RS232/RS485/RS422
Wired Device Server- up to 4500'
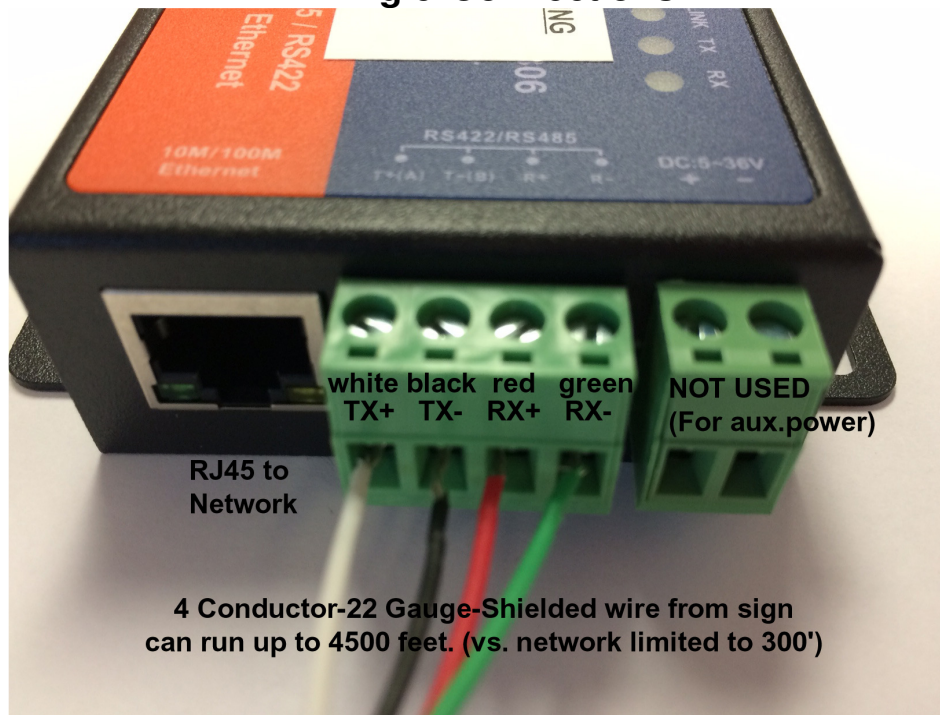**For direct wire connection from sign to Network,**
or to implement Wireless RF Modem to Network.

RS232/RS485-2 wire
WiFi Device Server-up to 50'
For WiFi HotSpot Like connections,
Direct connect to the sign with Laptop

Wiring & Connections

white black red green **NOT USED**
TX+ TX- RX+ RX- **(For aux.power)**

RJ45 to Network

4 Conductor-22 Gauge-Shielded wire from sign
can run up to 4500 feet. (vs. network limited to 300')

RS232 / RS485 / RS422 wiring configuration:
Use the provided RS232 - DB9 connection on the device to connect to a wireless RS232 modem we may have supplied, or directly to the signs RS485-2 wire- communication wires coming into the building. The grey communication wire will have a white and a black conductor within it that will connect to the screw terminals on the Device server. Pin-A(TX+) is the white wire and Pin-B(TX-) is the black wire. Otherwise our standard wiring from the sign uses RS422 (4 wire) as below:
       T+ = WHITE WIRE   T- = BLACK WIRE   R+ = RED WIRE   R- = GREEN WIRE

DEVICE SERVER TO WIRELESS RF MODEM SETUP

1) Take your existing RF Modem and Serial Cable & Power Adapter
   and find a suitable "Line Of Sight" (LOS) location that is nearest
   to the sign (usually in a window sill)
   and mount both the Device Server & The modem in LOS of sign.
2) Connect the 6 foot RS232 serial cable from the modem to the Device Server.
3) Connect the Device Server to the Ethernet Computer Network.
4) Plug in both power adapters to a receptacle that must be within
   reach of its 6' power cords.

