# H.264 NETWORK CAMERA



# | IPAdmin Tool User's Manual

Before connecting, operating or adjusting this product, read this instruction booklet carefully and completely





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# **1. Introduction**

IPAdminTool is a utility program for IP device managements, including encoders and cameras. The following list provides a brief summary for the feature of this tool.

- Configure IP address, subnet mask, gateway, DNS, and hostname
- Search available IP devices on network
- Show device information
- Update new firmware on single or multiple devices
- Reboot the system hardware

## **1.1. Requirements**

IPAdminTool can be run properly in Windows7 or later Windows<sup>®</sup>. *IPAdminTool.exe* and *IPAdminTool.dll* must be placed in the same folder, otherwise an error message is shown as the figure below.

ool.exe - Unable To Locate Component	×
This application has failed to start because IPAdminTool.dll was not found. Re-installing the application may fix this prob	olem.
( OK	
	ool.exe - Unable To Locate Component This application has failed to start because IPAdminTool.dll was not found. Re-installing the application may fix this prot OK

Figure 1. Warning message for IPAdminTool.dll

```
Factory default ID and password for firmware update:
ID – root
PW - pass
```

# **1.2. Starting IPAdminTool**

To start IPAdminTool, run the IPAdminTool.exe file. Then the main page of the tool appears as Figure 2.



# 1.3. Menu and button configuration

A B	IPAdminTool V3.23.0.2 File Setup System IP Setup Update	Reboot   Device It	nfo   Refresh	)			
С	Selected Device : Product Name  CNI-U29FNZ ZNI-PU2202XE-XT ZN-NH22XE ZN-DN312XE-MIR ZN-DN312XE-M ZN-DN312XE-MIR ZN-DN312XE-MIR ZN-DNT352XE-MIR	Rack Info         IP Address           192.168.1.93         192.168.1.61           221.186.72.99         192.168.1.52           192.168.1.102         192.168.1.102           192.168.1.13         192.168.1.21           192.168.1.61         192.168.1.65	MAC Address 00:1C:B8:C0:0C:CD 00:1C:B8:C0:5F:FB 00:1C:B8:C0:19:70 00:1C:B8:C0:18:6D 00:1C:B8:C0:18:AD 00:1C:B8:C0:18:AD 00:1C:B8:C0:19:80 00:1C:B8:C0:5F:59	USN C90A00CCD CC0075FFB D80C01970 D60C0186D D10C01781 D70C018AD D80C01980 C10065F59	Friendly Name 2N1-025PNZ ZN-PT2202XE-XT ZN-NH22XE ZN-DN352XE-MIR ZN-DN312XE-M ZN-DN312XE-M ZN-BT662XE-MIR ZN-DNT352XE-MIR	Firmware 1.7.0.7 1.6.0.6 1.6.0.6 1.6.0.4 1.6.0.4 1.6.0.4 1.6.0.4 1.5.0.9 1.6.0.4	Uptime 08,2217 08,20:00 27,18:08 00,03:54 40,01:59 40,01:34 07,04:27 61,01:38
E	Filter	IP range :		Apply			Device count : 8

Figure 2. Menus and buttons

### Section A

File

*Refresh* – Refresh the list and get the IP device information. *Exit* – Quit this program.

#### Setup

*IP Address* – Set IP configuration such as IP address, subnet mask, default gateway, etc.

Friendly name – Set a friendly name for a selected device.

Frequency setting – Set the message sending frequency for MDNS.

#### System

*Update* – Update the firmware or any other required files. (Planned for the next firmware release)

*Device info* – Show the device information.

*Reboot* – Reboot the device.

### Section B

*IP Setup* - Set the IP configuration such as IP address, subnet mask, default gateway etc.

**Update** - Upload the firmware or any other required files. (Planned for the next firmware release)

**Reboot** - Reboot the device.

Device Info- Show the device information.

*Refresh* – Refresh the list and get the IP devices information.



#### Section C

*Product Name* – Product name of your device is displayed.

