BLACK

4-Channel H.264 Network Video Encoder Quick Installation Guide

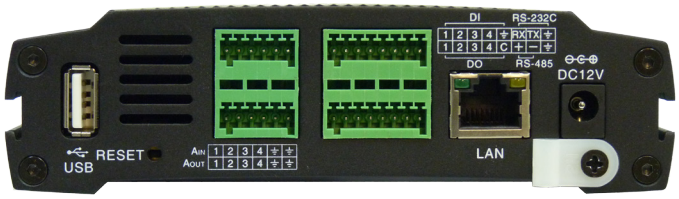
This document guides you through the basic steps to install and configure your DDIGIOP™ Black BLK-IPE4101 4-channel IP encoder. For detailed instructions, refer to the User Manual.

Find the four **MAC address** on the product label and enter them here: _____. _____. _____. _____.

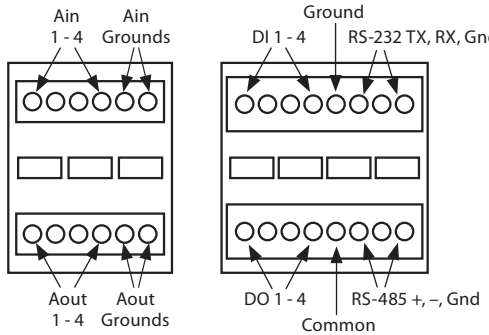
Step 1. Install the encoder

Mount the encoder in a secure location using the hardware installation kit provided. The kit includes mounting brackets that slide into the sides of the encoder.

Connect video feeds from four analog cameras to the four Vin BNC connector (Vin1, Vin2, Vin3, Vin4) on the front of the encoder.



Connections to the encoder for audio in and out (microphone and speaker), D/I sensor, alarm, video out BNC, RS-232C, and RS-485 control are made through two 6-pin and two 8-pin terminal blocks. Vin1 is associated with Ain1 (microphone), Aout1 (speaker), DI1 (sensor), DO1 (alarm output), and the first IP channel. Similarly, Vin2 is associated with Ain2, Aout2, etc. Attach peripheral devices to the terminal blocks as shown below. For detailed interface specifications, refer to the user manual.



Step 2. Connect the encoder to the LAN

Attach a network LAN cable to the RJ-45 connector on the encoder backpanel.

Attach the DC12V adapter to the power connector on the encoder. **DO NOT apply power** to the encoder at this time.

Step 3. Install IPAdmin Tool

The IPAdminTool is a utility for configuring the network settings of your DIGIOP™ Black encoders and installing new firmware. It can be loaded on a Microsoft® Windows® XP, Vista or Windows 7 operating system. At a computer on the same LAN (subnet) where your encoder will be installed, do the following:

1. Insert the CD disk provided with your encoder into your computer's CD ROM drive and open the CD in a Windows Explorer window.
2. Find the IPAdminTool directory on the CD.
3. Copy the IPAdminTool directory with its contents to your computer hard drive.

Step 4. Configure the network settings of you encoder

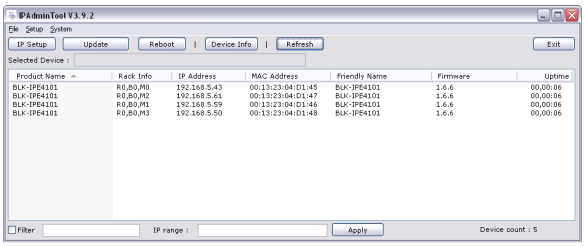
When your IP encoder is attached to a network and initially powered on, it attempts acquire compatible network settings for each IP channel from a DHCP server. If it cannot find a DHCP server, it configures each channel with the following static (fixed) settings:

IP address:	192.168.0.100
Subnet mask:	255.255.255.0
Gateway:	192.168.0.1

Your encoder must be configured with static network settings that are compatible with the LAN. If your LAN has a DHCP server, use the following sub-step. Otherwise, use the sub-step procedure below for **LANs without DHCP**.

