

DIGITALVIEW®



CONNECT WHERE IT COUNTS

# IP Controller

(IP-50)

## INSTALLATION GUIDE

Version 1.4

**Revision History**

<b>Amendment Date</b>	<b>Version</b>
August 2007	V1.0
October 2007	V1.2
November 2007	V1.4



# 1 Introduction

The IP-50 is a network device that allows you to control RS-232 enabled devices over a TCP/IP based Ethernet and the Internet using a web browser.

The IP-50 features an embedded Web Console Program (WCP) that allows developers to change command settings and make their own web pages. This guide assumes that the IP-50 has been programmed to match.

Applications include:

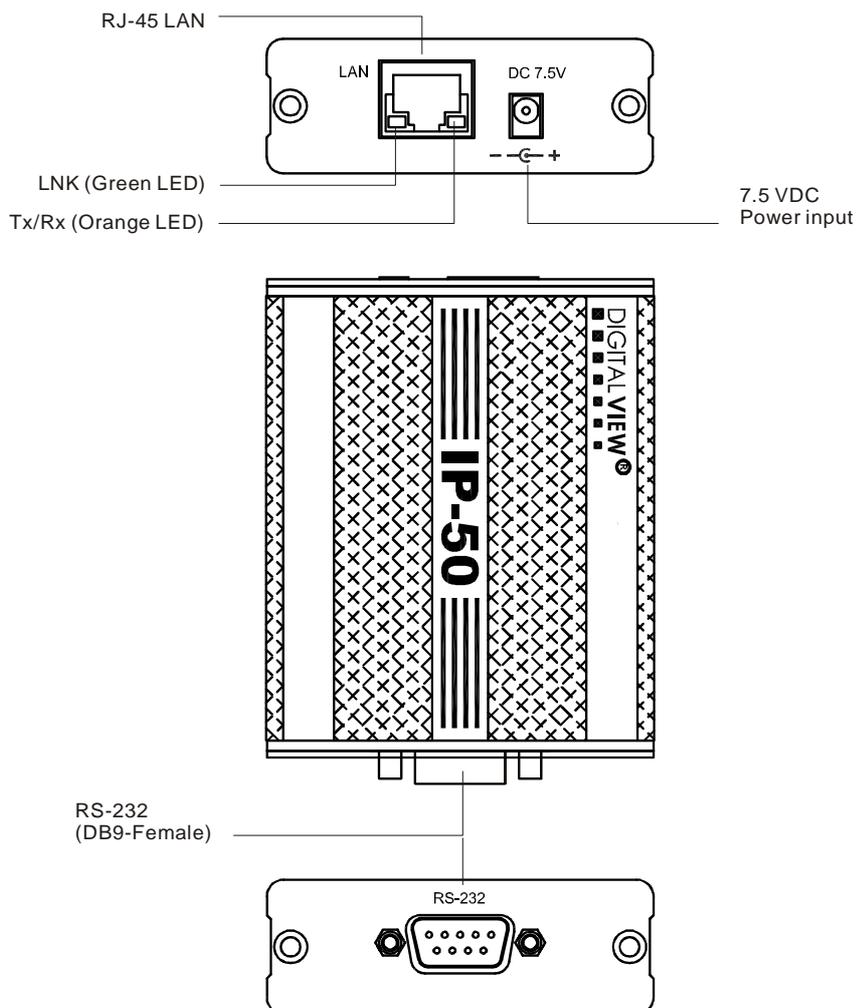
- Digital Signage installations
- Industrial systems remote monitoring and control
- Environmental monitoring (e.g. Temperature, light etc)
- Control and monitoring of Digital View products

# 2 Features

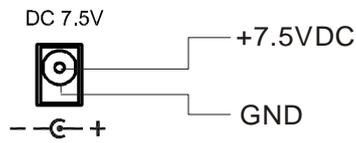
## 2.1 Features of the IP-50

- Compact solid aluminum housing.
- Simple straight forward connection to Ethernet, RS-232 and DC power.
- Integrated web server with simple development tools. Users can develop their own web console program as well as web pages for external devices.
- Supports DHCP client and fixed IP addresses.

