

# UM300 IP Camera UM400 IP Encoder Basic User Guide

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# 1. Hardware Installation

## 1.1 Check the Contents.

Open the wrapper carefully before using your IP Camera and check the contents. It is composed as the following items:



UM300 IP Camera



UM400 IP Encoder

- A . UM300 IP Camera or UM400 IP Encoder
- B . Power supply
- C . Lens (Optional accessories)
- D . CD with IP Camera Software and documentation
- E . Network cable

If you have found any damage or accessory missing, please contact to your dealer immediately.

## 1.2 Basic Installation

Step 1. Mount the IP Camera firmly.

Step 2. Decoder of the PTZ controller can be connected via RS485 connector by cable link to GPIO in the back cover panel if necessary. Joint with symbol '+' is linked to the connector RS485+ ( A ) of the decoder, joint with symbol '-' is linked to RS485- ( B ) ;

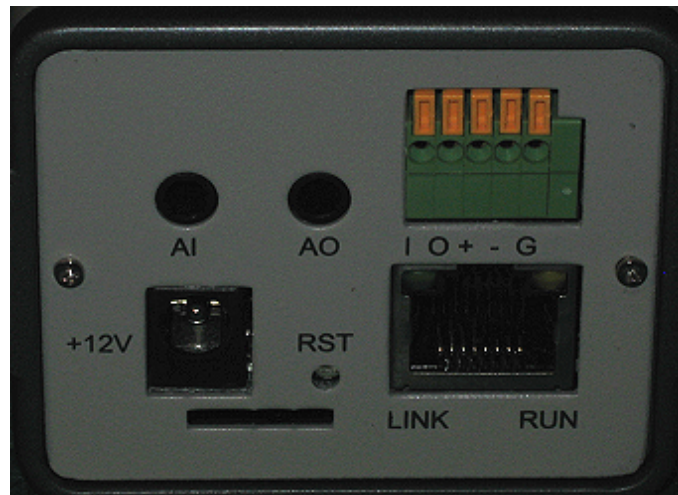
Step 3. Connect the network cable.

Step 4. Plug in the power, the [RUN] LED indicator flashes when IP Camera is working normally; the [LINK] LED indicator turns on when it gets connection to the network correctly. Refer to [Back Cover Layout](#) for detailed descriptions.

Step 5. Refer to Readme.txt located on the installation CD for finding an IP address of the camera.

Step 6. Now you can access the IP Camera by navigating to its IP address in the web browser.

## 1.3 Back Cover Layout



UM300 IP Camera



UM400 IP Encoder

- A. +12V PWR power input  
Single pin (  $\phi 2$  ) Power connector, DC+12V, 800mA, the pin is anode. Power consumption of the camera is 5 Watts maximum.
- B. Reset Button. Push it with a pin and hold for 10 seconds to reset the device to factory settings.
- C. Program running indicator (RUN)  
LED in orange color, flashes when power is input to the camera. It flashes one time per second under normal operating.
- D. Network indicator (LINK)  
LED in green color, shows steady when connection to network, unlit when there is no connection, flashes for network activities.
- E. RJ45 network connector ( LAN )
  - 1 - TX-P, TxData +
  - 2 - TX-N, TxData -
  - 3 - RX-P, RecvData +
  - 4 - Not used
  - 5 - Not used
  - 6 - RX-N, RecvData -
  - 7 - Not used
  - 8 - Not usedIt is recommended to follow Wiring Standards of T568B
- F. Stereo Audio input via 3.5mm jack

G. General Purpose Input/Output port (GPIO)

GPIO can be used to I/O ports of alarm notification and port RS485. Each of the pins is defined as the following table:

Pin	Purpose
I	Alarm Input GPIO1
O	Alarm Output GPIO2
+	RS485-A
-	RS485-B
GND	Ground

Table 2-1 Definitions of GPIO

- \* Output port is 0/3.3V TTL level compatible; the I/O driven current is 8mA.
- \*\* Input port is 0/5V TTL level with pull-up resistor can be used to connect with the alarm input sensor.
- \*\*\* RS485 is used to connect with PTZ control decoder. Bite rate 9600, 1 start bit, 8 data bit, 1 stop bit, and no parity bit. UM series IP Cameras/Encoders support PTZ control protocols of PELCO-D, PELCO-P and B01. You can have them configured using the IP Camera application software. Refer to the PTZ section further in this document for detailed descriptions.