Note: -The Network Administrator must provide us with a IP/subnet/gateway
information to pre-program.
   -The dual power receptacle must be near to the LOS location or an extension
    used.
   -An active network jack must be available nearby, along with a proper length
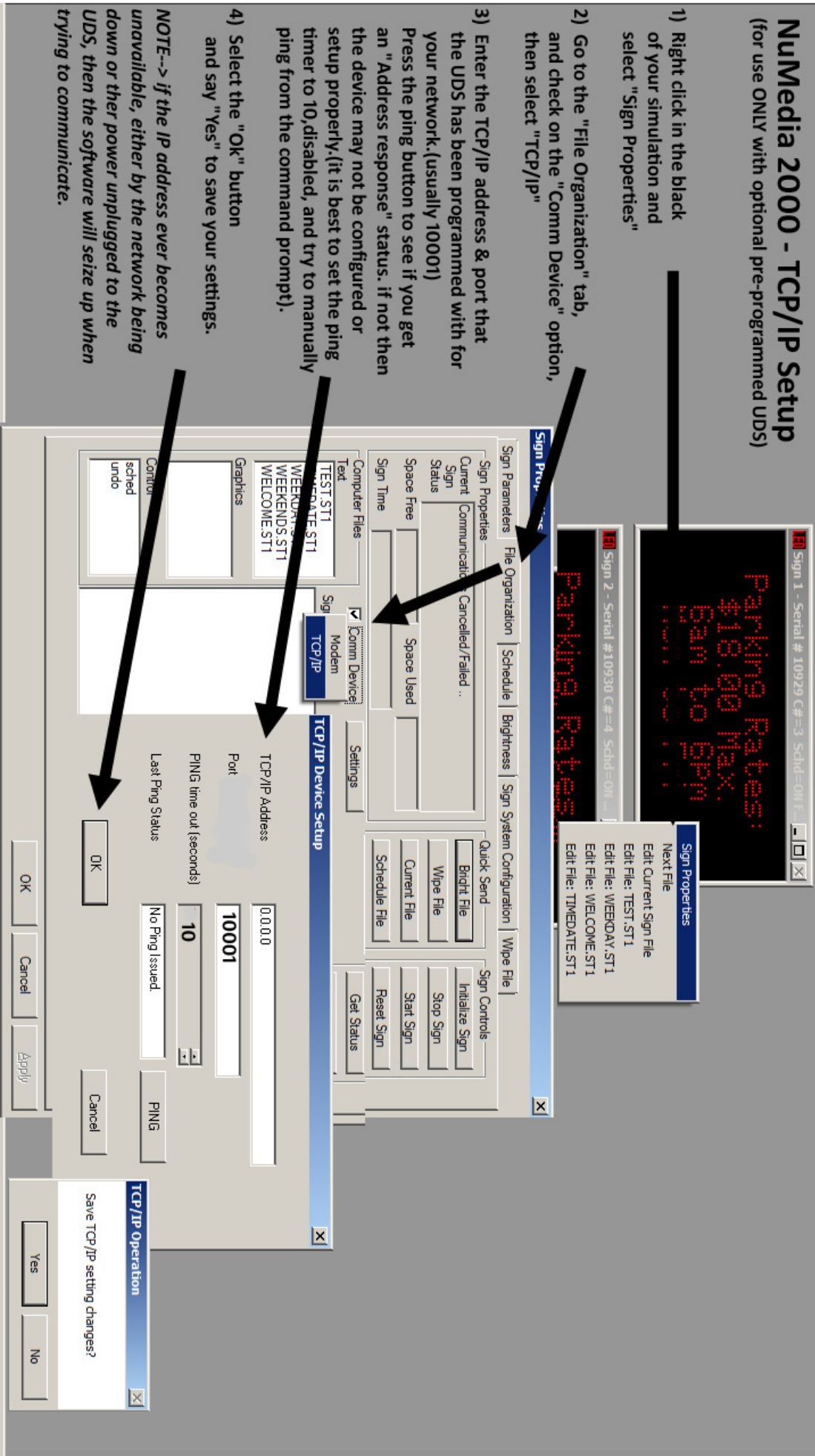   network cable to reach the Device Server.