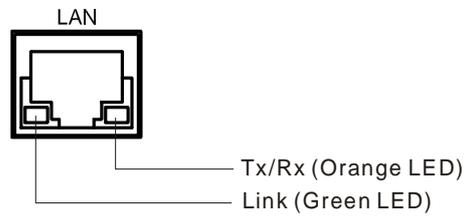
## 2.2 Connectors



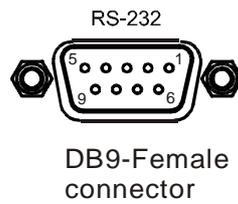
- Power input connector



- LAN connector (Standard RJ-45)



- RS-232 connector (Standard D-sub 9-pin)



PIN	SIGNAL
1	NC
2	TX
3	RX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC



### 3.3 Get the IP address using DHCP

When in a default state and powered on, the IP controller will first try to obtain its IP address and network information, such as Subnet Mask address, Gateway address, etc., from the DHCP server. The IP controller may also be configured manually.

If you have a DHCP server on your network, the IP-50 automatically obtains its IP address from that server.

- DHCP services must be available on the server.
- If the IP-50 and DHCP server are located on different subnets, IP configuration may fail unless the routing device allows the transfer of DHCP requests between subnets.

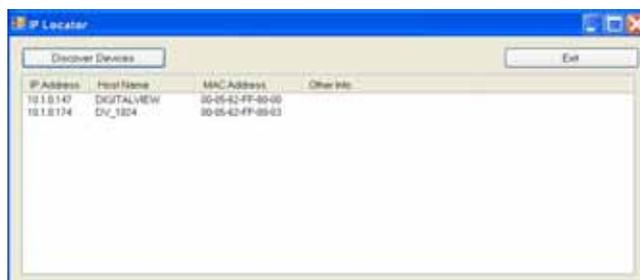
### 3.4 Web Console

The Web Console is a small web server program (.bin) embedded in IP-50. Authoring and modifying the Web Console is described in the Digital View IP-50 Web Creator User Guide and Programming Guide.

It provides the user interface that can be accessed and viewed on any standard web browser. The web console provides a platform where you can inquire and control the RS-232 devices which connecting to IP controller.

### 3.5 IP Locator

The IP Locator is a tool to search for any available IP-50 connected to the local network within same subnet. If you don't know the IP address of your IP-50, the IP Locator program can help you to find the IP address allocated to your IP-50. The following example IP Locator's screen shows the devices detected, as well as the IP address, host name and MAC address. *(Please copy the IP Locator from the Digital View website at [www.digitalview.com/ip-50](http://www.digitalview.com/ip-50))*



Pressing the **Discover Devices** button will re-detect the devices and update the screen.

*Note: Make sure you have "Microsoft .NET Framework 2.0" already installed on your PC before using the "IP Locator".*

### 3.6 Network configuration

To see the network configuration, click **Network** pull down menu will see the table of network settings.



#### Configure

- *Firmware Version*                      Firmware version of IP-50
- *MAC Address*                            MAC address of IP controller
- *Host Name*                                ID name without space (max. 15 character)
- *DHCP*                                        DHCP client mode enable/disable
- *IP Address*                                 IP address (assigned automatically if DHCP mode enable)
  
- *Subnet Mask Address*                  Subnet Mask Address
- *Default Gateway Address*            Network Gateway Address
- *Primary DNS Address*                 Network DNS Address

