchase USB Communications Module from our website at this link:

http://www.controlanything.com/Relay/Device/ZUSB

NOTICE:

When using a Web-i module with a Pulsar series device, ALWAYS be sure to disconnect the power supply when installing or removing the communication module. If you do not do this you risk frying the Web-i module. Symptoms that this has already occurred are failure to communicate through an Ethernet port *or* failure to communicate through the USB port using the Zigmo modem.

If the module has been damaged in this way the NCD warranty will NOT apply! Visit our website for warranty information:

http://www.controlanything.com/Relay/Relay/RETURN

# Table of Contents

Beginning Users

Web-I Setup

Things you will need:

- ➢ A computer running Windows XP, Vista, or Windows 7 (only required for IP Address discovery)
- ➢ NCD Base Station software: (http://assets.controlanything.com/Software/NCDBaseStation.zip)
- ➢ Once a device has been discovered, any web browser from any device or computer is required to access the Web-I interface.
- ➢ A device with a Web-I interface.
- ➢ A Router (make sure you are using a Router, not an Ethernet switch)
- ➢ You will have to configure port forwarding on your router to access the Web-I over the Internet. If you are unfamiliar with this process, please visit www.portforward.com for explicit instructions for your router model.
- ➢ Ethernet Cable
- ➢ Power Supply (We Strongly recommend 12V DC Computer Regulated)

Things you will need to know:

- ➢ IP Address for Web-i Device
- ➢ Port Number of Web-i Device
- ➢ Default Device Login: webi
- ➢ Default Device Password: 1234
  This can be configured in the "Device Configuration" portion of the interface. Scroll down to "Set Up the Password for the Device" section.
- ➢ Default FTP Login: webftp
- ➢ Default FTP Password: 1234

Getting Started

1. Make sure you have thoroughly read all precautions for your device to avoid damaging your controller.

2. Connect your Web-i enabled device to your router using an Ethernet cable (DO NOT use a Crossover Cable). DO NOT connect the Web-i to an Ethernet switch; you MUST connect it to a router for proper operation. Connect an appropriate power supply for your device.

3. Run NCD Base Station software. (Select Link to download and install NCD Base Station software).

4. Select "Network" Connection Setting.

5. The Base Station software will scan your network for Web-i communication modules. Each device will be listed by the MAC address. There should be at least one Web-i module listed. If there are several listings, there are multiple Web-i or .net device on the same router. If this happens, simply match the MAC address printed on the top of your module, located underneath the barcode, against the available listings to discover your module.
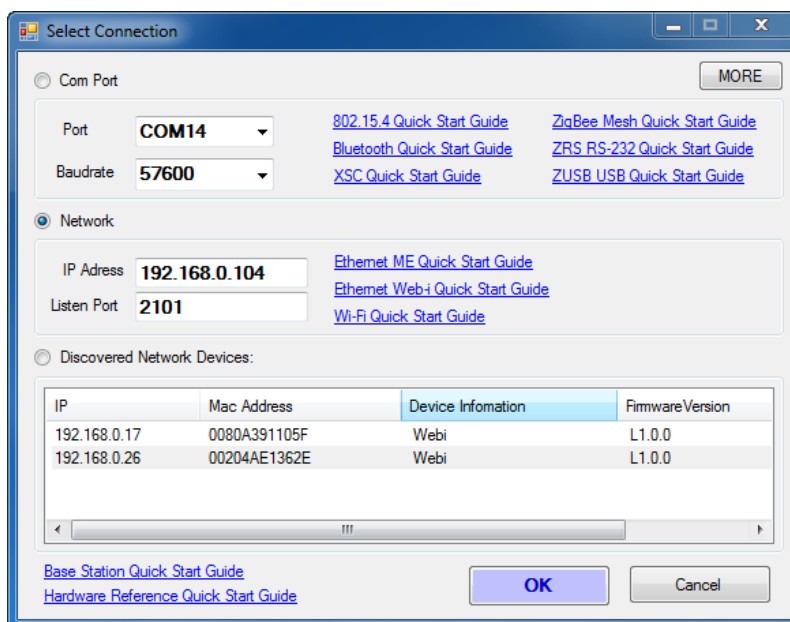

6. Double click on the appropriate available MAC address for your Web-i device. This should open a new tab in your favorite browser. You may also open a browser window and type the IP Address in the location bar.

