DIGITAL VIEW®

IP Controller

Model: IP-60

Part number : 41601371X-3 or up

INSTRUCTIONS

Revision History

Date	Rev No.	Page	Summary
1 April 2014	1.00	All	First issued

DIGITALVIEW®

Table of Contents

1 Introduction

The IP-60 is a network device that allows you to communicate with RS-232 enabled devices over a TCP/IP based Ethernet and the Internet using a web browser.

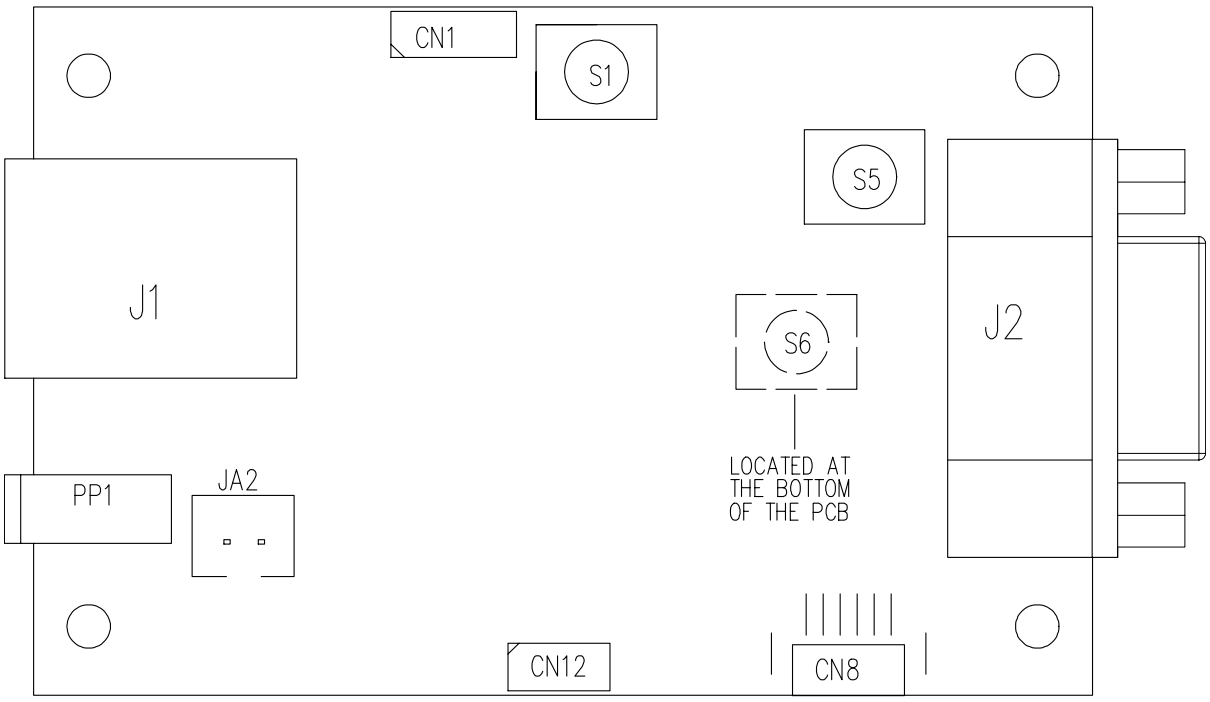
WEB BROWSER
The IP-60 features an embedded Web Console Program (WCP) that allows developers to change command settings and make their own web pages. This guide assumes that the IP-60 has been programmed to match.

DIRECT COMMANDS
The IP-60 also accepts direct commands using a terminal program or suitably programmed network device. This is introduced in section 4 and will be addressed in more detail in a later revision of this document.

Applications include:

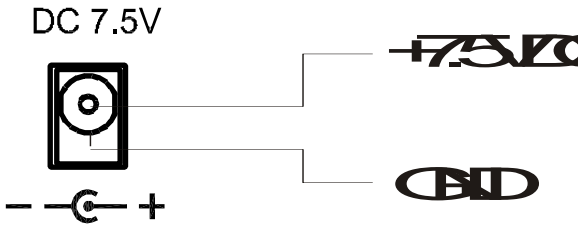
- Digital Signage installations
- Industrial systems remote monitoring and control
- Control and monitoring of Digital View products

2 Connectors



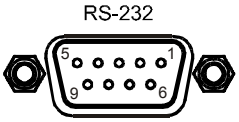
Ref	Purpose	Description
J1	Ethernet for network connection	RJ45 connector
J2	RS-232 interface connection	DB9- Female
PP1	Power input (7.5VDC)	DC jack 1.3mm
JA2	Alternative power input connector (5VDC)	JST 2 way, B2B-XH-A Pin Number: Description 1: +5VDC Power input 2: Ground
CN12	Reserved	Reserved
CN8	Reserved	Reserved
CN1	Factory use for firmware upgrade	Reserved
S1	Reset button	Tact switch button
S5	Config Menu button	Tact switch button
S6	Config Menu button	Tact switch button

- Power input connector



- LAN connector (Standard RJ-45)