#### Network Configure

**Firmware Version :**

**MAC Address :**

**Host Name:**  (Max. 15 characters)

**DHCP:**  On  Off

**IP Address:**

**Subnet Mask Address:**

**Default Gateway Address:**

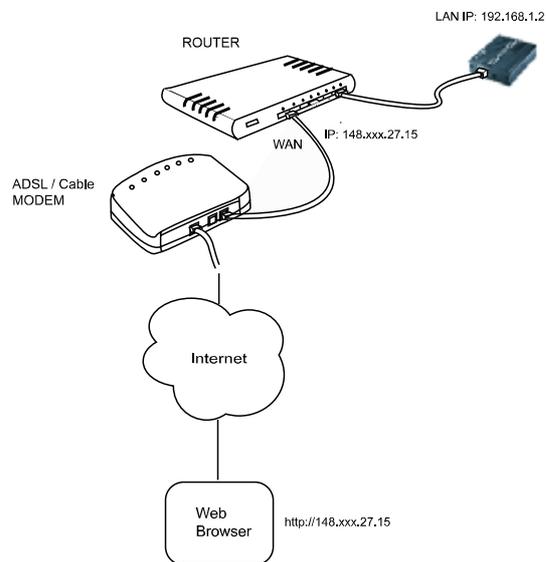
**Primary DNS Address:**

# 4 IP-50 Internet Connection

In cases where the IP-50 is setup behind a firewall and cable/ADSL modem. The following provides details so it can be directly accessed over internet by typing the dedicated IP address on web browser.

## 4.1 Connect to a single IP-50

- Connect the IP-50 to a router using Cat-5 cable. See the diagram as shown below.



- It is suggested to use "DMZ" function on the router. The standard ports required by IP-50 is shown as below:

Port ID	Service	Function
80	HTTP	Access web server
20	FTP (Data)	Web Server program upgrade
21	FTP (Control)	

- To setup DMZ function on your router, you may refer to the following procedure for your reference. (Different router will has its different setup methods, please refer to the user manual of your router.)

*Step 1:* Connect to the router and enter into its configuration page.

*Step 2:* Locate the internal IP address of IP-50. (e.g. 192.168.1.2)



*Step 3:* Assign the internal IP of IP-50 to DMZ function and enable it.



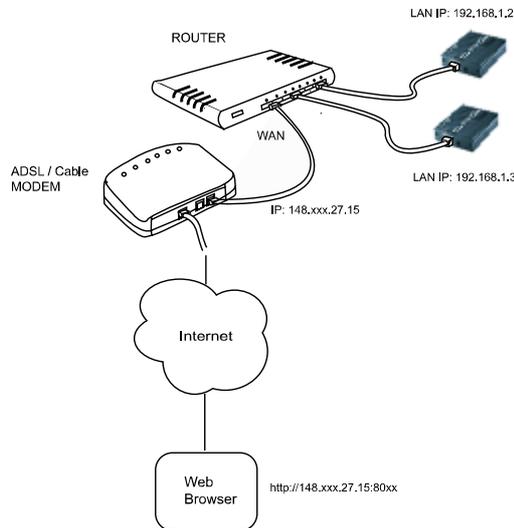
In the above example, we can just type **http://148.xxx.27.15** to enter web server of IP-50.

**4.2 Connect to multiple IP-50s**

If more than one IP-50 are installed at the same location but only has a single IP address to internet, then a router with the NAT, Port forward and firewall function to map different service ports to individual IP-50 is required.

For example:

External Port	Internal Port	Service	LAN IP
9080	80	HTTP	192.168.1.2
9021	21	FTP (Control)	192.168.1.2
9180	80	HTTP	192.168.1.3
9121	21	FTP (Control)	192.168.1.3