It can be modified by uploading the brand file involving the product name. **Rack Info** – When a device is rack type, the related rack information is displayed. *IP Address* – IP Address of the device is displayed.

**MAC Address** – MAC Address of the device is displayed.

**USN** – The unique serial number of the device is displayed.

*Friendly name* – The friendly name of your device is displayed.

*Firmware* – The current firmware version of the device is displayed.

Uptime – The passed time since the device has been booted (Days: Hours: Minutes).

#### Section D

**Exit** – Quit this program.

#### Section E

*Filter* – Type any part of numbers or alphabet letters (case sensitive) of device name, IP address, MAC address, USN, friendly name, or firmware in the Filter box to search the desired devices.

*IP range* – Type the IP address range to display devices that are in the IP range to search the desired devices.

*Device count* – The total number of scanned devices.



# **2. Scanning Devices**

# 2.1. How to search your device

Before running the IPAdminTool for finding a device, check out if the device is powered on and connected to the network properly. The IP devices connected to the network and turned on are automatically scanned on the main page of the tool. It re-scans network to keep updating IP devices on the list every 2 seconds. If required, you can also manually perform the scanning by pressing the **Refresh** button.

JPAdminTool V3.23.0.2							
<u>File</u> Setup <u>S</u> ystem			$\frown$				
IP Setup Update	Reboo	t   Device Ir	nfo Refresh				Exit
Selected Device :							
Product Name 🔻	Rack Info	IP Address	MAC Address	USN	Friendly Name	Firmware	Uptime
ZN1-Q3FN2		192.168.1.93	00:1C:B8:C0:0C:CD	C90A00CCD	ZN1-Q3FN2	1.7.0.7	08,22:17
ZN-PTZ202XE-XT		192.168.1.61	00:1C:B8:C0:5F:FB	CC0075FFB	ZN-PTZ202XE-XT	1.6.0.6	08,20:00
ZN-NH22XE		221.186.72.99	00:1C:B8:C0:19:70	D80C01970	ZN-NH22XE	1.6.0.6	27,18:08
ZN-DNT352XE-MIR		192.168.1.52	00:1C:B8:C0:18:6D	D60C0186D	ZN-DNT352XE-MIR	1.6.0.4	00,03:54
ZN-DN312XE-M		192.168.1.102	00:1C:B8:C0:17:81	D10C01781	ZN-DN312XE-M	1.6.0.4	40,01:59
ZN-DN312XE-M		192.168.1.13	00:1C:B8:C0:18:AD	D70C018AD	ZN-DN312XE-M	1.6.0.4	40,01:34
ZN-BT662XE-MIR		192.168.172.101	00:1C:B8:C0:19:80	D80C01980	ZN-BT662XE-MIR	1.5.0.9	07,04:27
ZN-DNT352XE-MIR		192.168.1.66	00:1C:B8:C0:5F:59	C10065F59	ZN-DNT352XE-MIR	1.6.0.4	61,01:38
Filter	IP ra	nge :		Apply	]		Device count : 8

Figure 3. Scanning by the Refresh button

### 2.1.1. Viewing video on web page

To see the web page for a device, right-click on a product name and then click **Web view** from the short cut menu. To open the web page more simply, just select one or multiple product names and click the Spacebar on your keyboard.