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



DB9-Female connector

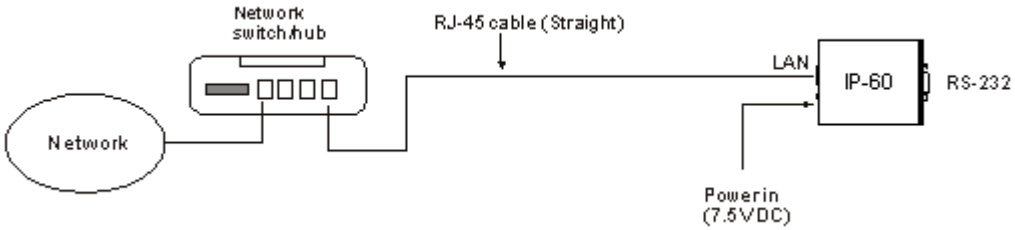
PIN	SIGNAL
1	NC
2	TX
3	RX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

3 Setup

CAUTION: Configuring TCP/IP settings are complicated and may require an experienced network administrator. For additional help or network configuration, contract your network provider.

3.1 Connecting a network port to IP-60

Connect the IP-60 to the network with a standard Cat-5 Ethernet cable. *Note: A straight RJ-45 cable should be used to connect to the network switch/hub/router.*



3.2 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-60 automatically obtains its IP address from that server.

- DHCP services must be available on the server.
- If the IP-60 and DHCP server are located on different subnets, IP configuration may fail unless the routing device allows the transfer of DHCP requests between subnets.

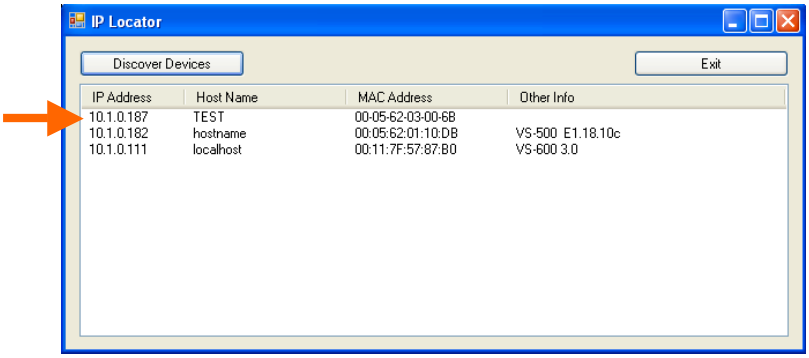
3.3 Web Console

The Web Console is a small web server program (.bin) embedded in IP-60. Authoring and modifying the Web Console is described in the Digital View IP-60 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.

3.4 IP Locator

The IP Locator is a tool developed by DigtalView to search for any available IP-60 connected to the local network within same subnet. If you don't know the IP address of your IP-60, the IP Locator program can help you to find the IP address allocated to your IP-60. The following example IP Locator's screen shows the devices detected, as well as the IP address, host name and MAC address.



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".

4 Control

IP-60 supports direct mode and browser mode to control the controller. User can select either Direct Mode or Browser Mode to control the controller on each boot up.

* Switching control mode requires power cycle of the IP-60.*

5.1 Direct Mode Control

Direct mode control is to use a PC based application to control functions over the network.

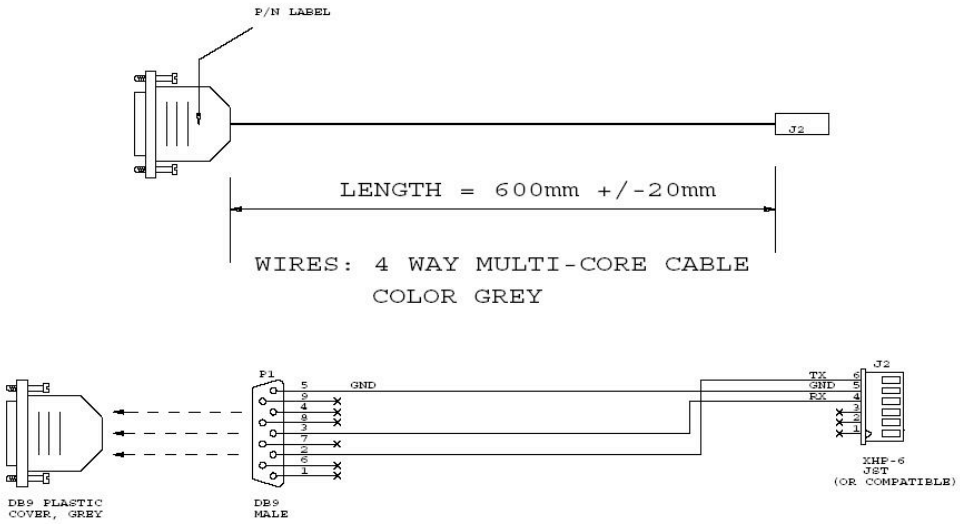
The RS-232 commands available are the same as documented in the controller manual and writing a control application is very similar to the RS-232 type except the commands must pass through the network. An alternative is to use an application written for RS-232 communication and use a virtual serial port program such as:

