IR Car License Capture Camera

Instruction:

Using the latest SONY 960 h ultra-high resolution scheme, high-definition visual and high resolution. Match import ding yuan wick, service life long distance light even color turn black and infrared lamp switch synchronization function design, colorless, gone with the wind, the same color symmetry. The day and night can automatic induction infrared high-definition image effect, display color images during the day and night automatically turn black and white and induction infrared this machine is low power consumption, small fever, restore true colors.

Features:

* 1/3" SONY Ex-View 960H CCD
* Ultra High resolution 700TVL
* Full color pattern, also can effectively identify license plate color and the impression in the evening
* Professional intelligence according to license plate cameras, intelligent light inhibition function technology innovation
* Use the independent research and development plan, solve the problem of engineering installation of the ground wire interference
* Intelligent analysis circuit control, is not afraid of strong light, license plate recognition effect at night, image is clear and bright during the day
* Built-in 6000 v level of lightning protection electric circuit, and static electricity protective function
* LED lamp brightness and open time, can be adjusted according to use environment, auxiliary can reach 50meters
* Built-in independent research and development of RS - 485 control system, greatly convenient for local or remote RS485 and RS422 adjustment menu
* Automatic aperture aspheric manual zoom 6 to 60 mm millions of hd camera (2 million pixels), automatic aperture function ensures image at noon, the sun will not white
* Day and identify high sensitivity of photosensitive chip is used to control, easy to precisely control the startup time
* Side-open rain shield type aluminum alloy enclosure, convenient to adjust the speed or mode, zoom lens, adjust the LED brightness etc, increase card buckle lock screw, prevent strangers casually open
* Built-in temperature control fan and the heating system, able to adapt to high and low temperature work, performance is stable (less than 5 degrees Celsius heater start work, above 40 degrees Celsius, heat dissipation system start working
* Apply to parking lot entrances, inward and outward highway Toll Gate village bayonet, such as indoor and outdoor all-weather monitoring car out most of the places
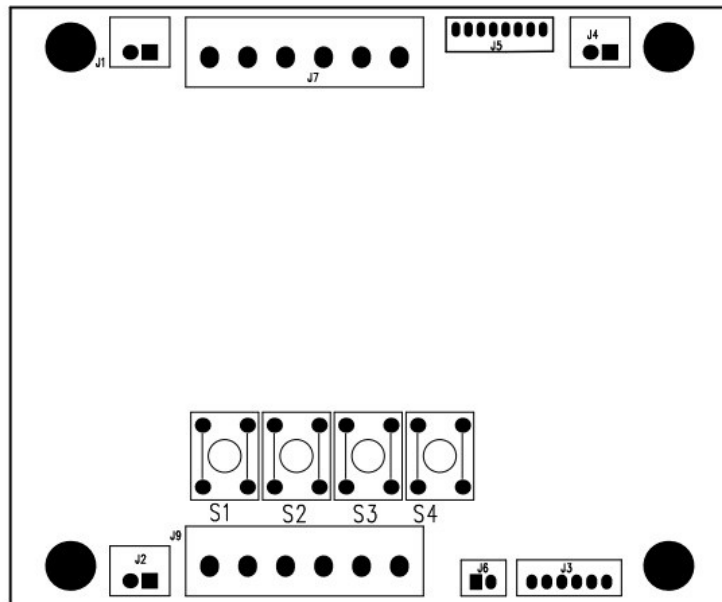
Installation:
* Do not expose power or video connection to moisture or water
* If camera is not functioning properly, please power off and contact the manufacturer.

Note: Non-regulated power supply may cause damage to

Technical Specifications:

Video system	PAL/NTSC
Sensor	1/3" SONY Ex-View 960H CCD
Pixel	PAL:976(H)x 582(V); NTSC: 976(H)x 494(V)
Resolution Color	700TVL
Lens	6~60mm
Horizontal Frequency	PAL：28.375mHz; NTSC:28.636mHz
Scanning	2:1 interlace
Sync	internal
Electronic Shutter	PAL:1/50~1/120000 sec; NTSC:1/60~1/120000 sec
Control Mode	The built-in OSD, RS485 (Pelco D/P) for automatic identification of 2400 B/S
Day& Night	CDS
SNR	52dB (AGC OFF)
Illumination	0.1Lux/F1.2(LED off)
DNR	2D
Gamma correction	0.45
White balance	Auto
Backlight Compensation	On/off
Video output	1.0Vp-p/75Ω, Video composite video signal
Min.Illumination	0Lux (LEDs ON)
IR LED	42pcs IR LEDs
IR Distance	40m
Power Supply	DC12V (±10%), 1A at DC12V(Max)
Work environment	-20°~60°C, 20%~90% RH
Temperature control	Heater works at 5 °C optional, fan works at 40 °C
Dimension	390x140x100(mm)
Net Weight	1140g