NuMedia 2000 - TCP/IP Setup
(for use ONLY with optional pre-programmed UDS)

1) Right click in the black
of your simulation and
select "Sign Properties"

2) Go to the "File Organization" tab,
and check on the "Comm Device" option,
then select "TCP/IP"

3) Enter the TCP/IP address & port that
the UDS has been programmed with for
your network.(usually 10001)
Press the ping button to see if you get
an "Address response" status. if not then
the device may not be configured or
setup properly.(it is best to set the ping
timer to 10,disabled, and try to manually
ping from the command prompt).

4) Select the "Ok" button
and say "Yes" to save your settings.

NOTE--> if the IP address ever becomes
unavailable, either by the network being
down or ther power unplugged to the
UDS, then the software will seize up when
trying to communicate.

Sign Properties

Sign Parameters | Communication | File Organization | Schedule | Brightness | Sign System Configuration | Wipe File

Current Cancelled/Failed ..
Sign Status

Space Free   Space Used

Sign Time

Computer Files
Text
TEST.ST1
TIMEDATE.ST1
WEEKDAY.ST1
WEEKENDS.ST1
WELCOME.ST1

Graphics

Control
sched
undo

Sign
☑ Comm Device
Modem
TCP/IP

Settings

Quick Send
Bright File   Initialize Sign
Wipe File   Stop Sign
Current File   Start Sign
Schedule File   Reset Sign
                Get Status

Sign Controls

OK   Cancel   Apply

Sign 1 - Serial # 10929 C#=3 Schd=ON F...

Parking Rates:
$10.00 Max.
6am to 6PM

Sign 2 - Serial #10930 C#=4 Schd=ON ....

Parking Rates:

Sign Properties
Next File
Edit Current Sign File
Edit File: TEST.ST1
Edit File: WEEKDAY.ST1
Edit File: WELCOME.ST1
Edit File: TIMEDATE.ST1

TCP/IP Device Setup

TCP/IP Address   0.0.0.0

Port   10001

PING time out (seconds)   10

Last Ping Status   No Ping Issued.   PING

OK   Cancel

TCP/IP Operation

Save TCP/IP setting changes?

Yes   No

If using the USR-VCom application, Screen settings below (Used for "Virtual Com port" redirector; not advised to use & we do not support)
-This app/utility will search your network for devices or allow you to program the device(s) as needed and Map it to a "Com Port#" for serial devices that do not have the option for a TCP/IP setting to use.

The App and User Guide can be downloaded from the following link,
http://nu-mediadisplays.com/support/USR-VCOM-Setup-UG.zip
and includes the complete User Guide for more complex configurations
which are not supported by Numedia Display Systems

We strongly suggest to use the web interface instructions instead below & on page 4.
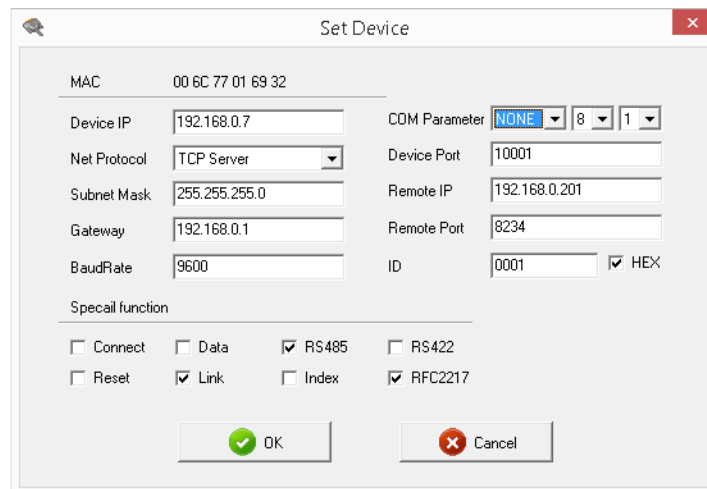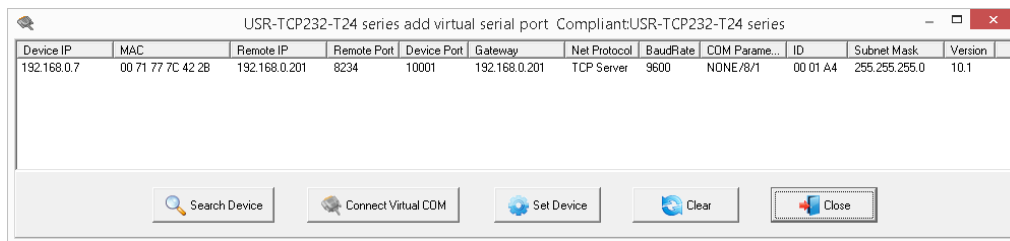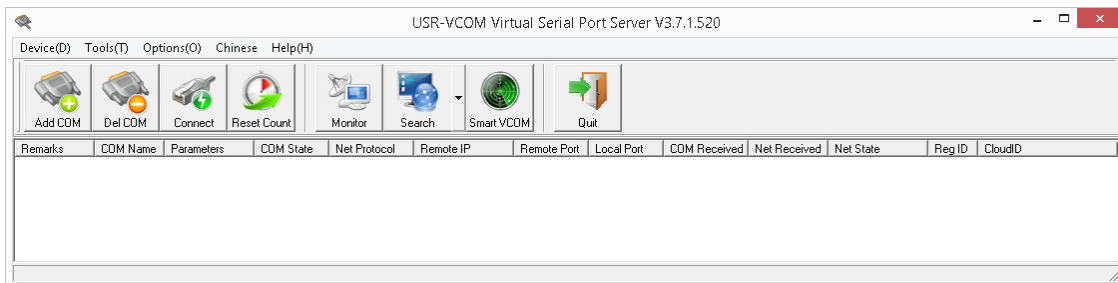
We strongly suggest to use the web interface instructions instead below.