Installing encoders on LANs with DHCP

1. Connect your encoder to the LAN, then plug in the power adapter to power it on.
2. Open the directory IPAdminTool directory on your computer, then double click the file **IPAdminTool.exe** to start the application. When IPAdmin Tool starts, it will discover all the IP devices it supports that exist on the network. The discovery process may take a few minutes.



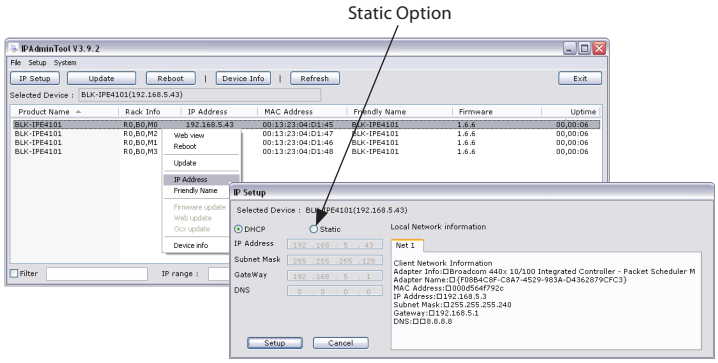
Check the list of devices found by IPAdmin Tool. You can identify your encoder IP channels by their MAC addresses.

The Rack Info field "M" number is directly associated with the Vin channel (M0 for Vin1, M1 for Vin2, etc.). The Rack Info identifiers in the list may not appear in order. See the following table for the example shown above.

Rack Info	Vin Channel	IP Address (via DHCP)	MAC Address
R0, B0, M0	Vin1	192.168.5.43:	00:13:23:D4:D1:45
R0, B0, M1	Vin2	192.168.5.59	00:13:23:D4:D1:46
R0, B0, M2	Vin3	192.168.5.61	00:13:23:D4:D1:47
R0, B0, M3	Vin4	192.168.5.50	00:13:23:D4:D1:48

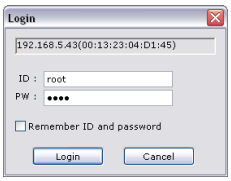
If an encoder channel was not found, click the **Refresh** button every minute until the four channels for your encoder appear in the list.

3. Right click your encoder entry with Rack Info **R0, B0,M0** (IP channel associated with Vin1), then select **IP Address** from the drop-down list. An IP Setup window will open.



4. In the IP Setup window, click the **Static** option bullet. If you have other compatible network settings you want to apply to the device, enter them in the appropriate locations. Click **Setup** to continue.

5. In the **Login** window, enter the ID and PW (password) for your encoder, then click **Login**. The default administrator values for the ID and PW are **root** and **pass**.



6. In the IPAdmin Tool window, click **Refresh**. Verify that the entry representing the encoder now shows the (new) static IP address.

7. Repeat these steps to setup the other three encoder IP channels.

8. Continue with procedure **Step 5. Setup encoder Basic Configuration**.

Installing encoders on LANs without DHCP

Configuring the network settings of your encoders includes these steps:

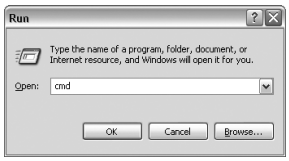
- Determine the network settings of your computer.
- Check the network for compatibility with the default static network settings of your encoder.
- Find four network settings (IP addresses) that are not in use and can be assigned to the IP channels of your encoder.
- Attach the encoder to the network, power it on, and configure each IP channel with new network settings.

Determine the network settings of your computer

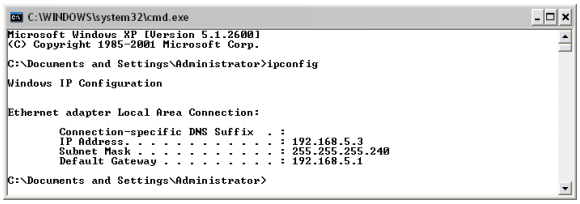
1. At a PC attached to the LAN where your encoder will be connected, determine the IP address, subnet mask, and default gateway of your PC. To find this information:

   a. Hold down the **Windows** key and press **r** to open the Run dialog box.

   b. Type **cmd** in the entry field, then click **OK** to open the Command Prompt window.



   c. At the command prompt, enter **ipconfig.** The response will show the your PC's network settings.

