

DS Manager IP Setup For use with Hall Research Products

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Hall Research Inc.

Home of the Mini-Cat®

1. Introduction

1.1 General

Many Hall Research products are IP enabled allowing communications across a LAN network to communicate with the product. Some products are shipped in DHCP mode which allows the customers network to assign an IP address. Other products are shipped with a static IP address. Consult the product documentation for more information.

To find the Hall Research device on your compatible LAN network requires the use of the DS Manager utility. This small Windows™ based utility scans the local network and displays a list of all compatible devices found.

2. Installation

2.1 Download the DS Manager Installation

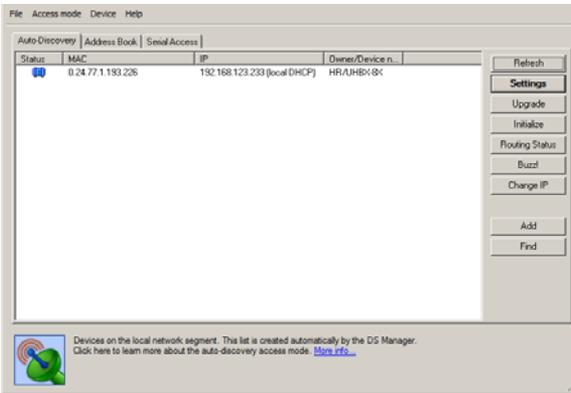
Access the Hall Research product webpage and download the appropriate 32 or 64 bit Windows™ application.

Unzip and execute the installation program.

Run the DS Manager application

A window similar to below is displayed with a list of all compatible devices found.

If no devices are listed, click the REFRESH button. If no devices are listed, contact you IT administrator to ensure that all the proper network settings are in place.



3. Configuration

3.1 Ethernet Configuration

If the configuration of the end users LAN is compatible with the default settings, then the user is not required to make changes to the Ethernet Configuration.

If the configuration is not compatible, use the DS Manager to change the unit's configuration.

Set the IP Address to any STATIC unused address available on the end-users network.

The IP Address of the model must be in the same subnet as any computer attempting to access the device. If the computer attempting to access the device is on another network subnet, then the end-user is responsible for configuring any network routers or switches necessary to allow access to the devices IP Address on Ports 23 and 1001. Contact your network IT administrator for assistance with these settings.

Set the Gateway Address to the required IP Address of the end-users Gateway. If the end-user will always access the device from a computer connected on the same network node, then the Gateway Address may be left at its default value. Contact your network IT administrator for assistance with these settings.

Set the Net Mask to the required values compatible with the end-users network. If the end-user will always access the device from a computer connected on the same network node, then the Net Mask may be left at its default value. Contact your network IT administrator for assistance with these settings.

3.2 Settings

The user must select the desired device and click the "SETTINGS" button to obtain access to that device's configurable parameters.

To change a parameter, click on the field next to the parameter's name and enter the appropriate information.

Click the OK button when finished and the information will be uploaded into the device. There will be a short time delay while the device reboots.

4.5 Access via Port 23 and Port 1001 or 6324

A HyperTerminal TCP/IP connection can be used to access either PORT 23 or 1001.

- Either Port 1001 or 6324 is used for the RS232 communication through the device. All communication occurs at the baud rate that the device is currently configured for. The LAN connection Baud Rate must match the speed being used by the RS232 ports for meaningful communication to occur. Consult the product manual for more information.
- Port 23 can be used to change specific parameters in the device such as its IP Address, Gateway Address, Baud Rate...etc.

To run a HyperTerminal window, open the application and set it up for TCP/IP connection on PORT 23 along with the device IP address as the host address.

Commands to PORT 23 have the following format and replies:

STX	Command/Reply	CR
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- STX character (ASCII code 0x02 or CTRL-B from the keyboard)

The unit will respond with the following codes indicating the status of the command requested. Anything other than 'Accepted' indicates a problem with that command/connection to the VSA-31-IP Module:

- <^B>A means Accepted
- <^B>C means Error
- <^B>R means Rejected
- <^B>D means Denied
- <^B>F means Failed
- <^B>S means Bad Sequence

In the following table, the following notations are used:

- <^B> denotes the STX Character, 1 Byte of 0x02
- <CR> denotes the CR Character, 1 Byte of 0x0D

Command	Purpose	Reply	Notes
<^B>L<CR>	Log Into Module	<^B>A<CR>	
<^B>O<CR>	Log Out of Module	<^B>A<CR>	
<^B>E<CR>	Reboot Module	None	IP Connection to module will be lost