To use the web interface to program the unit (suggested):

Go to the Web interface of the device at http://192.168.0.7 (user=admin pass=admin)
Note--> your PC must be on the same network segment as instructed below.

To configure your Laptop or PC to a static IP address:
1) Open your Network and sharing center by clicking on the network icon next to your clock.
NOTE: You may also have a Wi-Fi Connection which should be disabled or turned off during this process when using a wired Ethernet connection.
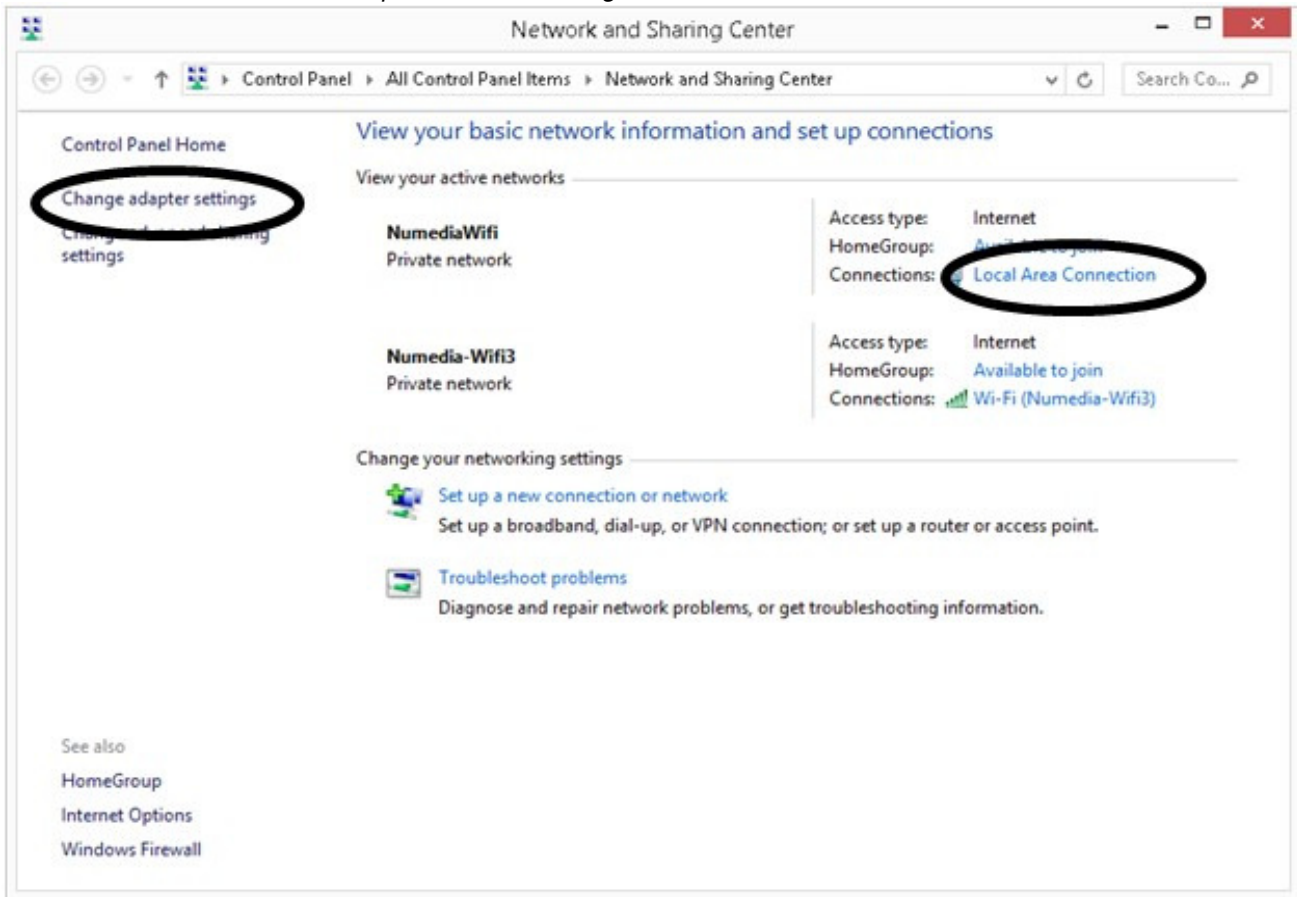
2) From the Network and Sharing Center Window, click on the "Local Area Connection" link on the right side, or the "Change adapter settings" link on the left side and then right click on the "Local Area Connection" (or Ethernet) icon and select "Properties" and the following screen will appear.

