

Vehicle Safety Video System

2.4 GHZ Wireless Camera Control Box

2.4 GHZ Wireless Camera

LCD Monitor



FEATURES

Wireless Camera Control Box

KEY FUNCTIONS

- This system is designed with ultrahigh frequency channel rated at 2.4GHz which is very close to microwave bands.
- The frequency bands range from 2400MHz to 2483MHz (ISM Band).
- Aside from the ISM 2.4G within the system, there is another ISM dual-direction control channel by using ISM433 channel to control over 2.4G channel for camera signaling and the frequency is automatically swappable to assure of more stable signaling.
- The ISM 2.4G is designed with analogy, while ISM 433 is used for digital control.
- Within this system, each unit is designed with an ID code. Before operation, please setup the password previously so that users can avoid erroneous operation.

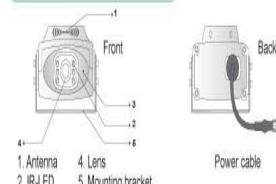


Wireless Camera

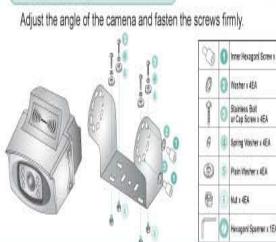
KEY FUNCTIONS

- The wireless camera is powered by voltage level from 10V-30V and this voltage range is quite different from that of general cameras only rated at 12V. Thus, it is available for automobile application.
- This camera is designed with internally hidden antenna with the least damage possibility under operation.
- The camera is automatically turned on when the monitor is turned on.
- The camera utilizes a CCD image sensor having a high quality picture.
- The camera automatically adjusts the picture quality with changing in light.
- Wide field of view (option)
98 degree in the horizontal plane.
120 degree in the diagonal plane.
- Water resistant housing.
- Operates over a wide temperature range.

CAMERA CONTROLS



INSTALLATION



WIRELESS CAMERA SETTING

Please connect the camera control box to the dedicated monitor. — Picture 1

Camera 1 Setup :

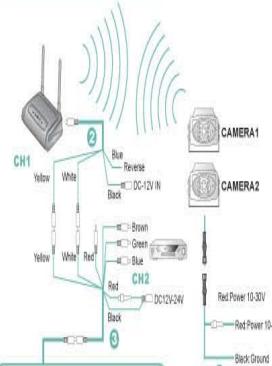
- Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a short beeping sound, immediately after that, the unit is exactly under setup status. — Picture 2
- Press 'CH' key with beeping sound happening and the CA1 indicator stably lamp lights up. It means the setup completeness of CA1. — Picture 3

Camera 2 Setup :

- Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a long beeping sound (approximately 3 seconds of duration), the unit is therefore exactly under setup status. — Picture 4
- Press 'CH' key with beeping sound happening and the CA2 indicator stably lamp lights up. It means the setup completeness of CA2. — Picture 5

CONNECT

WIRING DIAGRAM (1)



CABLE

For LCD Monitor



SPECIFICATIONS

2.4 GHZ Wireless

Camera Control Box -- W-2400R

2.4GHz Receiving Band	2400MHz-2483MHz (ISM band)	ACCY Supplied
2.4GHz Channel Frequency	CH1: 2414MHz CH2: 2432MHz CH3: 2450MHz CH4: 2468MHz	Power cable 1EA
2.4GHz Channel Setting	By Tact Switch	Touch Fastener 1EA
2.4GHz RF Sensitivity	-80dB (min.)	
433 MHz Transmission Frequency	433.92 MHz or 434.33 MHz	
433 MHz RF Output Power	For FCC or RBTTE	
433 MHz Receiver Sensitivity	-95dB (min.)	
Control Data Modulation	FSK	
Control Data Communication Type	Half-Duplex	
Camera Setting		
CA1/CA2 Camera Selection	Normal-DIP Switch	
	Reverse Gear auto Change to CA1	
CA1/CA2 Camera Mirror Setting	By DIP Switch	
Power Supply		
Supply Voltage	DC12V	
Supply Current	≤350mA	

Wireless Camera(Color Outdoor Mounting Camera)

—CA-2400TC

2.4GHz Receiving Band	2400MHz-2483MHz (ISM band)
2.4GHz Channel Frequency	CH1: 2414MHz CH2: 2432MHz CH3: 2450MHz CH4: 2468MHz
2.4GHz Channel Setting	By Control Box (Front side)
2.4GHz RF Output Power	For FCC or RBTTE
Video Modulation Type	FM
Audio Modulation Type	FM-FM
433MHz Transmission Frequency	433.92 MHz or 434.33 MHz
433MHz RF Output Power	For FCC or RBTTE
433MHz Receiver Sensitivity	-95dB (min.)
Control Data Modulation	FSK
Control Data Communication Type	Half-Duplex
Power Supply	
Supply Voltage	DC12-24V
Supply Current	≤350mA