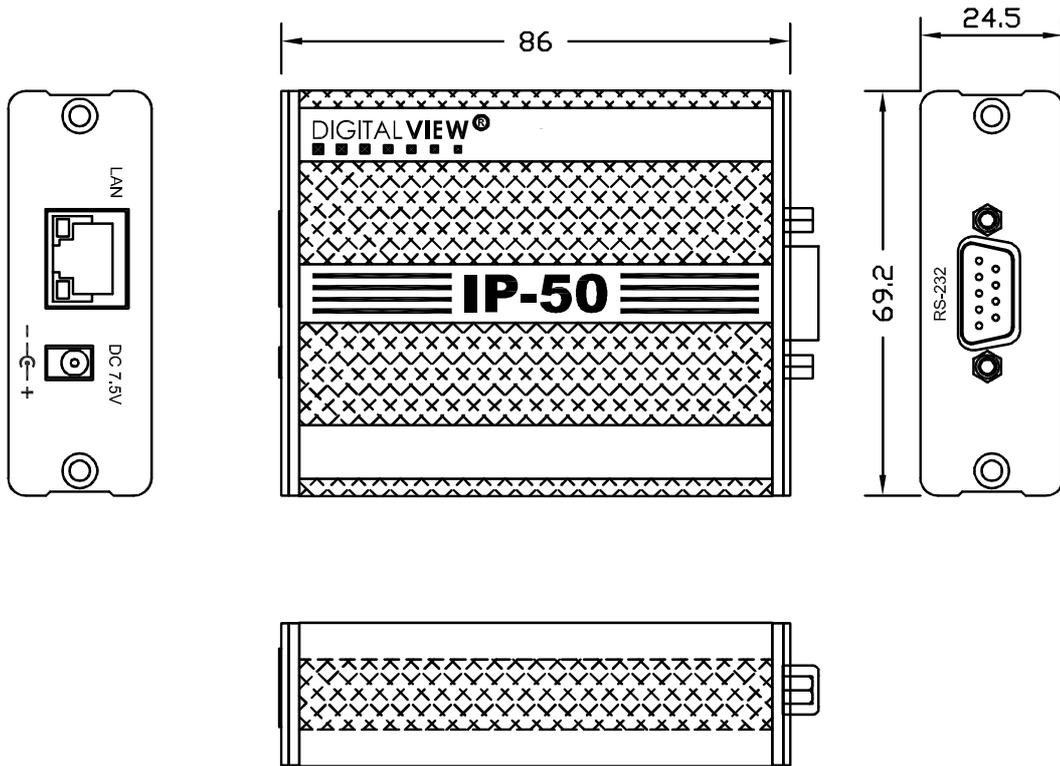


To setup NAT and Port forward function on your router, you may refer to the following procedure for your reference. (Different router will has its different setup method, please refer to the user manual of your router.)

*Step 1:* Connect to the router and enter into its configuration page.



# 5 Dimensions



Overall Dimension:  
86mm(W) x 69.2mm(D) x 24.5mm(H)

IP-50



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## WARRANTY

The products are warranted against defects in workmanship and material for a period of one (1) year from the date of purchase provided no modifications are made to it and it is operated under normal conditions and in compliance with the instruction manual.

The warranty does not apply to:

- Product that has been installed incorrectly, this specifically includes but is not limited to cases where electrical short circuit is caused.
- Product that has been altered or repaired except by the manufacturer (or with the manufacturer's consent).
- Product that has subjected to misuse, accidents, abuse, negligence or unusual stress whether physical or electrical.
- Ordinary wear and tear.

Except for the above express warranties, the manufacturer disclaims all warranties on products furnished hereunder, including all implied warranties of merchantability and fitness for a particular application or purpose. The stated express warranties are in lieu of all obligations or liabilities on the part of the manufacturer for damages, including but not limited to special, indirect consequential damages arising out of or in connection with the use of or performance of the products.

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## CAUTION

Whilst care has been taken to provide as much detail as possible for use of this product it cannot be relied upon as an exhaustive source of information. This product is for use by suitably qualified persons who understand the nature of the work they are doing and are able to take suitable precautions and design and produce a product that is safe and meets regulatory requirements.

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## SAFETY INSTRUCTION

The IP-50 is not waterproof. As with all electrical devices, do not use where there is a risk of the unit getting wet.

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## LIMITATION OF LIABILITY

The manufacturer's liability for damages to customer or others resulting from the use of any product supplied hereunder shall in no event exceed the purchase price of said product.

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IP-50

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