7. At this point, you should see a Web-i webpage appear (see next page).

Web-i Interface

This webpage is generated by the Web-i module and will allow you to access and control your device over a local area network or from anywhere in world with Remote Internet Access (with some additional setup)

Each page of the interface controls a different function of the device. The "Relays" page allows control of relay functions. The A/D page shows a reading of the A/D input values for each relay. The "My Page" page allows multiple commands to be sent at once with customized control Macros. The "Console" page allows manual control of individual commands sent to the Web-i module. The "Network" page provides the basic information concerning your device. The "Configure" page allows you to configure the settings of your controller. Some modules may have a "Trigger Events" page, which allows user to trigger specialized functions of their device.
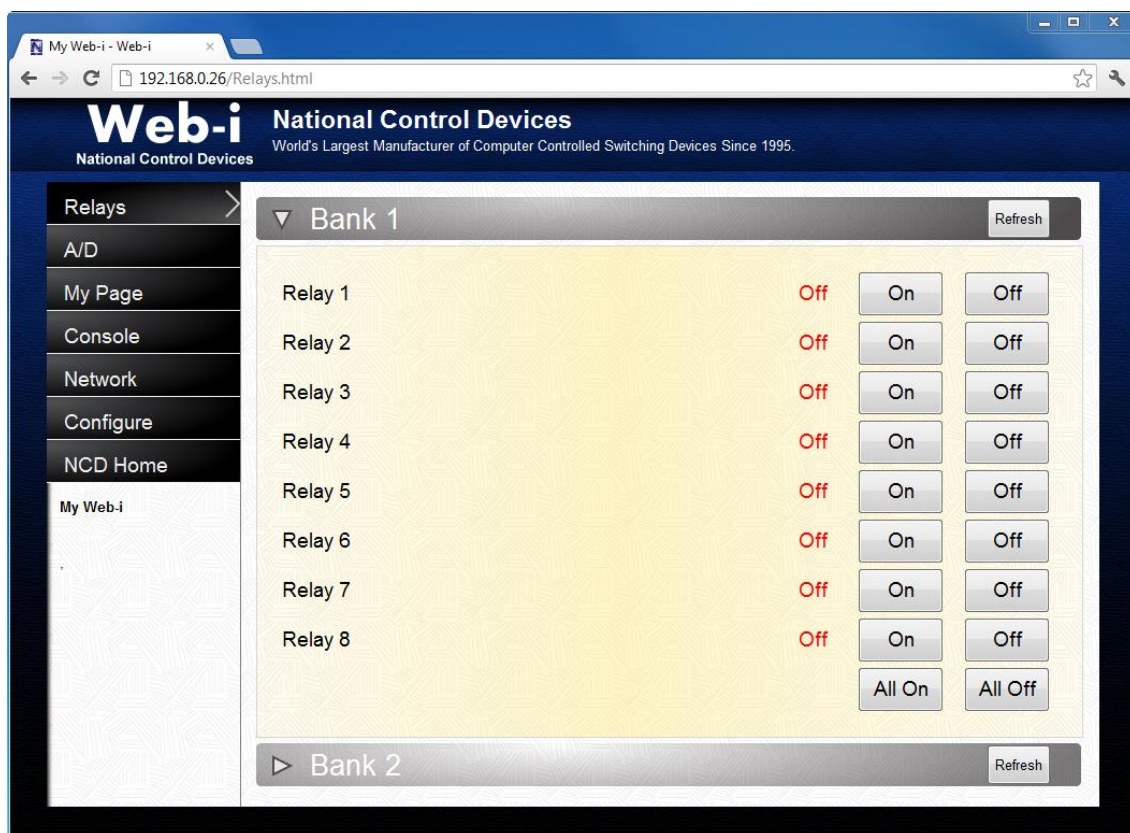
Remote Internet Access

Web-i controllers can be accessed remotely through an Internet connection using any device with an embedded web browser such as a smartphone, tablet, or computer. To do this simply open the web browser on your device, enter link.signalswitch/Your MAC address. *The MAC address should be entered without the colons, dashes, or spaces.*

Example: link.signalswitch.com/00204ael35ff

Note: The device may only be accessed in this way when the Web-i controller and web browser are connected using different networks. If the controller and device are on the same Local Area Network, do not use link.signalswitch.com. Simply enter the devices IP address into the URL.