3) then highlight Internet Protocol Ver.4 and press the "properties" button below it.

4) This will bring you to a screen where you can change the settings, keeping in mind that if you already have settings in here, that they must be put back once you complete your task. (most of the time this is set to "Obtain an IP address Automatically")
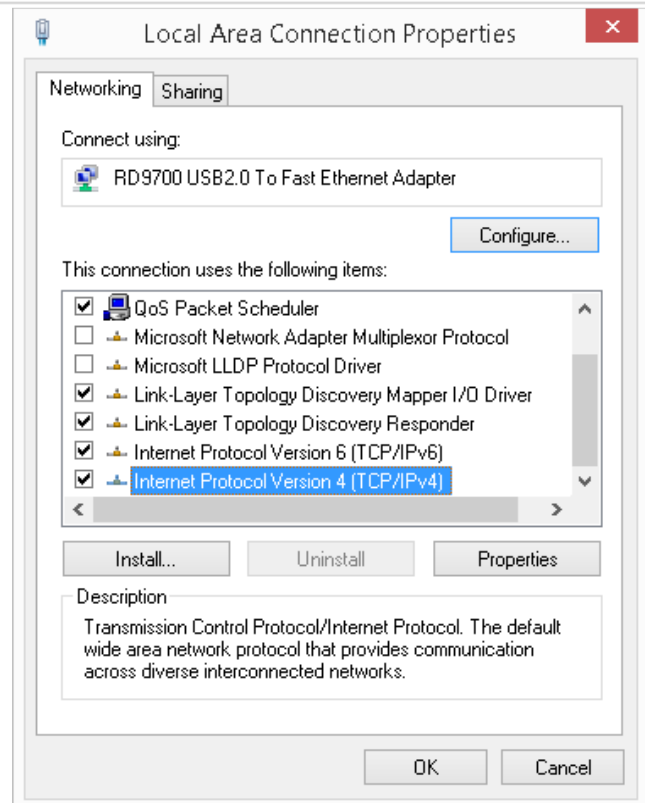
5) Enter the IP address of 192.168.0.100 and the subnet mask with 255.255.255.0 and gateway can remain blank.
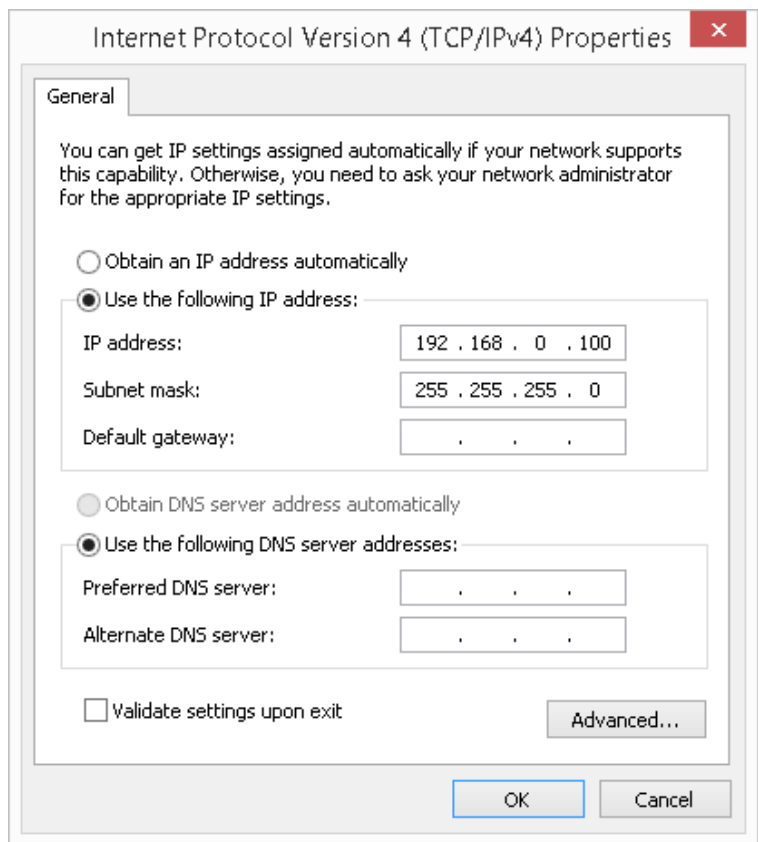
6) Press "OK" on that TCP/IP V4 screen to close it and save the settings.