H. Composite RCA Video input (for Encoder only).

## 1.4 Install the Lens

The IP Camera should be assembled with the lens before operating. Usually you should choose the suitable lens (e.g. fix focal lens, zoom lens, manual iris lens, auto iris lens, standard lens, wide-angle lens, telephoto lens) according to the condition. CS-mount lens mode is the standard type for UM300 series IP Camera, When use C-mount lens, please use the CS-C conversion ring. Make sure to remove the protective cap of the camera and lens first. Mount a lens onto the camera by lightly turning it to the exact position.

Adjusting the iris and focusing: Aim the camera at a surveillance scene, open the irises to maximum, and turn the focusing ring to obtain the optimum image on the monitor. And then adjust the iris to a proper value according to the illumination and the depth of field in the scene. If the illumination of the scene varies in a wide range, it is recommended using auto iris lens. If manual iris lens is being used, open your iris as much as possible and keep the optimum image when it is the brightest in the scene (for the largest environment illumination). During the adjustment, if the iris has not been wide opened enough in the most brightest moment, the electric shutter of the camera will auto change to the low speed mode, so that to display better image on the monitor. When the environment became darker and the electric shutter was in the slowest mode (1/50s), the image would be dullish to see.

If there is still no clear image after the adjust procedure above, you should adjust the back focus of the camera as following instruction.

## 1.5 Adjust the Back Focus

Back focus refers to the "focal flange length". This is the distance between the rear lens element and the CCD after mounting on the standard lens (standard C/CS mount lens). The back focus has been well adjusted when the camera shipping from the factory. Yet it still needs adjusting when the zoom lens is being applied. Sometimes you cannot obtain clear images when the focusing ring is adjusted to the limit position. Just make sure that you have the correct lens mounted and then adjust the back focus. According to the past experience, the back focus should be adjusted in most application of IP Camera mounted electric zoom lens. Following shows the steps of the adjustment:

- A . Mount a lens onto the camera
- B . Wide open aperture (Reducing the depth of field to obtain the imaging focus)
- C . Set zoom ring to fully TELE position; take a close-up to the subject 10m away. And then turn the focus ring of the lens until the image is clear.
- D . Zoom out to fully WIDE position. The shot with the above subject becomes a wide-angle view and the focus could not be adjusted any more.



- E . Loosen the back-focus ring's fixing screw, and adjust the ring until the picture is clear. Tighten the back-focus fixing screw temporarily.
- F . Set the lens to fully TELE position again to see whether the close-up object is still clear. If not, repeat steps C, D, E, F until the focus is consistently clear.
- G . Usually the adjustment could be finished within repeating the above steps once or twice.
- H . Tighten the back-focus fixing screw.

## 2. Parameters Configuration

Navigate to Live View web page and click on “Config” button to configure the parameters.