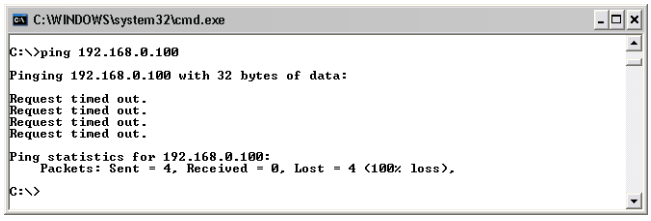


   d. Record the IP Address, Subnet Mask, and Default Gateway for your PC's Ethernet adapter for reference later.

NOTE *If you are using Windows Vista or Windows 7, the IP address is identified as the "IPv4 Address."*

Check the LAN for default IP address compatibility

Before connecting your encoder to the LAN, check the network to see if IP address 192.168.0.100 is already in use. At a Microsoft Windows computer attached to the LAN where the encoder will be connected, open a Command Prompt window and enter: **ping 192.168.0.100**



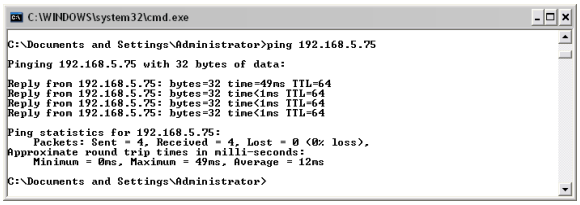
The "**Request timed out**" response indicates that the IP address is not in use and the encoder can be connected without causing conflicts. If the response from the ping command received a "**Reply..**", the IP address is in use. Contact Technical Support for further assistance, if needed.

Find network settings (IP addresses) that are not in use

1. At your PC, find an IP address on your network that is not in use:

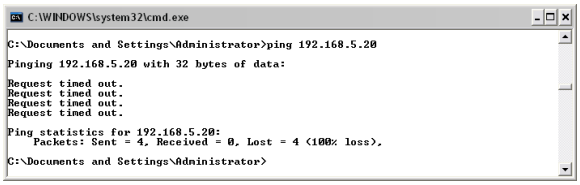
   a. Write down the EXACT IP address of your PC up to the third/last period. Using the example shown above, this expression is: 192.168.5. After the third period, include any number between 1 and 254 that is different from the one in your PC's IP address, 3. As a first try, let's choose 75, which will form the IP address 192.168.5.75.

   b. Next, use the **ping** command in the Command Prompt window to see if this IP address is in use on your network. Enter: **ping 192.168.5.75**.



   In the example shown above, the message "**Reply from 192.168.5.75: ..**" indicates that your PC can reach a device with that IP address, and that address is in use (i.e., you cannot use it for your encoder).

   c. Since the **ping** test showed that 192.168.5.75 is in use, try another number between 1 and 254. Let's try to ping 192.168.5.20. At the command prompt, enter: **ping 192.168.5.20**



   d. In this test, the message "**Request timed out**" indicates that your PC cannot reach the device with that IP address, and that address is probably not in use. If this test showed that this IP address is in use, try other IP addresses using the steps above until an unused address is found.

   e. Repeat these steps to find IP addresses for the other IP channels of your encoder.

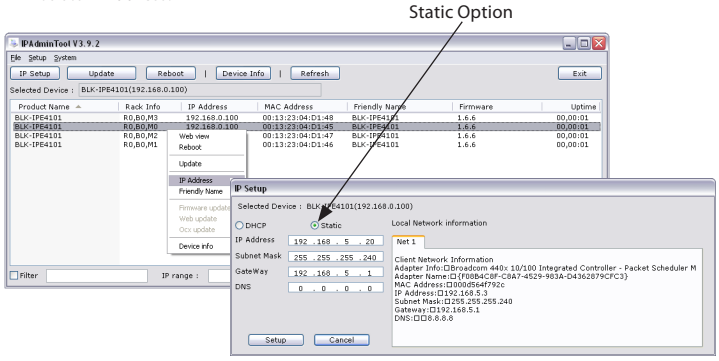
Attach your encoder to the network, power it on, and configuring it with new network settings

1. Connect the encoder to the LAN, then plug in the power adapter to power it on. Wait until the initialization process completes (about 4 minutes) before continuing.