Also note that port forwarding must be configured on your router. To setup port forwarding, you will need:

➢ The IP Address of the Web-i device on your LAN
➢ The Port Number of the Web-i device (which is port 80)
➢ The port number to be forwarded (default 8080)
➢ For most devices simply forward incoming requests on Port 8080 to Port 80 of the Web-i's Address. You can change the forwarded port through the Web-i configuration pages. Note that Port 80 must not already be in use on your network.

Please visit www.portforward.com for complete instructions on how to setup port forwarding on your router, as most brands and models are covered with explicit directions on this website.

Note:

➢ The Web-i listens on Port 2101 if you would like to access this device through a TCP/IP Socket connection.
➢ The Web-i provides webpage content on Port 80.
➢ If you still do not have internet access through link.signalswitch.com view our Web-i Troubleshooting video.

Setting Static IP Address

DHCP is enabled by default on your device. In order to activate a static IP Address, Visit the "Configure" page of the Web-i Interface. When setting the static IP, be sure that IP is within bounds of your router and is currently not being used by another device. If communication with the static IP is lost, switch the PRG/RUN jumper on the controller from RUN to PRGM. This will re-enable DHCP, allowing you to reconfigure your device with useable static IP Address. Note that any changes made to the configuration of your device will only be applied after you select the "Reboot" option on the "Configure" page.

Advanced Users

Customizing Your Web-i Interface

FTP (File Transfer Protocol to Web-i

File Transfer Protocol allows the Web-i user to edit the webpage that controls their device by moving files form the Web-i module to a local computer using a FTP client and then back to the module once changes are made. This allows personalization preferences starting with but not limited to, putting a specified company name across the top of specified pages, creating a list of custom commands, adding increased UI (User Interface) capabilities for your Application.

FTP Client Page
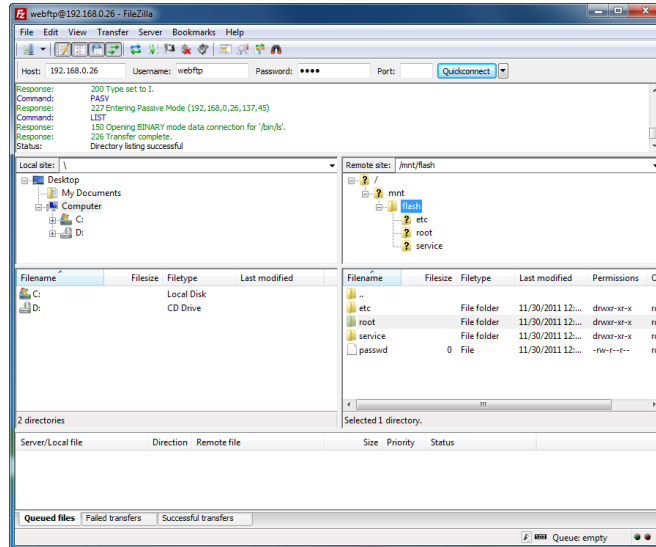
You first have to obtain an FTP Client in order to perform file transfers to your device. We suggest "Filezilla," a freely available FTP Client that may be acquired through www.filezilla-project.org. To use, visit the website and download the client version.

1. When you have accessed an FTP Client, input the IP Address of your device into the "Host" field.

   ➢ EXAMPLE: 193.168.1.31

2. In the "Username" field type webftp

3. In the "Password" field type 1234.

4. Ignoring the "Port" field, Select "Quick Connect". There should be a list of commands and responses showing in the previously blank field below. The "Remote" field will also be populated.

5. In the "Remote Site" section there will be multiple folders available. Expand the folder named "Flash" by clicking the "+" beside it. There will be three more files listed: "ETC", "Root", and "Service".

Remote Site Field

Remote site: /mnt/flash/etc
/
  mnt
    flash
      etc
      root
      service

   ➢ ETC: Stores all configuration files.