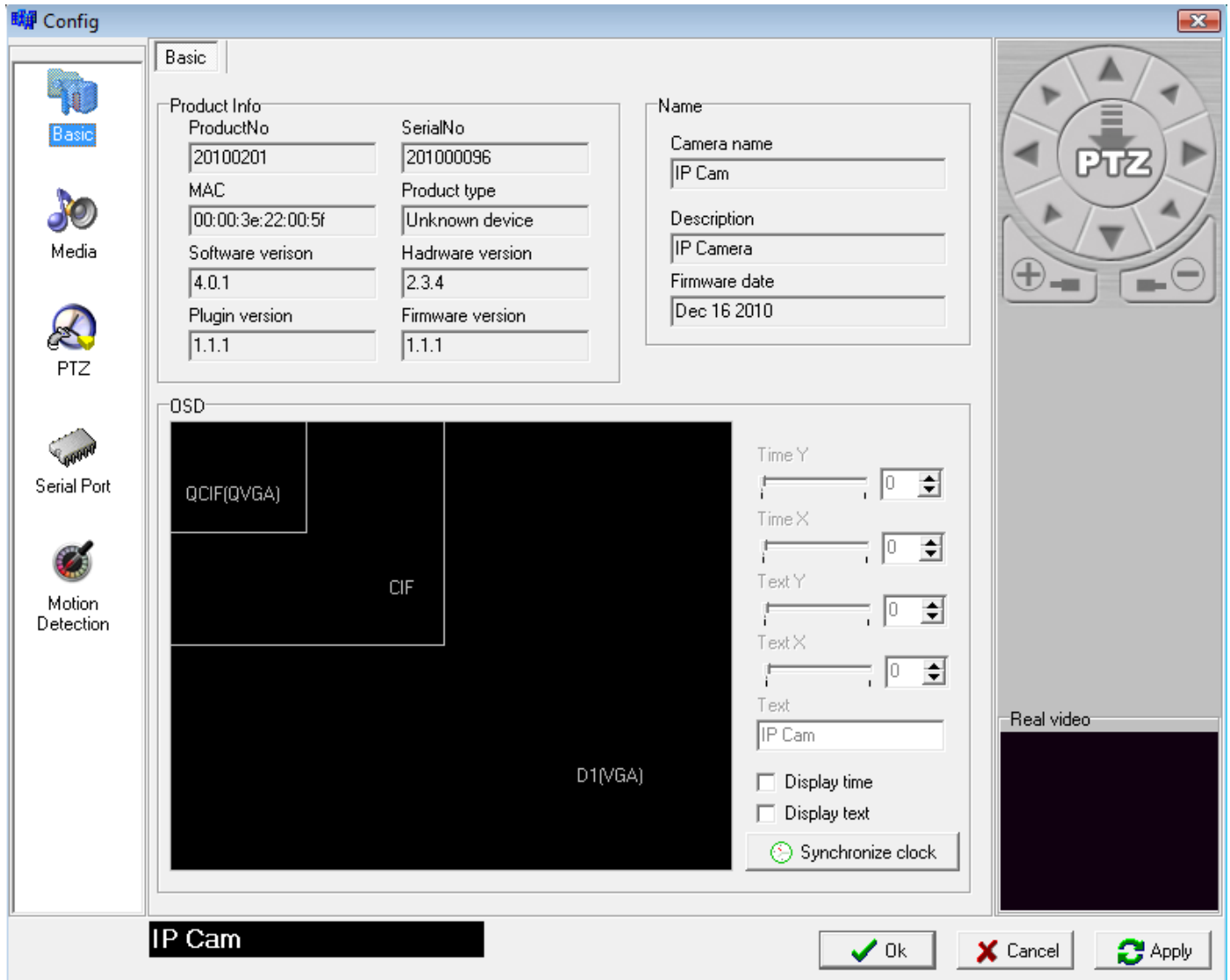


Figure 1.0 Basic Parameter Setting

### 2.1 Basic Setting

The main purpose of Basic Setting is to adjust the position of device name and time that show on the screen.

**Display time:** Time information is auto added to video that is the system clock of current device.

**Display text:** Name information of a device is auto added to the screen. Device name input by Device Name setting that mentioned in last part would be presented in the text edit box as a default. You can modify it to any content as you wish. Positions of displaying time and text can be adjusted though modifying values of the coordinates. The position can also be adjusted by left-clicking on the text and time to drag. Click “OK”.

## 2.2 Media Setting

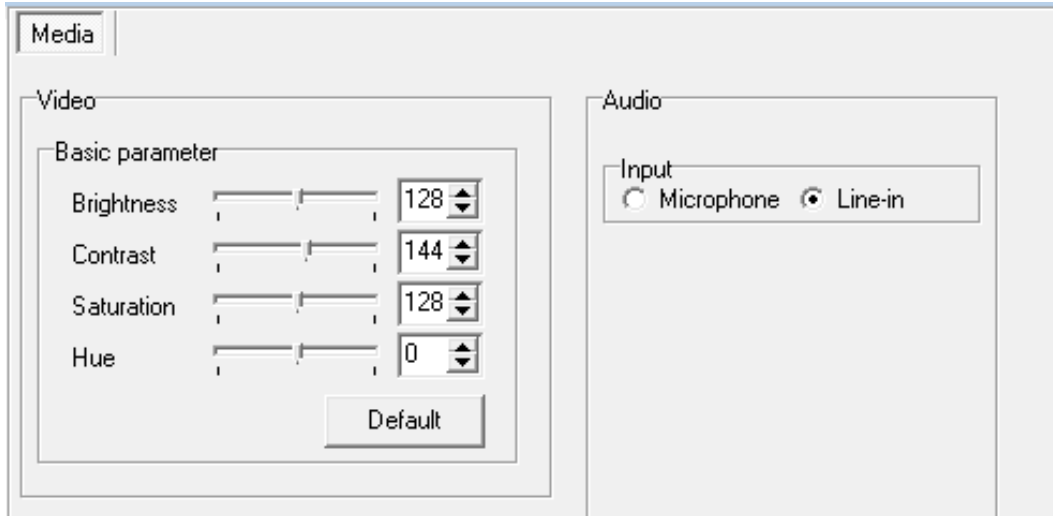


Figure 1.1 Media Parameters Setting

**Video Basic Parameters:** Set brightness, contrast, hue and saturation of encoded output image and save it to the device. Notice that the setting here is not the display parameter of your display which can be adjust by the buttons on it. The range of each parameter is listed in the following table:

	Minimum	Maximum	Default Value
Brightness	0	255	128
Contrast	0	255	144
Saturation	0	255	128
Hue	-180	+180	0