JPAdminTool V3.23.0.2	IPAdminTool V3.23.0.2											
File Setup System												
IP Setup Update Reboot   Device Info   Refresh												
Selected Device : 192.168.1.52												
Product Name 🔻	Rack Info IP Address	MAC Address	USN	Friendly Name	Firmware	Uptime						
ZN1-Q3FN2	192.168.1.93	00:1C:B8:C0:0C:CD	C90A00CCD	ZN1-Q3FN2	1.7.0.7	08,22:30						
ZN-PTZ202XE-XT	192.168.1.61	00:1C:B8:C0:5F:FB	CC0075FFB	ZN-PTZ202XE-XT	1.6.0.6	08,20:13						
ZN-NH22XE	221.186.72.99	00:1C:B8:C0:19:70	D80C01970	ZN-NH22XE	1.6.0.6	27,18:20						
ZN-DNT352XE-MIR	102-168 1 52	00:1C:B8:C0:18:6D	D60C0186D	ZN-DNT352XE-MIR	1.6.0.4	00,04:06						
ZN-DN312XE-M	Web view	00:1C:B8:C0:17:81	D10C01781	ZN-DN312XE-M	1.6.0.4	40,02:12						
ZN-DN312XE-M	Reboot	00:1C:B8:C0:18:AD	D70C018AD	ZN-DN312XE-M	1.6.0.4	40,01:47						
ZN-BT662XE-MIR	Lindate 1	00:1C:B8:C0:19:80	D80C01980	ZN-BT662XE-MIR	1.5.0.9	07,04:39						
ZN-DNT352XE-MIR	opulte	00:1C:B8:C0:5F:59	C10065F59	ZN-DNT352XE-MIR	1.6.0.4	61,01:51						
	IP Address											
	Friendly Name											
	Firmware update											
	Web update											
	Ocy update											
	oux upuate											
	Device info											
Filter	IP range :		Apply			Device count : 8						

Figure 4. Web viewing option

### 2.1.2. Searching devices with filtering feature

If your network has multiple IP devices and *IPAdminTool* scans too many devices, you can easily find the desired device by using the filtering feature. Type any part of numbers or alphabet letters (case sensitive) of device name, IP address, MAC address, USN, friendly name, or firmware in the Filter box (e.g. A4, 13.153, A90C, etc.) and click the *Apply* button. IPAdminTool will scan IP devices that include typed numbers or letters only. Refer to the figure below for an example. In this example, all of the IP devices having a letter 'M' in the information are searched.

IPAdminTool V3.23.0.2	1.4.5.6		-								
<u>File</u> Setup <u>S</u> ystem											
IP Setup Update	Reboot	Device In	fo   Refresh				Exit				
Selected Device :											
Product Name 🔻	Rack Info	IP Address	MAC Address	USN	Friendly Name	Firmware	Uptime				
ZN-BT662XEMR		192.168.172.101	00:1C:B8:C0:19:80	D80C01980	ZN-BT662XB-MIR	1.5.0.9	07,04:42				
ZN-DN312XEM		192.168.1.102	00:1C:B8:C0:17:81	D10C01781	ZN-DN312XE-M	1.6.0.4	40,02:14				
ZN-DN312XE		192.168.1.13	00:1C:B8:C0:18:AD	D70C018AD	ZN-DN312XE-M	1.6.0.4	40,01:49				
ZN-DNT352XE-MR		192.168.1.52	00:1C:B8:C0:18:6D	D60C0186D	ZN-DNT352X8-MIR	1.6.0.4	00,04:08				
Filter M	IP ran	iae :		Apply	1		Device count : 4				
					1						

Figure 5. Device filtering



### 2.1.3. Searching devices with IP address range

You can search multiple devices by specifying the IP address range also. Type the IP address range to display devices that are in the IP range by referring to the following rule.

#### IP Address Range Filtering Rule

```
Range input: Start IP Range-End IP Range
IP Range: OCT4[.OCT3[.OCT2[.OCT1]]]
OCT(octet): 0-255
```

The IP range can be configured with from 1 to 4 octets. 1 octet means the last section of the IP address, 2 octets mean the last two sections of the IP address, and so on.

The specified filtering section number must have set same section number both the start IP address and end IP address. (e.g. 10.1-100.100, 100.10.15-200.80.220).

Refer to the figure below for an example.