Camera interface function diagram:

S1:The starting time of the LEDs is more sensitive.
S2: The starting time of the LEDs is less sensitive
S3: lowdown the brightness of the LEDs.
S4: increase the brightness of the LEDs

Instructions:

* Camera mounting bayonet above or oblique direction, surveillance camera distance optimization within 50m, the installation height to avoid light and sun light halo direct to camera is appropriate.
* Make up about a third or fourth of the entire screen plate width, is relatively appropriate, specific width should look to the specific requirements of the software
* Adjust the light intensity can effectively control the camera's exposure level, to get better images, according to the above specifications, according to the actual installation distance, ambient light intensity, speed and other specific conditions to adjust the lamp brightness, should avoid overexposure, to underexpose, if installation distance too far, ambient light is weak or the speed is faster, the built-in light source strength is insufficient, needs to take into consideration the fill light
* If the glance of light is strong, license plate is not strong, you can use the light inhibition function, main menu - backlit processing pattern - strong inhibition, can according to need to adjust light inhibition of set values in the sub menu, all day work or night work, only can generally have a good result for license plate recognition
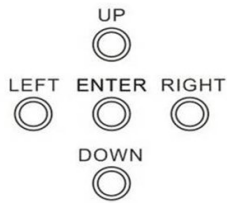
* Lamp brightness adjustment according to actual applications factors such as light intensity, reflection of license plate, speed, ambient light, installation distance and angle. Suitable light intensity can be avoided in license plate images the image or to underexpose the effect not beautiful. As indicated by the arrows from the tail look and adjust the lamp brightness lights, counterclockwise clockwise turn dark.
* Lights starting time can be adjusted according to the light , which is what the outside light intensity under the lamp. As indicated by the arrows from the tail looks counterclockwise to adjust the infrared lamp start time is early, late clockwise.
* The fan starts in 40 ℃, the heater starts in 5 ℃.
* Adjusting the focal length needs to be carefully adjusted to ensure that the plate width make up about a third or fourth of the entire screen is more appropriate

RS485 OSD Settings

Power Input

Video Output

RS485 Port

Mini Keyboard

UP

LEFT ENTER RIGHT

DOWN

The Camera has built-in Pelco-D Protocol. It can be connected and controlled by the keypad or DVR. Please note to press key "SAVE" to operate your changes on OSD MENU before exit.

How to connect in MINI keypad

Step 1:

Power up the camera and keypad, connect camera and keypad in RS485 port.
Caution: RS485 has Negative and Positive port, please connect properly.
Otherwise the connection between keypad and camera will be failed.

Step 2:

Select the same protocol, baud rate and camera ID in both keypad/DVR and camera.

Shift+1: Select Protocol (Pelco-D for this camera)

Shift+2: Select baud rate (2400bps for this camera)

(Press LEFT/ RIGHT to select optional items, ENTER to confirm.)

Camera ID: (default ID 001)

Camera ID Setting: Press Enter go into the OSD Menu, and select,

SETUP MENU>>>NEXT

SETUP MENU (NEXT)>>>CAMERA ID.

Enter into "CAMERA ID", use "LEFT" or "RIGHT" to change "OFF" to "ON", and press "ENTER" to change the ID.

NOTE:

The ID must be 3 figure, such as "001", "123", "243".

The ID figure is selected from the keyboard on the OSD MENU window by using the direction key "UP", "DOWN", "LEFT", "RIGHT".

After setting the ID, please remember to select "SAVE ALL".

The new ID will be effective after the camera is restart. (The camera ID is recognized once when it is power on. You need to power off camera and restart it again to get new ID.)

Or you can use RS485 control keyboard to "CALL 100" to get the new ID effective immediately.