Table 1.1 Basic Audio/Video Parameters Settings

## 2.3 PTZ Setting

PTZ

PTZ Control

Protocol: MG-801

PTZ Address: 1

Horizontal Speed Limit: 100

Zoom Speed Limit: 100

Vertical Speed Limit: 100

Enable PTZ

Preset & Patrol

Add Preset Delete Preset

Patrol No. 01

Preset List

Index	Name
01	Cross
02	Road view
03	Steps
04	Building
29	Test position

Preset Stay Time: 1

Sequence

Preset No.	Preset Name	Stay Time
01	Cross	5
02	Road view	5
03	Steps	10

Insert the preset into patrol

Figure 1.3 PTZ Settings

## PTZ Control

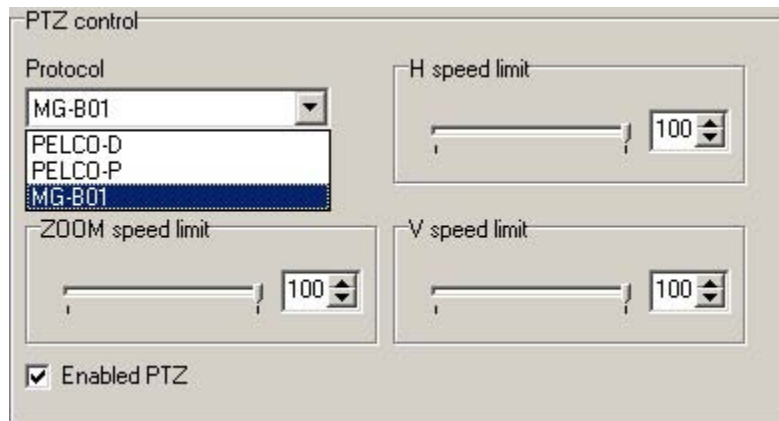


Figure 1.3.1 PTZ control

**Protocol:** PELCO-D, PELCO-P and MG\_B01 protocols are supported in the devices, shown as Figure 2.9.

**PTZ Address:** This setting should be agreed with the PTZ device. Pay attention to that port RS-485 baud rate should be the same as the PTZ device.

Rotation speed limit of Pan/Tilt is set between 0-100. To high-speed dome, it is recommended to set the value in 32 about. If the value is set too large, it is hard to control the dome camera in tracking some objects with high speed rotating to stop in a specific location.

## Preset Position and Patrol Settings

**Preset Position Setting:** Turn the PTZ and adjust the camera to a right position by controlling the PTZ Control Button on the right side. Click "Add a preset position" button, shown as Figure 1.3.2.

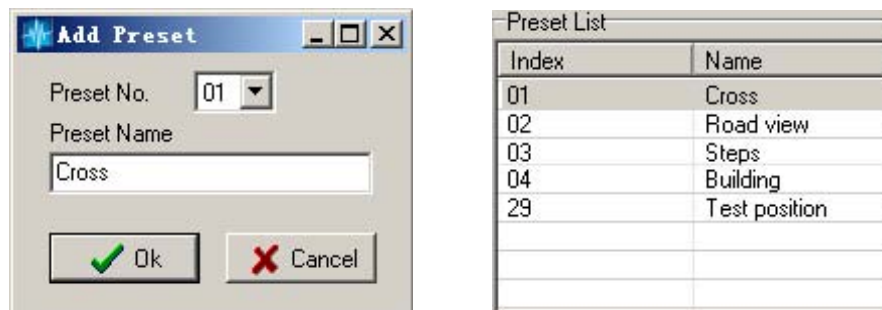


Figure 1.3.2 adding preset position

Choose a preset position number; enter a descriptive name "Cross", click "OK" to save it. Repeat the operation above can set multiple preset positions.

## Patrol Setting:

Steps:

- ① Select a patrol number in the drop-down list, shown as Figure 2.12
- ② Select a preset position
- ③ Set a stay time in seconds
- ④ Add this preset position to the patrol sequence