IPAdminTool V3.23.0.2	1000						
<u>File</u> <u>Setup</u> <u>System</u>							
IP Setup Update	Reboo	t   Device I	nfo   Refresh				Exit
Selected Device :							
Product Name 🔻	Rack Info	IP Address	MAC Address	USN	Friendly Name	Firmware	Uptime
ZN-BT662XE-MIR		192.168 172.101	00:1C:B8:C0:19:80	D80C01980	ZN-BT662XE-MIR	1.5.0.9	07,04:42
ZN-NH22XE		221.186 72.99	00:1C:B8:C0:19:70	D80C01970	ZN-NH22XE	1.6.0.6	27,18:23
Filter	IP ra	nge : 2.1-200.200		Apply			Device count : 2

Figure 6. IP range

#### **IP Address Range Filtering Example**

IP Range: 2.1-200.200 (Search the devices with last two sections of the IP address.) Filtered IP address: 192.168.1.13 (X) 192.168.1.52 (X) 192.168.1.61 (X) 192.168.1.66 (X) 192.168.172.101 (O) 221.186.72.99 (O)



## **2.2. IP management for devices**

You can adjust the network setting of a device with IPAdminTool. Select a device from the list and click the **IP Setup** button on the upper menu bar or **IP Address** menu with the mouse right click.

IPAdminTool V3.23.0.2 IPA System		
IP Setup         Update         Reboot         I Device Info         Refresh           IP Selected Device : 192.168.172.101         Selected Device : 192.168.172.101         Client Network information           IP Address         Ip2 . 168 . 172 . 101         Net 1         Net 2           Subnet Mask         255 . 255 . 0         Client Network information         Adapter Info:Realtek RTLB168D/8111D Family PCI Gigabit Ethernet NIC (NDIS 6.2 Adapter Name: {41ACS901-1053-431D-995D-473683F1206E} MAC Adapter Name: {41ACS901-1053-431D-995D-473683F1206E} MAC Adapter Name: {41ACS901-1053-431D-095D-473683F1206E} MAC Adapter Name: {41ACS901-1053-055D-095D-473683F1206E} MAC Adapter Name: {41ACS901-	Firmware 1.6.0.6 1.5.0.9 1.6.0.4 1.6.0.4 1.6.0.4 1.6.0.4 1.6.0.4 1.6.0.4 1.7.0.7	Uptime           08,20:17           07,04:44           40,02:16           61,01:55           27,18:25           40,01:51           00,04:11           08,22:34
Filter IP range : Apply	Dev	vice count : 8

Figure 7. Network setting

#### DHCP

Let the DHCP server get the IP address automatically.

#### Static

Set the IP address, Subnet Mask, Gateway and DNS manually according to users' network requirements.



### 2.3. How to check your device Information remotely

The software version information of IP devices can be displayed by selecting the **System** > **Device Info** menu. You can check the information by selecting **Device Info** from the shortcut menu.

Device I	nfo		
Name	8	Value	<u> </u>
Reque	st ID	Admin1.1	
Produ	ct Name	ZN-BT662XE-MIR	=
Host N	Name	ZN-BT662XE-MIR	
Eth Co	ount	1	
Eth In	terface	eth0	
IP Ad	dress	192.168.172.101	
MAC	Address	00:1C:B8:C0:19:80	
Subne	et Mask	255.255.255.0	
Gatew	vay	192.168.172.1	-
•			Þ
		OK	

Figure 8. Device information

You can find the device information as below.

- Request ID
- Product Name
- Host Name
- Ethernet Count
- Ethernet Interface
- IP Address
- MAC Address
- Subnet Mask
- Gateway
- IP mode
- DNS
- BootMode
- Firmware Version
- SafeFirmware Version
- Bootloader Version
- Web URL
- Web Port
- RTSP Port
- Update Port
- Uptime
- System Key Method
- Device Serial
- Rack-info
- Description



# **3. Updating Firmware**

IPAdminTool provides the firmware update feature for single or multiple IP devices. To update the firmware for your device, follow the steps described on this chapter.

### Step1. Select IP device(s) to update

Select the device you want for the firmware update from the list and it turns blue. You can either update a device one by one or update multiple devices at the same time. To update multiple devices, choose all the devices you want with *Ctrl* or *Shift* and click the **Update** button on the upper menu as the figure below (The mouse shortcut menu also provides the **Update** menu).