One of the software programs can be download at
http://www.taltech.com/products/tcpcom.html

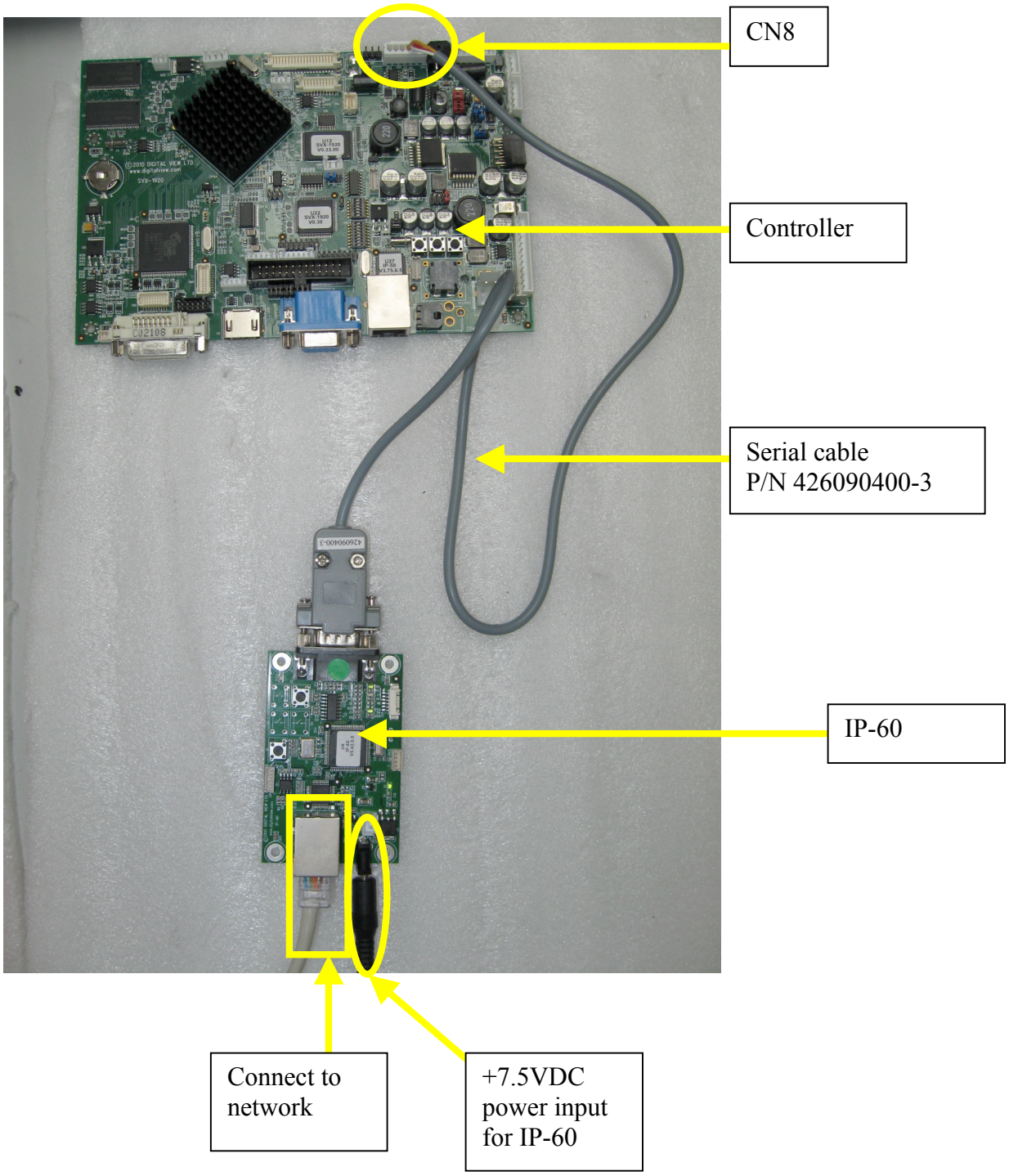
This software can create “Virtual” RS232 serial ports that are actually connections to a TCP/IP port. This allows you to use existing Windows based serial communications software to send and receive data across a TCP/IP network.

Please note this is a 3rd party program and is not warranted nor is it the responsibility of Digital View.