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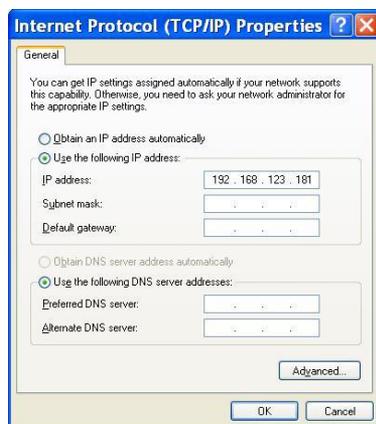
Command	Purpose	Reply	Notes
<^B>GFE<CR>	Get Modules MAC Address	<^B> xxx.xxx.xxx.xxx.xxx.xxx<CR> Where xxx.xxx.xxx.xxx.xxx.xxx represents the MAC Address	
<^B>SFExxx.xxx.xxx.xxx.xxx.xxx<CR> Where xxx.xxx.xxx.xxx.xxx.xxx represents the MAC Address	Set Modules MAC Address	<^B>A<CR>	1 st Digit must be EVEN. Must REBOOT for changes to take effect It is recommended that the MAC address not be changed
<^B>GIP<CR>	Get Modules IP Address	<^B>Aaaa.bbb.ccc.ddd<CR> Where aaa.bbb.ccc.ddd represents the IP Address	
<^B>SIPaaa.bbb.ccc.ddd<CR> Where aaa.bbb.ccc.ddd represents the IP Address	Set Modules IP Address	<^B>A<CR>	Must REBOOT for changes to take effect
<^B>GPN<CR>	Get Modules Port Number	<^B>Aaaaa <CR> Where aaaaa represents the Port Number from 0 to 65534	Defaults to 1001
<^B>SPNaaaa<CR> Where aaaaa represents the Port Number	Set Modules Port Number	<^B>A<CR>	Must REBOOT for changes to take effect
<^B>GGI<CR>	Get Modules Gateway Address	<^B>Aaaa.bbb.ccc.ddd<CR> Where aaa.bbb.ccc.ddd represents the Gateway Address	
<^B>SGIaaa.bbb.ccc.ddd<CR> Where aaa.bbb.ccc.ddd represents the Gateway Address	Set Modules Gateway Address	<^B>A<CR>	Must REBOOT for changes to take effect
<^B>GNM<CR>	Get Modules SubNet Mask	<^B>Aaaa.bbb.ccc.ddd<CR> Where aaa.bbb.ccc.ddd represents the SubNet Mask	
<^B>SNMaaa.bbb.ccc.ddd<CR> Where aaa.bbb.ccc.ddd represents the SubNet Mask	Set Modules SubNet Mask	<^B>A<CR>	Must REBOOT for changes to take effect
<^B>GBR<CR>	Get Modules Baud Rate	<^B>Aaa <CR> Where aa represents the Baud Rate as follows: 0 = 1200 5 = 38400 10 = 600 1 = 2400 6 = 57600 11 = 28800 2 = 4800 7 = 115200 3 = 9600 8 = 150 4 = 19200 9 = 300	
<^B>SBRaa<CR> Where aa represents the Baud Rate as follows: 0 = 1200 5 = 38400 10 = 600 1 = 2400 6 = 57600 11 = 28800 2 = 4800 7 = 115200 3 = 9600 8 = 150 4 = 19200 9 = 300	Set Modules Baud Rate	<^B>A<CR>	Must REBOOT or LOG OUT for changes to take effect
<^B>GPR<CR>	Get Modules Parity	<^B>Aaa <CR> Where aa represents the Parity as follows: 0 = Off or None 1 = Even 2 = Odd 3 = Mark 4 = Space	

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Command	Purpose	Reply	Notes
<code><^B>SPRaa<CR></code> Where aa represents the Parity as follows: 0 = Off or None 1 = Even 2 = Odd 3 = Mark 4 = Space	Set Modules Parity	<code><^B>A<CR></code>	Must REBOOT or LOG OUT for changes to take effect
<code><^B>GBB<CR></code>	Get Modules Serial Data Bits Per Byte	<code><^B>Aaa <CR></code> Where aa represents the Data Bits per Byte as follows: 0 = 7 1 = 8	
<code><^B>SBBaa<CR></code> Where aa represents the Data Bits per Byte as follows: 0 = 7 1 = 8	Set Modules Serial Data Bits Per Byte	<code><^B>A<CR></code>	Must REBOOT or LOG OUT for changes to take effect

Note on IP Settings via port 23

If you are unable to access the unit's port 23 from your PC using the IP Modules default or last known IP address, it could be that the IP address of the IP Module is not compatible on your LAN. One way around this is to connect your PC directly to the IP Modules RJ45 port using a cross over cable, or use a switch or router not connected to anything else but your PC and the IP Module, and then configure your PC for a static IP address compatible with the current address of the IP Module. If the IP Module has the factory default of 192.168.123.199, a PC address of 192.168.123.nnn may be entered where nnn is any number except 199.



5. Troubleshooting

5.1 Contacting Hall Research

If you determine that your device is malfunctioning, do not attempt to repair the unit. There are no user serviceable parts inside the unit. Opening the unit will void the warranty.

Contact the Hall Research Technical Support department at 714-641-6607 to obtain an RMA (Return Authorization) number.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description.

5.2 Shipping and Packaging

If you need to transport or ship your device:

- Package it carefully. We recommend that you use the original container if possible.
- Before you ship the units back to Hall Research for repair or return, contact us to get a Return Authorization (RMA) number.