7) Proceed to the firmware page as instructed to program your device as required.

8) Once your device is programmed, you will no longer be able to access it, unless you repeat the steps above and assign yourself an IP address that is now within the new range you programmed it with.

Alternatively, you should now be able to plug the network device into the network you programmed it for and test it or ping its new IP address.

9) Be sure to set your PC/Laptop back to its original settings if required.

Internet Protocol Version 4 (TCP/IPv4) Properties ☒

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically

◉ Use the following IP address:

IP address:	192 . 168 . 0 . 100
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	. . .

○ Obtain DNS server address automatically

◉ Use the following DNS server addresses:

Preferred DNS server:	. . .
Alternate DNS server:	. . .

☐ Validate settings upon exit   Advanced...

OK   Cancel

Continue to use the web interface to program the USR Device server (suggested):

Go to the Web interface of the device at http://192.168.0.7 (user=admin pass=admin)
Note--> your PC must be on the same network segment.
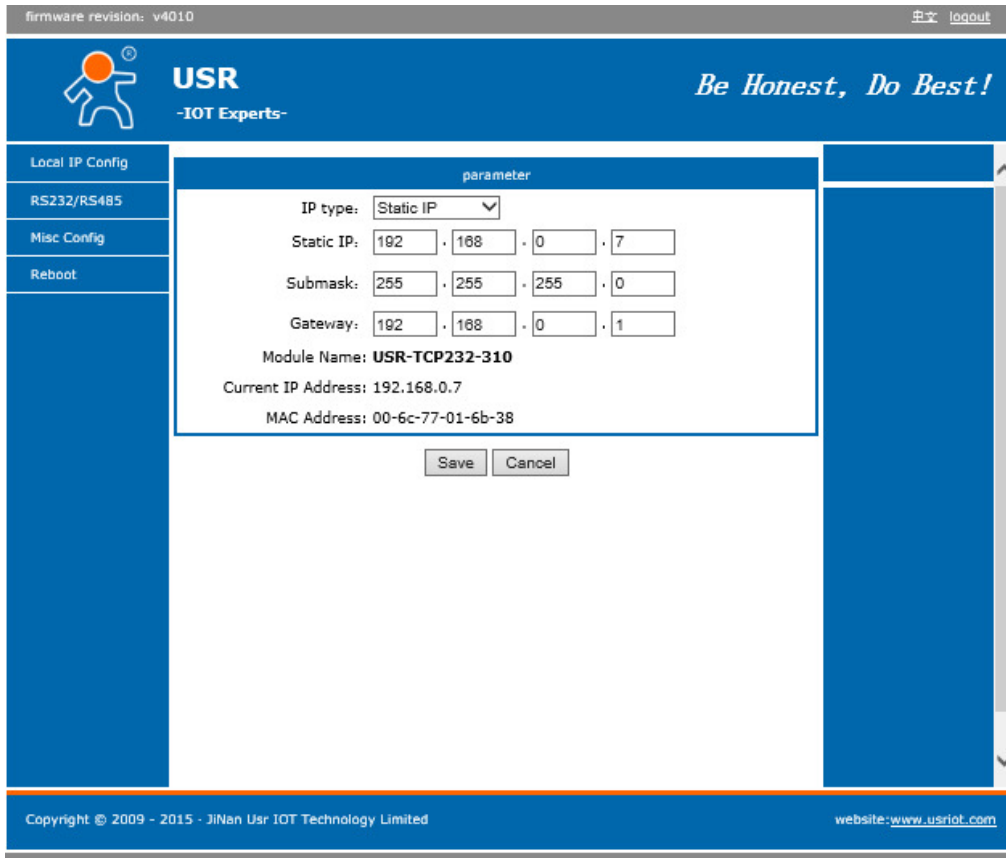
The following Options/Pages for Configuration are:

- Local IP Config: the module's ip address, subnet mask and gateway parameter
- RS232: the module's serial to ethernet parameter
- Web to Serial: web to serial data transparent
- Misc Config: some parameter such as user name and password parameter
- Reboot: user can reboot/restart module from here

---NOTE---
DO NOT CHANGE ANY OTHER SETTINGS EXCEPT FOR THE "LOCAL IP CONFIG"
AS NUMEDIA SIGNS USE THE FOLLOWING PRESET SETTINGS TO OPERATE WITH OUR SIGN
CONTROLLERS.