(1) Use Serial cable P/N 426090400-3 to connected between CN8 on controller and IP-60, see below the cable construction :

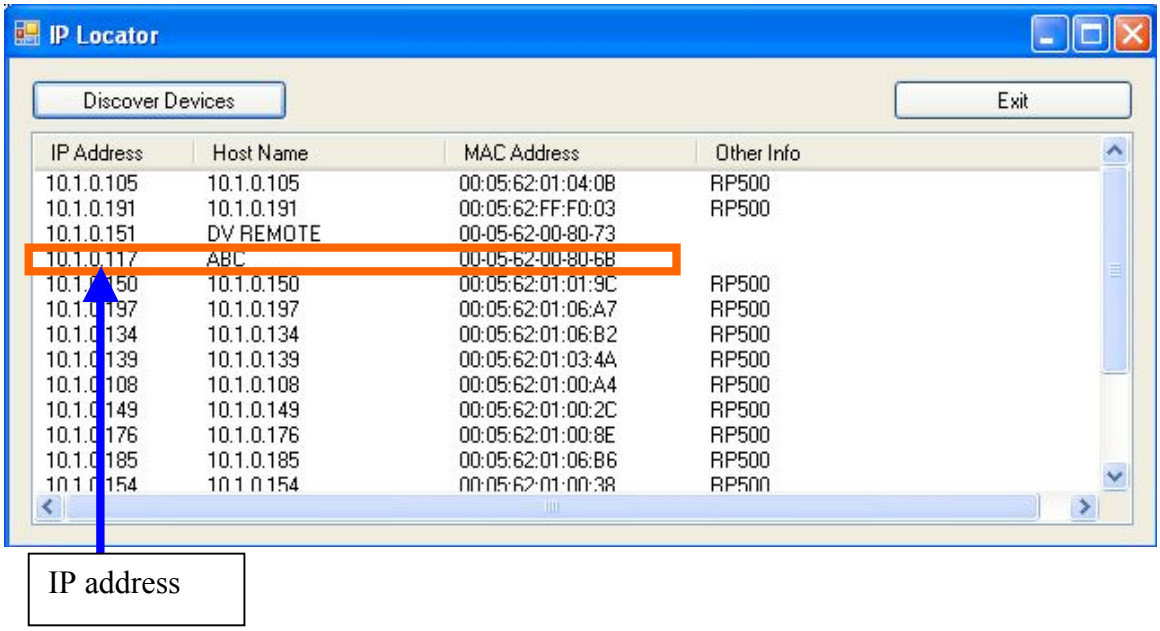


(2) Wiring connection :



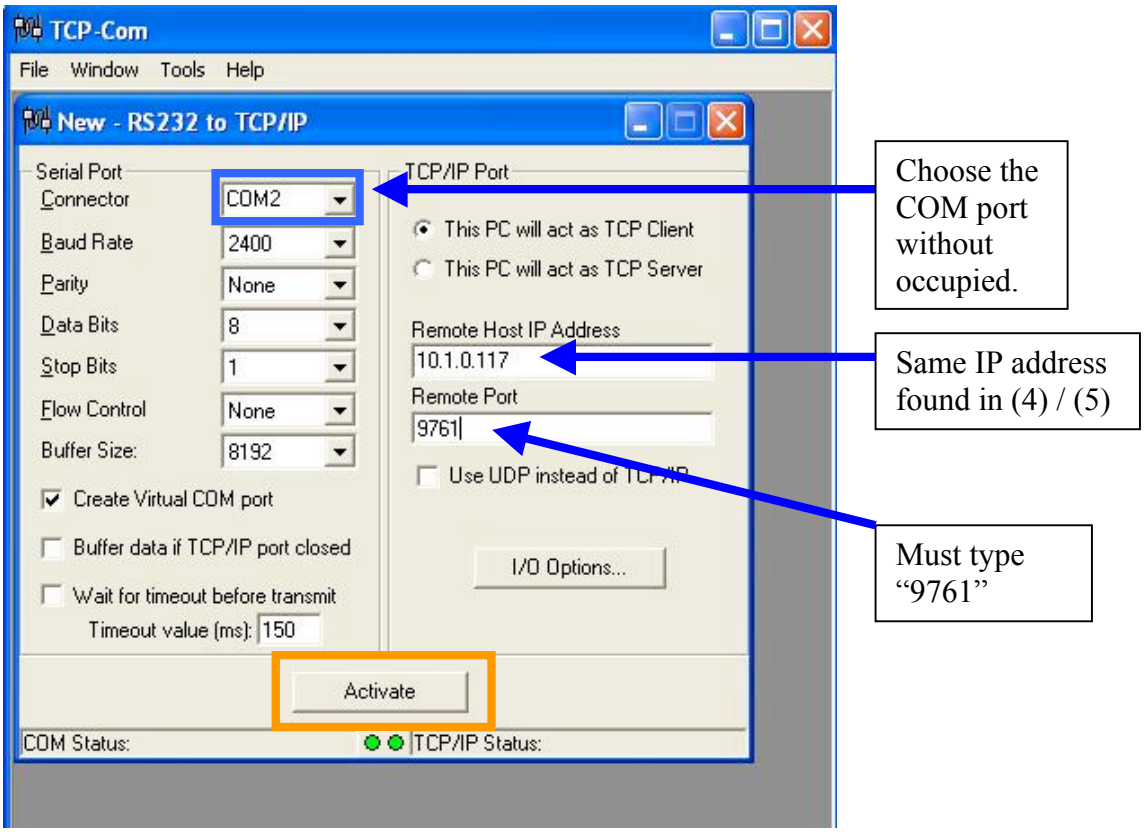
(3) Then turn on controller and IP-60 power