   ➢ Root: Is the base folder for all html files. For examples, javascript and images.

   ➢ Service: Contains administrative configuration files. Files such as those that determine whether or not you want to use the NCD Component Network with your device.

FTP Process Example: Simple edit of A/D html page

1. Select "Root" folder in the "Remote Site" field.

2. Select AD.html" file.

3. Drag the file over to "Local Site" field.

4. Right click on the file, select "Open". We open the file in Microsoft Sharepoint.

5. To edit, select "Code" tab.

6. We are going to do a simple title change, so find the line <h1>. This should read "National Control Devices". Change this line to read your company name. Then change the line below (<p>) to read your company's slogan.

    ➢ We are changing the names in two fields to give a short example of the process. Changes can be as simple or extensive as you need them to be.

7. Save changes and then exit.

8. When you are finished editing a file, drag it back from the "Local Site" field to the "Remote Site" field and overwrite the file.

9. You can then open your web interface on your browser to view the changes made. The specific outlined above will be apparent on the A/D page of your interface.

    ➢ A video detaining the FTP process is available here. The link will direct you to a Web-i product page on the NCD website, scroll down to "Video Resources" and select over arrow once for "FTP to Web-i" instructional video.

CGI Gateways: Web-i JavaScript Gateways

This is a library demonstrating how to access the gateways built into the Web-i module using JavaScript.

*A random number followed by a : (colon) is needed with some commands to prevent the browser from caching the results. The random number will be denoted by rndvar (random variable) where rndvar is a random number from 1-1000. This can be achieved with the code: Math.floor(Math.random()*1000) in javascript. Commands requiring rndvar are noted with *. Look for rndvar after the ? in a command example.

➢ **getAdName.sh**
This allows you to pull the user customized names of the A/D inputs stored in the module and returns a string.
> Example: http://192.168.1.12/cgi-bin/getAdNames.sh

➢ **getBankCount.sh**
This queries the number of relay banks currently configured for the board and returns an integer.
> Example: http://192.168.1.12/cgi-bin/cgi-bin/getBankCount.sh

➢ **getBankRelayNames.sh***
This queries the name of the bank and the relays in that bank of a specific bank number and returns a string.
> Example: http://192.168.1.12/cgi-bin/getBankRelayNames.sh?rndvar:1

➢ **getDefaultHome.sh**
This allows you to query the selected default homepage for the Web-i Interface. Returns a string.
> Example: http://192.168.1.12/cgi-bin/getDefaultHome.sh

➢ **getMacros.sh***
Queries the module for the individual Macro Commands on the My Page section of the interface. Returns a string.
> Example: http://192.168.1.12/cgi-bin/getMacros.sh?rndvar:0

➢ **getnetworkinfo.sh**
This queries the board for its MAC address and IP Address. Returns a string.
> Example: http://192.168.1.12/cgi-bin/getnetworkinfo.sh

➢ **getWebConfi.sh**
Queries the module for the web configuration information. Returns a string.
> Example: http://192.168.1.12/cgi-bin/getWebConfig.sh

➢ **runcommand.sh***

Forwards commands to the module. Can be used for a single command or a series of up to 3. Can also specify the number of bytes expected back and the timeout period Returns a string. The syntax is "cmd=254,108.1r1t300" where directly after the cmd= is the command you want to send, then the number after the r is bytes expected back, and the number after the t is the timeout period for communications.

> Example: http://192.168.1.12/cgi-bin/runcommand.sh?rndvar:cmd=254,109,1r1t300:cmd=254,110,1r1t300:cmd=254,101,1r1t300

➢ **setAdNames.sh***

Saves the names of the A/D inputs into the modules/

> Example: http://192.168.1.12/cgi-bin/setAdNames.sh?rndvar:name1,name2,name3,name4,name5,name6,name7,name8

➢ **setBankCount.sh***

Saves the number of banks into the module

> Example: http://192.168.1.12/cgi-bin/setBankCount.sh?rndvar:4

➢ **setBankRelayNames.sh***

Saves the number of banks into the module. The syntax is "bankNumber;name1,name2,name3,name4,name5,name6,name7,name8"

> Example: http://192.168.1.12/cgi-bin/setBankRelayNames.sh?rndvar:1;name1,name2,name3,name4,name5,name6,name7,name8

➢ **setDefaultRelayNames.sh***

Saves the preferred home page for the Web-i interface into the module.