IPAdminTo File Setup IP Setup	IPAdminTool V3.23.0.2     Image: Constraint of the second se												
Product Nam	elected Device : 192.100.1.32 Product Name Rack Info IP Address MAC Address V USN Friendly Name Firmware Uptime												
ZN-BT662 ZN-NH22X ZN-DN312 ZN-DN312 ZN-DN312 ZN1-03FN ZN-PTZ20 IPX3702H	Web view Reboot Update IP Address Friendly Name Firmware update Web update Ocx update	192.168.172.101 221.186.72.99 192.168.1.13 192.168.1.52 192.168.1.93 192.168.1.61 192.168.1.61	00:1C:B8:C0:19:60 00:1C:B8:C0:19:70 00:1C:B8:C0:18:AD 00:1C:B8:C0:18:6D 00:1C:B8:C0:18:6D 00:1C:B8:C0:0C:CD 00:1C:B8:C0:SF:FB 00:1C:B8:C0:SF:59	D80C01980 D80C01970 D70C018AD D60C0186D D10C01781 C90A00CCD CC0075FFB C10065F59	ZN-BT662XE-MIR ZN-NH22XE ZN-DN312XE-M ZN-DN352XE-MIR ZN-DN352XE-MIR ZN-PT2202XE-XT ZN-DNT352XE-MIR	1.5.0.9 $1.6.0.6$ $1.6.0.4$ $1.6.0.4$ $1.6.0.4$ $1.7.0.7$ $1.6.0.6$ $1.6.0.6$	07,04:48 27,18:28 40,01:55 00,04:14 40,02:20 08,22:38 08,20:21 61,01:59						
Filter	Device into	range :		Apply	]		Device count : 8						

Figure 9. Firmware update of multiple devices

Clicking the Update button displays the popup window as below.

						Diowsk
ID :	root F	PW : pas	55			
essage						Log
No	Address	Port	Status	Step	Progress	Log
<b>¥</b> 1	192.168.172.101	80	none	0/0		2014-04-09_15-39-35_192.168.172.101.log
✓ 2	221.186.72.99	80	none	0/0		2014-04-09_15-39-35_221.186.72.99.log
🖌 3	192.168.1.13	80	none	0/0		2014-04-09_15-39-35_192.168.1.13.log
✓ 4	192.168.1.52	80	none	0/0		2014-04-09_15-39-35_192.168.1.52.log

Figure 10. Selected device list



#### Tip. To manually add devices on the firmware update list

Your devices may have been connected to the external network or the mDNS feature may have been disabled on your device. In this case, you can add the device manually by typing the IP address for firmware update.

Select any device listed on the IPAdminTool and click the **Update** button or run FirmwareUpdate.exe. Type the IP Address you want to update and click the **Add** button as below. Then, you can see that the IP address is newly added on the list.

🏪 Firmw	are updater v1.1.3	.1					×
F <b>/</b> W Path							Browser
ID:	root P	w: pa	ss				
Message							Log
No	Address	Port	Status	Step	Progress	Log	
✓ 1	192.168.172.101	80	none	0/0		2014-04-09_15-41-45_192.168.172.101	.log
TP I		Deet	80	dd Delete	Salast	Incolect Bulk Count 10	E site
		Port	A	Delete	select	Update Update	Exit

Figure 11. Adding device for firmware update

#### Tip. To remove devices from the selected list :

If you want to remove the device from the selected list, select the **No** check box and click the **Delete** button. Then, the selected device is removed.