(4) Under DHCP mode, use the “Digital View IP Locator” program to locate the IP address using IP-60 :

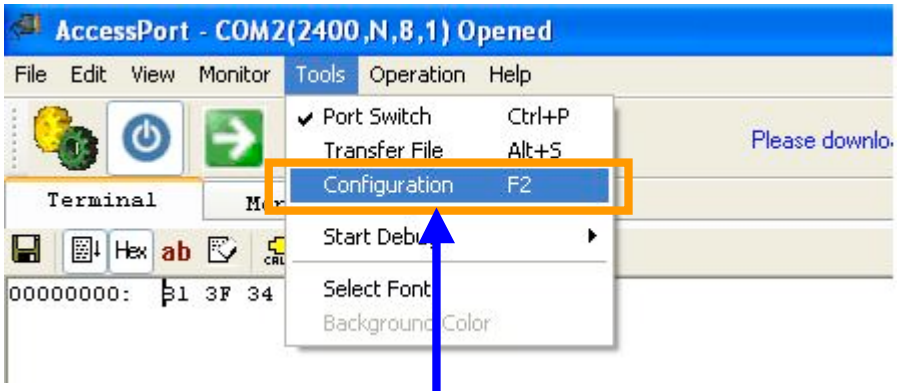


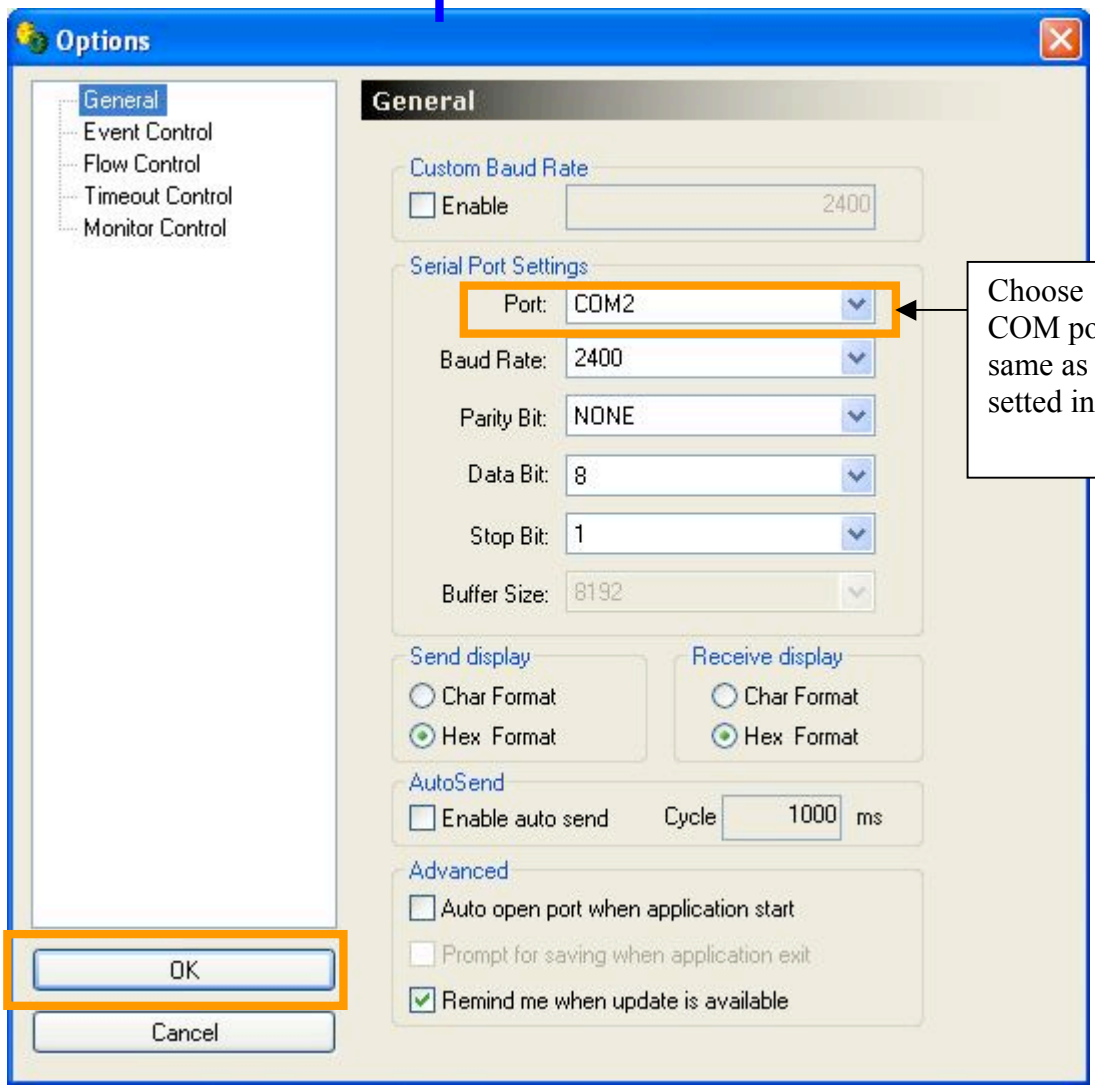
(5) Under fixed IP mode, the user knew the corresponding IP address already.