2. Open the directory IPAdminTool directory on your computer, then double click the file **IPAdminTool.exe** to start the application. When the IPAdmin Tool starts, it will discover all the IP devices it supports that exist on the network. The discovery process may take a few minutes.

3. In the Product list, find the entries with the MAC addresses of the encoder you installed. If all four IP addresses are not shown, click **Refresh** once a minute until all four addresses are shown.

4. Right click the encoder entry with Rack Info **R0,B0,M0** (IP channel associated with Vin1), then select **IP Address**.



5. In the IP Setup window:

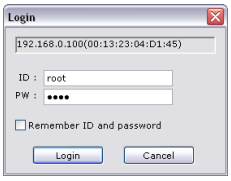
   a. Select the **Static** option if it is not selected.

   b. Enter the new IP address for your encoder into the IP Address field.

   c. Enter the subnet mask of your computer into the Subnet Mask field.

d. Enter the gateway of your computer into the Gateway field.

e. Click **SETUP**. A Login window will open.



6. In the **Login** window, enter the ID and PW (password) for your encoder and click **Login**. The default administrator values for the ID and PW are **root** and **pass**.

7. In the IPAdmin Tool window, click **Refresh**. Verify that the entry with **R0,B0,M0** now shows the new IP address.

8. Repeat these steps for the other three encoder IP channels.

Step 5. Setup encoder Basic Configuration

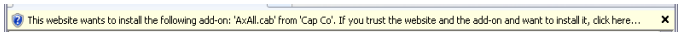
Repeat this step for each encoder channel.

To view video images from any encoder channel, at a computer attached to the LAN where the encoder is installed, open Microsoft© Internet Explorer© and go to:

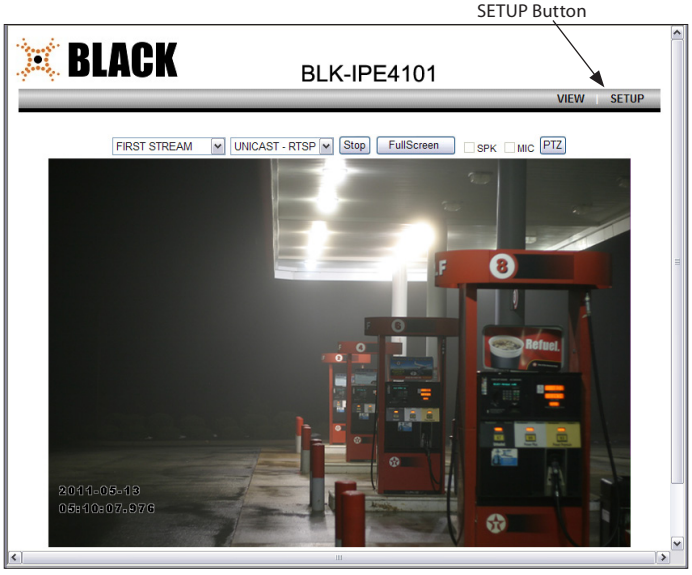
http://<IP address of the encoder>

In this example, the IP address is 192.168.5.20. Enter: **http://192.168.5.20**

If prompted to install ActiveX controls such as AxAll.cab (publisher Cap Co), AxPTZ, or AxNVC, follow screen prompts to install the software.