Step 3:

After all the settings done properly, the keypad shall be able to control the camera.

```
SETUP  MENU
   LENS                  AUTO
   SHUTTER/AGC           AUTO
   WHITE BAL             ATW
   BACK LIGHT            OFF
   PICT ADJUST
   D-WDR                 OFF
   MOTIONDET             OFF
   NEXT
   EXIT                  SAVEALL
```

```
SETUP  MENU(NEXT)
   PRIVACY               OFF
   DAY/NIGHT             Auto
   2DNR
   CAMERA ID             OFF
   SYNC                  INT
   LANGUAGE              ENGLISH
   CAMERA RESET
   BACK
   EXIT                  SAVE ALL
```

```
SET UP MENU
   LENS……………………AUTO/MANUAL
   SHUTTER/AGC………AUTO/MANUAL
   WHITEBAL……………ATW/PUSH/USER1/USER2/
                     ANTI CR/MANUAL/PUSH LOCK
   BACKLIGHT……………OFF/BLC/HLC
   PICK ADJUST
   ATR……………………OFF/ON
   MOTION DET…………OFF/ON
   NEXT
   EXIT……………………SAVE ALL
```

```
SET UP MENU(NEXT)
   PRIVACY…………………..OFF/ON
   DAY/NIGHT………..AUTO/EXIT1/EXIT2/COLOR/B/W
   Y/C  Y/C/OFF
   CANMERA ID………………OFF/ON
   SANC…………………………INT
   LANGUAGE…………Chinese, English , Japanese, Germen
                        French,Russian,Portuguese, Spanish.
   CAMERA RESET
   NEXT
   EXIT…………………………SAVE ALL
```

```
LENS
   TYPE               DC
   MODE               AUTO
   SPEED              80
   RETURN
```

```
SHUTTER/AGC………AUTO
   HIGH LUMINANCE
   MODE               SHUT AUTO IRIS
   BRIGHTNESS         32
   LOW LUMINANCE
   MODE               AGC
   BRIGHTNESS         X0.5
   RETURN
```

```
SHUTTER/AGC………MANUAL
   MODE               SHUTTER+AGC
   SHUTTER            1/50
   AGC                6.0
   RETURN
```

```
WHITEBAL
   SPEED              239
   DELAY CNT          1
   ATWFRAME           X2.0
   ENVIRNMENT         IN-
DOOR
   RETURN
```

```
PICK ADJUST            OFF
   MIRROR             0
   BRIGHTNESS         128
   CONTRAST           128
   SHARPNESS          128
   HUE                128
   GAIN
   RETURN
```

```
MOTIONDET …………………OFF/ON
   RETURN
```

```
ATR
   LUMINANCE          MID
   CONTRAST           MID
   RETURN
```

```
PRIVACY…………………OFF/ON
   RETURN
```

```
DAY/NIGHT
   BURST              OFF
   DELAY CNT          1
   DAY→NIGHT          2
   NIGHT→DAY          3
   RETURN
```

```
2-DNR
   NRMODE             Y/C
   Y LEVELC           001
   C LEVEL            004
   RETURN
```

```
LENS(AUTO IRIS)
   TYPE…………………………DC/VIDEO
   MODE…………………………AUTO/OPEN/CLOSE
   SPEED………………………0~255
   RETURN、
```

```
SHUTTER/AGC(AUTO SET UP)
   HIGH LUMINANCE
   MODE…………………………SHUT+AUTO IRIS/AUTO IRIS
   BRIGHTNESS ………………0~255
   LOW LUMINANCE
   MODE …………………………AGC/OFF
   BRIGHTNESS………………X0.25,X0.5,X0.75X1.0
   RETURN
```

```
SHUTTER/AGC(MANUAL SET UP)
   MODE…………………………SHUTTER+AGC
   SHUTTER……………………1/50(1/10000~1/50)
   AGC…………………………6.0(6.0~44.8)
   RETURN
```

```
WHITE BAL (ATW)
   SPEED ……………………239(0~255)
   DELAY CNT………………1(0~255)
   ATW FRAME……………X2.0(X1.5,X2,X0.5,X1.0)
   ENVIRONMENT…………INDOOR/OUTDOOR
   RETURN
```

```
PICK ADJUST
   MIRROR…….. …………OFF/ON
   BRIGHTNESS…….. …..0(0~255)
   CONTRAST……………130(0~255)
   SHARPNESS………….140(0~255)
   HUE……………………120(0~255)
   ..GAIN…………………140(0~255)
   RETURN
```

When access ON,press ENTER to confirm submenu to set up the motion area and sensitivity

```
ATR(ON)
   LUMINANCE……………LOW/MID/HIGH
   CONTRAST……………LOW/MID LOW/MID
                     /MID HIGH/HIGH
   RETURN
```

When access ON,press ENTER to confirm submenu to set up the privacy area

```
DAY/NIGHT(AUTO)
   BURST …………………………OFF/ON
   DELAY CNT………………….1(1~255)
   DAY→NIGHT………………...2(1~255)
   NIGHT→DAY………………….3(1~255)
   RETURN
```

```
NR
   NR MODE……………………..OFF/C/Y/YC
   Y LEVEL
   C LEVEL
```