(6) Open the "TCP-Com" program and set the following settings and then click activate.



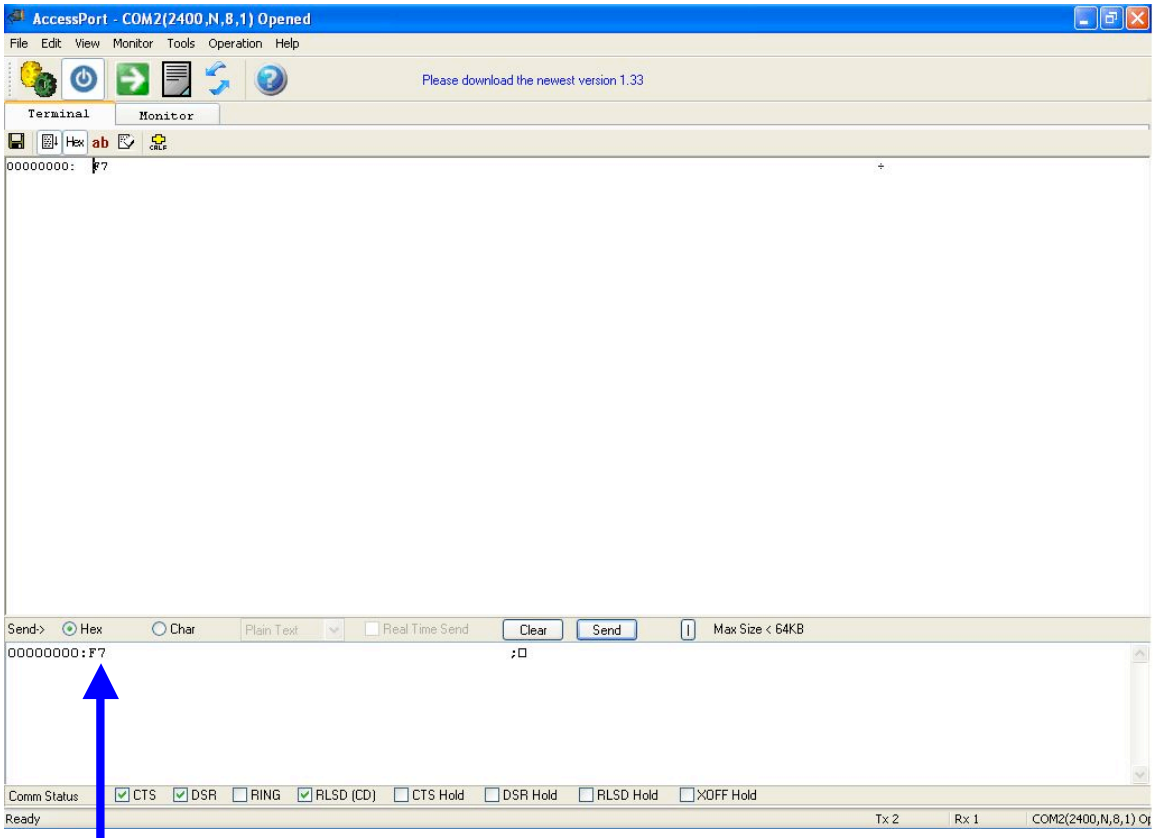
(7) Open the “AccessPort” RS-232 program. Tick “Port Switch” and then go to “Tool” → “Configuration” to follow the settings stated below :





Choose COM port same as we setted in (6)

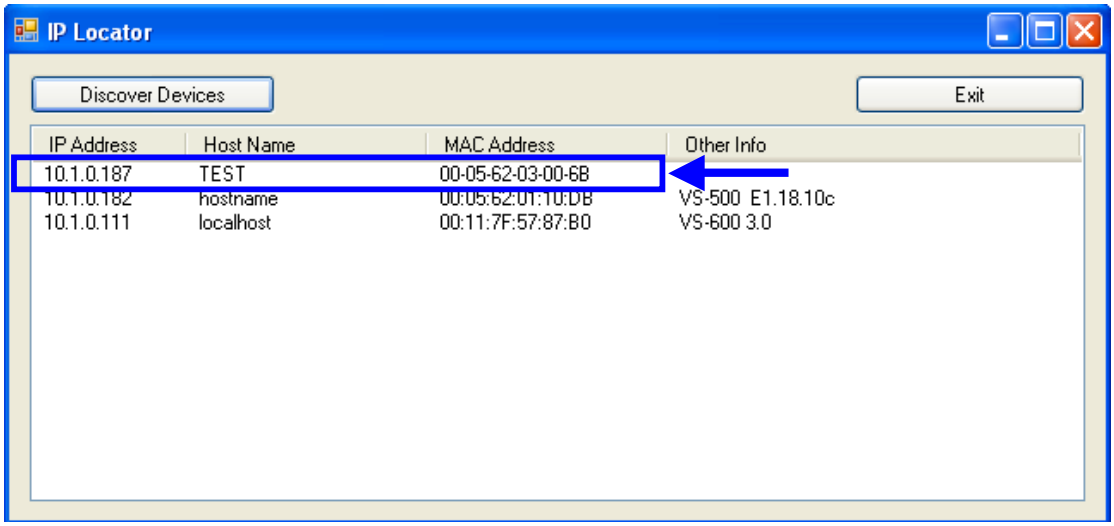
(8) Type RS-232 commands using serial communication program like “AccessPort” to control the controller function