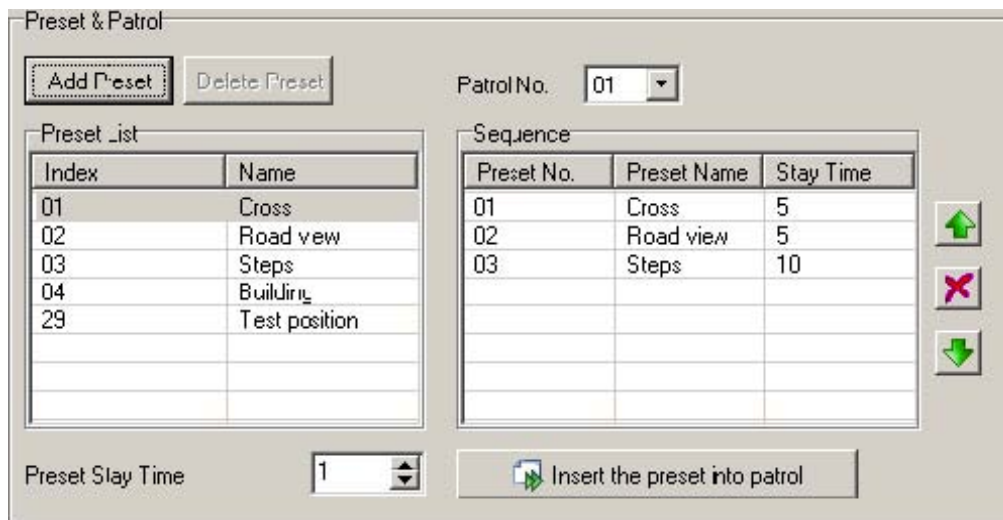





Figure 1.3.3 Patrol Setting

Using  &  buttons to arrange the sequence of preset positions in the patrol list. Press  icon to delete a preset position.

Click "OK" to save the configuration.

## 2.4 Serial Port Setting

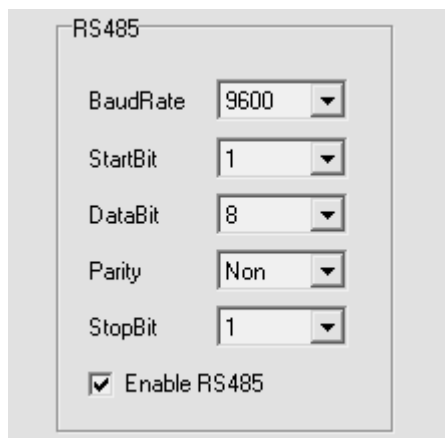


Figure 1.4 Serial Port Setting

IP Camera connects with the PTZ device and PTZ controller by port RS-485. The data format output by RS-485 is required to match with the PTZ controller. You can configure RS485 data format here.

## 2.5 Motion Detection Setting

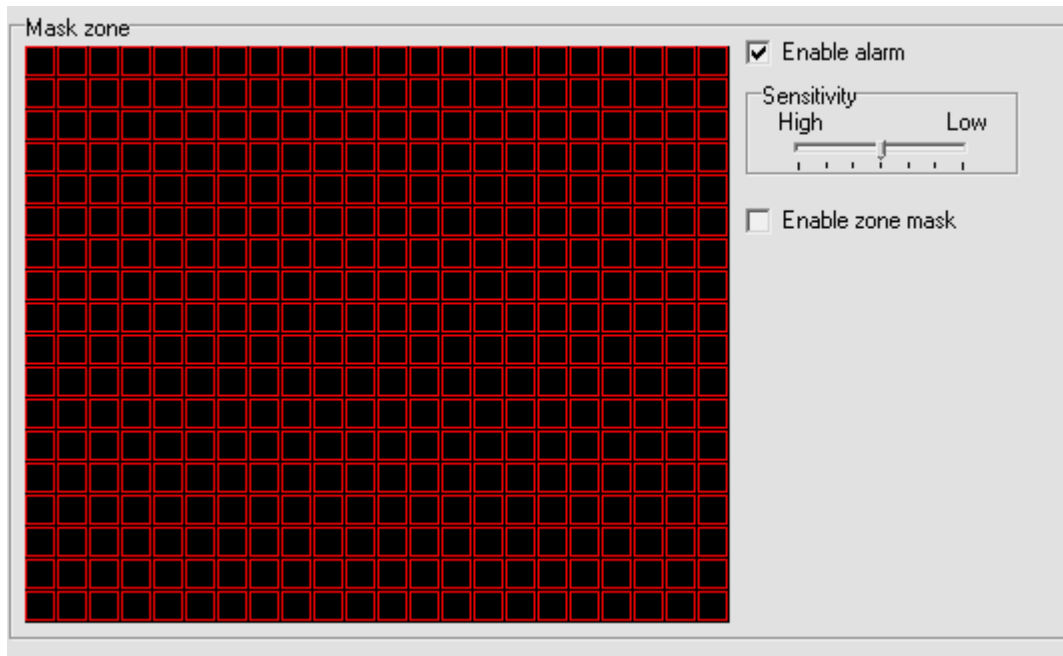


Figure 1.5 Motion Detection Setting

Using motion detection zone mask and sensitivity level, you can configure motion detection according to your area of surveillance.