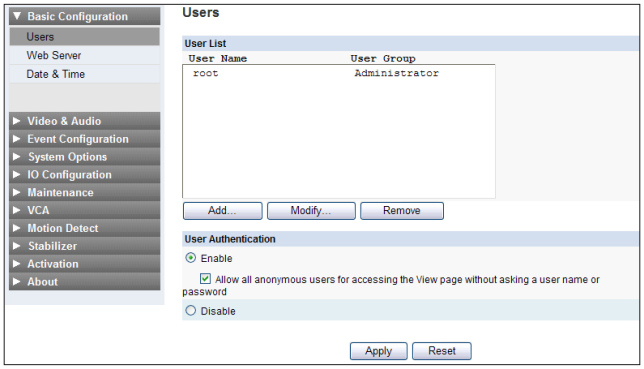
NOTE *To load these ActiveX controls, you may need to adjust the security settings of your browser to accept add-ins from unknown publishers.*



After logging into your encoder, if you cannot see live video from the encoder and the message: "Can not Create XMLDOMDocument Install MSXML4.0" appears, download and install the MS XML 4.0 library. This library can be found at:
http://www.microsoft.com/downloads/details.aspx?familyid=3144B72B-B4F2-46DA-B4B6-C5D7485F2B42&displaylang=en

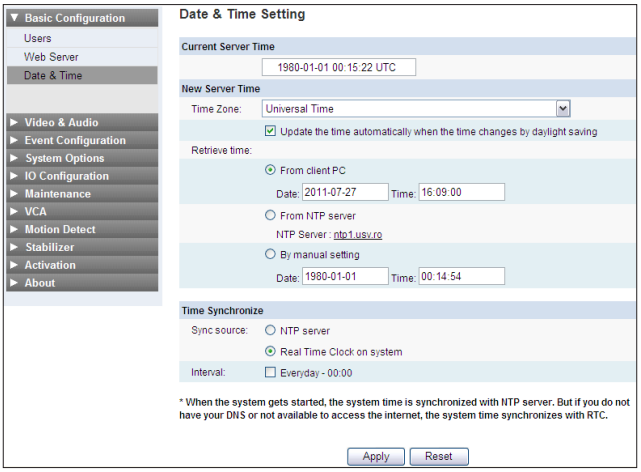
After the encoder video view screen appears, click the **SETUP** button in the upper right corner. In the pop-up window, enter the default User name and Password, **root** and **pass**.

In the SETUP window, go to **Basic Configuration** > **Users**.



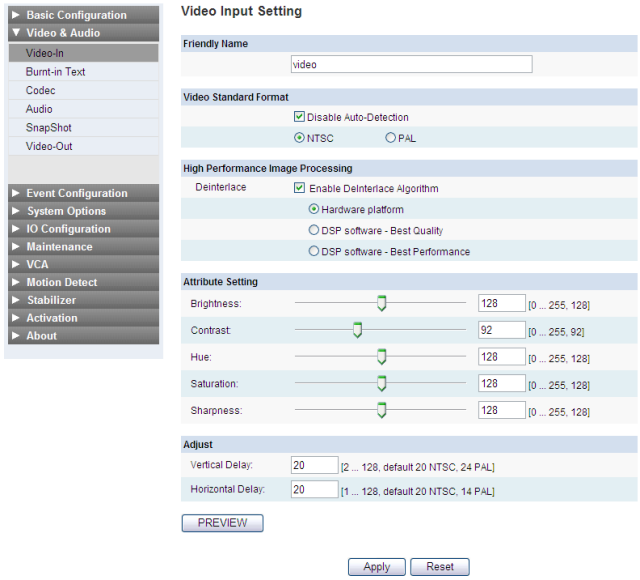
In the User list, click **root** to highlight it, and then click **Modify**. Enter a new password and click **OK**. In the Users screen, click **Apply**, and then click **OK** to restart the server.

Go to Basic **Configuration** > **Date & Time**.



On the Date & Time screen, set the Time Zone, Method, and Time Synchronization options. Click **Apply**.

Go to **Video & Audio** > **Video-in**.



On the Video Input Setting screen, click the **PREVIEW** button to open a window showing the video stream from the camera.

Adjust the Brightness, Contrast, Hue, Saturation, and Sharpness to perfect the video image. After changing parameters, click **Apply**.

Click **VIEW** to exit SETUP mode and return to the video view screen.