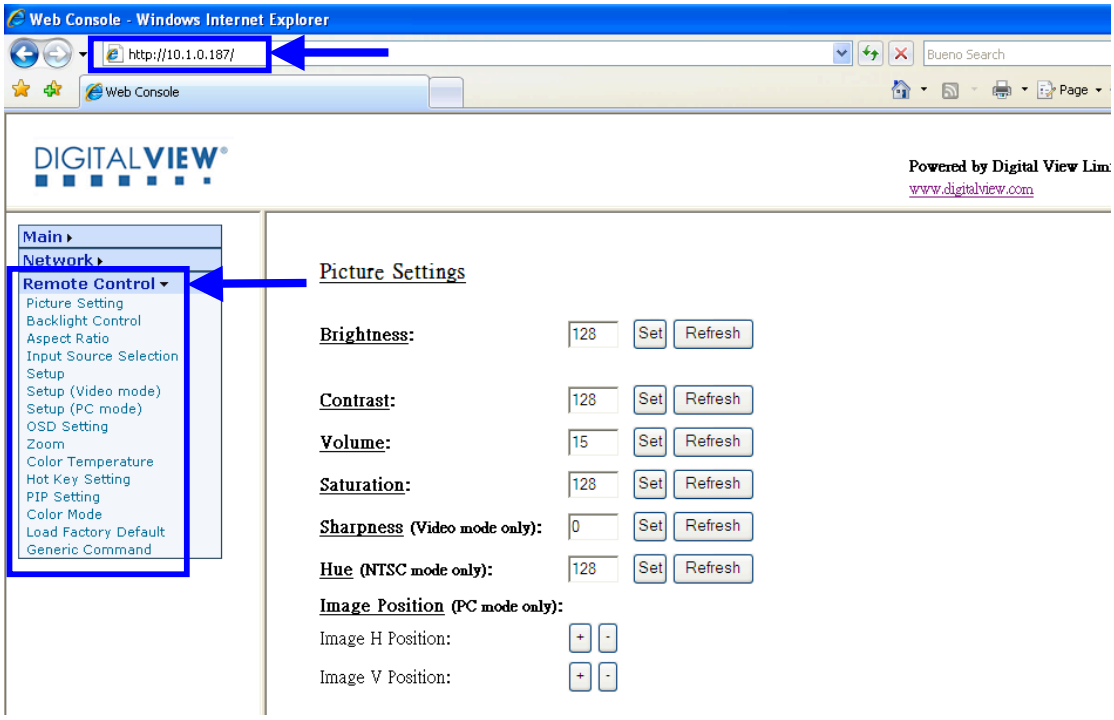
For example : Type “F7” to display the OSD menu

5.2 Browser Mode Control

Use the Digital View IP Locator, it is a simple program to search for any available IP-60 connected to the local network within same subnet. If you don't know the IP address of your IP-60, the Digital View IP Locator program can help you to find the IP address allocated to your IP-60. The following example IP Locator's screen shows the devices detected, as well as the IP address, host name and MAC address.



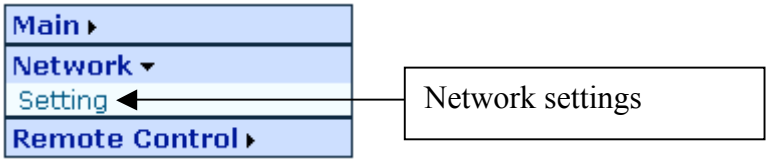
Browser Mode control uses a standard web browser to send commands to IP-60. To select browser mode, open the web browser after the IP-60 boot up, enter the corresponding IP address (e.g "10.1.0.187") in the address bar, then the following page will show up.



The controller functions can be controlled through the browser controls under the remote control page.