. Default Parameter List: Numedia Preset settings (not the devices default settings):

Classes	Default Settings	NUMEDIA SETTINGS
IP Address	192.168.0.7	-client must provide
Subnet Mask	255.255.255.0	-client must provide
The Default Gateway	192.168.0.1	-client must provide
Baudrate	115200	9600
Parity/Data/Stop	None，8，1	Same
Local Port	20108	10001
Remote IP	192.168.0.201	Not used-device is set to TCP SERVER
Remote Port	8234	Not used
User Name	admin	Same
Password	admin	Same

Diagram 2-3 pc parameter

Numedia Preset settings (not the devices default settings):

1) set baud rate to 9600 and local port to 10001, and net protocol set to "TCP Server" then save and reset. (this is already done by us initially when tested in house)

2) set IP/subnet/gateway, then save and reset module as asked.

3) test with new IP. (RS485 or RS232 is auto detected-no changes required)

RS232 / RS485 / RS422 wiring configuration:
Use the provided RS232 - DB9 connection on the device to connect to a wireless RS232 modem we may have supplied,
or directly to the signs RS485-2 wire- communication wires coming into the building. The grey communication wire will have a white and a black conductor within it that will connect to the screw terminals on the Device server.
RS485-2wire: Pin-A(TX+) is the white wire and Pin-B(TX-) is the black wire.
Otherwise our standard wiring from the sign uses RS422 (4 wire)as below:
T+ = WHITE WIRE   T- = BLACK WIRE   R+ = RED WIRE   R- = GREEN WIRE

Please contact us at the number below for further support if required.

Nu-Media Display Systems Inc.   165 Matheson Blvd. East Unit 8   Mississauga, Ontario, Canada, L4Z 3K2
Tel: 905.568.0990   Toll Free: 1.800.676.4502   Web: www.nu-mediadisplays.com

Page 8 of 8   NM-USR-DeviceServer-Setup-Scenarios&Instructions-April2020.doc