> Example: http://192.168.1.12/cgi-bin/setDefaultHome.sh?rndvar:Relays.html

➢ **setIpConfig.sh***

Saves the IP Address and configuration into the module. The syntax is "0,ipAddress,subnetMask,defaultGateway" where the first value of 0 is a static IP Address and 1 is DHCP enabled.

> Example: http://192.168.1.12/cgi-bin/setIpConfig.sh?rndvar:0,192.168.1.25,255.255.255.0,192.168.1.1

➢ **setMacros.sh***

Saves the commands in the macro to the module. The syntax is macroTitle:command1;bytesback1;timeout:command2;bytesback2;timeout2:comand3;bytesback3;timeout3

> Example: http://192.168.1.12/cgi-bin/setMacros.sh?rndvar:My Macro:254,109,1;1,300:254,110,1;1,300:254,111,1;1;300

➢ **setWebConfig.sh***
Saves the web configuration preferences such as whether it will work with signalswitch.com or whether it will have a web page. The syntax is "1,0,1". A 1 means enabled and a 0 means disabled. The first number is the NCD Network Component, the second is the use with signalswitch.com, the third is whether the module has a web page or not.

Example: http://192.168.1.12/cgi-bin/setWebConfig.sh?rndvar:1,0,1

Troubleshooting

<u>If you are unable to save configuration files or experience general functional errors:</u>

 ➢ Avoid using Internet Explorer with your Web-i device, we suggest using Firefox or Google Chrome.

<u>If you experience a loss of communication with a static IP Address:</u>

 ➢ Revisit the PRGM/RUN jumper option from page 7 under "Setting Static IP". Remember, switching the jumper to PRGM setting enables DHCP allowing you to regain communication in order to reconfigure the settings of your device.

<u>If Web-i Interface pages do not display all content:</u>

 ➢ Enter the following sequence into the address bar of your web browser: http://deviceIPAddress/cgi-bin/resetEtc.sh
This will reset the configuration files for the device. The device will then have to be reconfigured.

**<u>If the AD page of Web-i Interface is freezing up:</u>**

 ➢ Go to A/D Configuration page (AD Configuration tab is found on the Configure page of the Web-i interface) and increase the refresh rate.

<u>If you experience problems discovering the Web-i module on your network:</u>

 ➢ Unblock Ports 13000 and 13001

Technical Support

Technical support is available through our website, <u>controlanything.com</u>. **Support** is the way we connect NCD engineers to our customers.
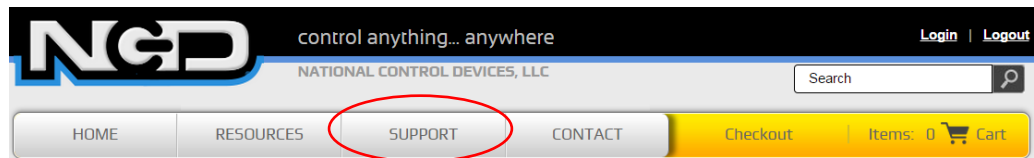
*Click on the **Support** tab at the top of any page on our website to be taken to the **Forum** page. Here you can publicly post or review problems that customers have had, and learn about our recommended solutions.*

Our engineers monitor questions and respond continually throughout the day. Before requesting telephone technical support, we ask that customers please try to resolve their problems through **Support** first. However, for persistent problems, NCD technical support engineers will schedule a phone consultation.

Contact Information

National Control Devices, LLC
PO Box 455
Osceola, MO 64776
417-646-5644 phone
866-562-0406 fax
Open 9 a.m. - 4 p.m. CST

Like "National Control Devices" on Facebook, and follow us on Twitter @ControlAnything.

All orders *must* be placed online at our website, www.controlanything.com

Notice:

The only authorized resellers of NCD products are

- www.controlanything.com
- www.relaycontrollers.com
- www.relaypros.com

All other websites are not authorized dealers; we have noticed some retailers offering our products fraudulently.