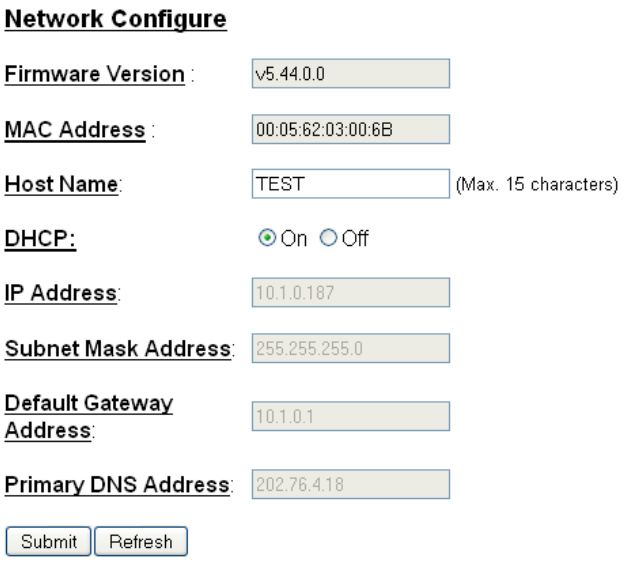
Network configuration

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

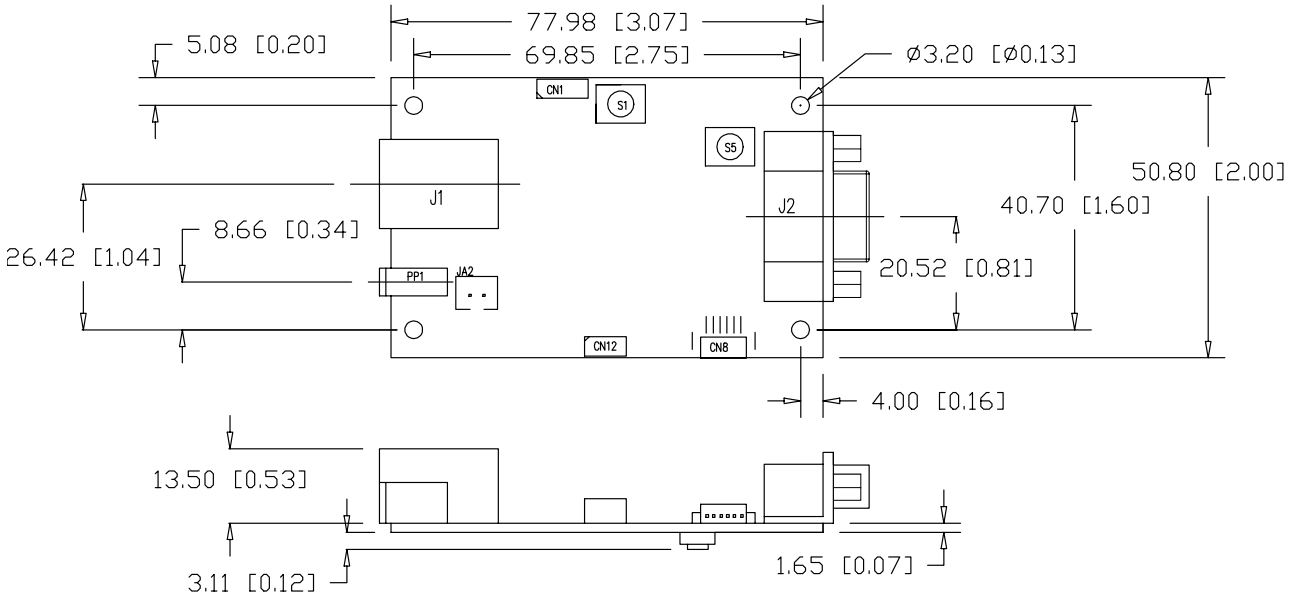


Configure

- *Firmware Version* Firmware version of IP-60
- *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



5 Dimensions



6 SpecificationS

Network Interface	Ethernet 10BaseT RJ-45 connector x 1 Supported protocols: IP, TCP, DHCP
RS-232 Interface	DB9-Female connector x 1 Serial baud rate: 2400 Date bits: 8 Parity : none Stop bits: 1 RS-232: TxD, RxD
Power	Power input : DC 7.5V via PP1 connector Power consumption: 200mA @ 7.5V DC Alternate power input DC 5V, 300mA via JA2 connector
Dimensions	77.98(W) x 50.8(D) x 18.26(H) mm
Environmental	Operating temperature : 0°C to 50°C Relative humidity : 5%-95% relative humidity (Non-condensing)

7 WARRANTY

The products are warranted against defects in workmanship and material for a period of three (3) years from the date of purchase provided no modifications are made and they are 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.

8 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.

9 SAFETY INSTRUCTION

The IP-60 is not water safe. As with all electrical devices, do not use where there is a risk of the unit getting wet.

10 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.

11 TRADEMARKS

The following are trademarks of Digital View Ltd:
Digital View
IP-60
All the brands name are belong to their respective owners.

12 CONTACT DETAILS

USA: Digital View Inc.
18440 Technology Drive
Building 130
Morgan Hill, CA 95037
Tel: (1) 408-782 7773 **Fax**: (1) 408-782 7883
Sales: ussales@digitalview.com

EUROPE: Digital View Ltd.
The Lake House
Knebworth Park
Herts, SG3 6PY
UK
Tel: (44) (0)20 7631 2150 Fax : (44) (0)20 7631 2156
Sales : uksales@digitalview.com

ASIA: Digital View Ltd.
2/F Bamboos Centre
52 Hung To Road
Kwun Tong
Hong Kong
Tel: (852) 28613615 Fax: (852) 25202987
Sales: hksales@digitalview.com

Specifications subject to change without notice