Firmwa	are updater v1.1.3	.1			-	×
=/W Path						Browser
ID :	root F	W: pas	S			
Message						Log
No	Address	Port	Status	Step	Progress	Log
1	192.168.172.101	80	none	0/0		2014-04-09_15-42-43_192.168.172.101.log
2	221.186.72.99	80	none	0/0		2014-04-09_15-42-43_221.186.72.99.log
3	192.168.1.13	80	none	0/0		2014-04-09_15-42-43_192.168.1.13.log
4	192.168.1.52	80	none	0/0		2014-04-09_15-42-43_192.168.1.52.log
-						
IP		Port	Ad Ad	d Delete	Select L	Unselect Bulk Count 10 Update Exit

Figure 12. Removal of a device

#### Step2. Browse the firmware file and update

Now, if you have selected all the devices you want to update, select the firmware file (file format: \*.pkt or \*.enc) by clicking the **Browser** button, and then click the **Update** button. It requires the log-in authentication as picture below (a). Type the ID and password of administrator authentication. The factory default is 'root' (ID) and 'pass' (password). Wait for a few seconds and the progress bar will show you the current status of update. If the update process is completed, the 'Complete' message will be shown on the status box of selected list as below.

đ	A Firmware updater v1.1.3.1							
C	=/W Path	F:¥FTP¥Download¥U	)P¥firmwa	re-V1.6.0.6.Gar	nzGXi.enc			Browser
(	a) ID:	root P	W: pa	s				
	dessage Firmware update complete							Log
	No	Address	Port	Status	Step	Progress	Log	
	✓ 1	192.168.1.13	80	Complete	7/7	100%	2014-04-09_15-50-23_192.168.1.13.lo	9
	IP		Port	80 Ad	d Delete	e Select (	Unselect Bulk Count 10 Update	Exit

Figure 13. Completed firmware update

#### Step3. Reboot the system

After the firmware update, you should wait for about 1 minute until the device restarts. If your device is not shown on the scanned list of IPAdminTool even after the update and reboot of the system, click the **Refresh** button or try to type the IP address on the Internet Explorer's address bar.

**Select / Unselect Button :** To select or unselect the device(s) click the check box directly or click the **Select / Unselect** button.



# **4.0ther Features**

# 4.1. How to reboot the device remotely

You can reboot the IP device by clicking the **Reboot** button or the **Reboot** option from the shortcut menu. If you choose the **Reboot** menu, the dialog box (a) appears as shown below. Then, click the **Yes** button to log into the device by entering your ID and password as the popup window (b). After that, click the **OK** button on the pop-up window (c). Now, the device will get restarted in about 1.5 minutes.

IPAdminTool					
ZN-DN312XE-M      Do you really want to reboot the device?					
(a)					
Login					
192.168.1.102(00:1C:B8:C0:17:81)					
ID : [root] PW : [****					
Remember ID and password					
Login Cancel					





Figure 14. Device reboot



## 4.2. How to set the retransmit interval for mDNS queries

To set the MDNS message frequency, select **Setup** > **Frequency Setting** from the menu. If the pop-up window appears as below, set the desired frequency and click the **Save** button to save the changes.

Frequency setting					
Set the MDNS messages frequency.					
Frequency : 5 times(s) every 3 second(s)					
(Setting '0' time : It does not set limits to the number of sending messages)					
Cancel					

Figure 15. mDNS frequency

#### What is mDNS?

The IPAdminTool uses a specific protocol, multicast DNS (mDNS), to get the information of devices on the network. When the IPAdminTool is run by a user, it sends the packets which request the answers from devices. The results are shown on each tab of IPAdminTool.

You can adjust the retransmit interval for the mDNS queries in this menu.

As an example above, if you set the frequency as '5 times every 3 seconds,' your IPAdminTool would send out the mDNS queries 5 times in every 3 seconds and you will get the responses from all devices. If you set the times as '0,' it keeps sending the queries without limit.

If you have completed the setting, click the **Refresh** button on the main menu of IPAdminTool. Then, the list will be refreshed according to your frequency setting.

**Note 1.** Too frequent mDNS queries may result in the increase of the network load. **Note 2.** IP address and port number for mDNS is 224.0.0.251:5353.



# **REVISION HISTORY**

MANUAL#	DATE (M/D/Y)	COMMENTS
01A.01	05/04/2012	Created
04-2014-A	04/09/2014	Updated for the latest software