Color Camera

Image Sensor	1/3" COLOR CCD	ACCY Supplied
Picture Format	NTSC: 510(H) x 492(V), PAL: 500(H) x 502(V)	Camera Bracket 1EA
Scanning System	525 TV Lines 2 Interface	525 TV Lines 2 Interface
Min. Illumination	1 Lux (F1.2)	Power Cable 1EA
Electronic Shutter	1/60 (1/50)~1/1000 (1/100)	
Sync. System	Internal	
Scanning Frequency	NTSC: 15.750Hz, PAL: 15.625Hz	
Horizontal Resolution	330TV Lines	
S/N Ratio	45dB or more (AGC Off)	
Video Output Signal	VBS 1.0~1.5V	
Shock Resistance	10G	
Lens	Angular Diagonal 120° F4.0mm ± 5%	
Power Supply	DC12~24V	
Power Consumption	200mA	
Audio Output	2V (RMS)	
Operating Temp.	-30°C to 55°C	
Weight	208g	
Dimension	105 x 85 x 65 (W x H x D) mm	

CAMERA CONTROLS USING

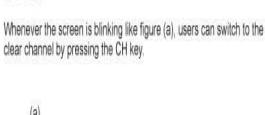
CA1 Key



CA2 Key



CH Key



Whenever the screen is blinking like figure (a), users can switch to the clear channel by pressing the CH key.

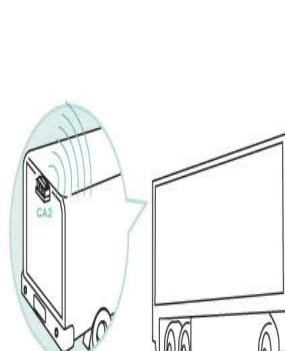
Referring Diagram for the Installation of Camera's Angle:
To avoid interference, please tune your antenna higher than the height of the car.

(a)

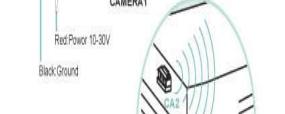
PERFECT

WIRING DIAGRAM (2)

CA2 Key



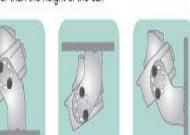
CA1 Key



Referring Diagram for the Installation of Camera's Angle:
To avoid interference, please tune your antenna higher than the height of the car.

(a)

PERFECT



Red Power 10-30V

Black Ground



CAMERA1

Red Power 10-30V

Black Ground



CAMERA2

Red Power 10-30V

Black Ground



CA1

Red Power 10-30V

Black Ground



CA2

Red Power 10-30V

Black Ground



CA1

Red Power 10-30V

Black Ground



CA2

Red Power 10-30V

Black Ground



CA1

Red Power 10-30V

Black Ground

CA2

Red Power 10-30V

Black Ground

CA1

Red Power 10-30V

Black Ground

CA2

Red Power 10-30V

Black Ground

CA1

Red Power 10-30V

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CA2

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Red Power 10-30V

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CA1

Red Power 10-30V

Black Ground

CA2

Red Power 10-30V

Black Ground

CA1

Red Power 10-30V

Black Ground

Vehicle Safety Video System

- **2.4 GHZ** Wireless Camera Control Box
- **2.4 GHZ** Wireless Camera
- LCD Monitor

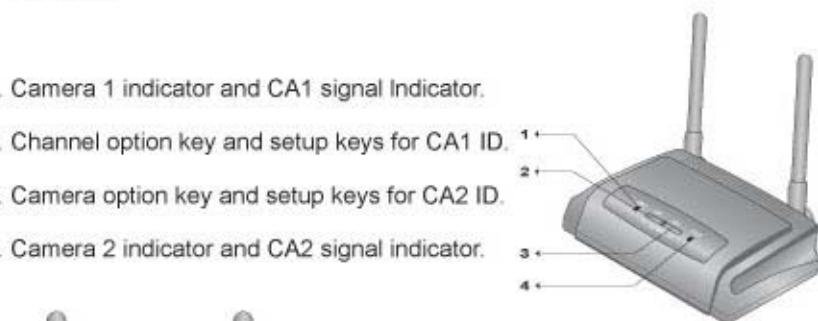


FEATURES

Wireless Camera Control Box

KEY FUNCTIONS

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4. The ISM 2.4G is designed with analogy, while ISM 433 is used for digital control.
5. Within this system, each unit is designed with an ID code. Before operation, please setup the password previously so that users can avoid erroneous operation.



1. Antenna 1.
2. Mirror & Normal Setup.
3. Terminals to connect the dedicated monitor.
4. The setup connection hole for Camera ID.
5. Antenna 2.

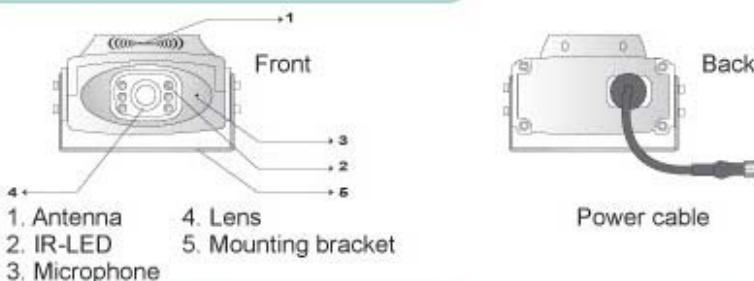
Wireless Camera

KEY FUNCTIONS

1. The wireless camera is powered by voltage level from 10V~30V and this voltage range is quite different from that of general cameras only rated at 12V. Thus, it is available for automobile application.
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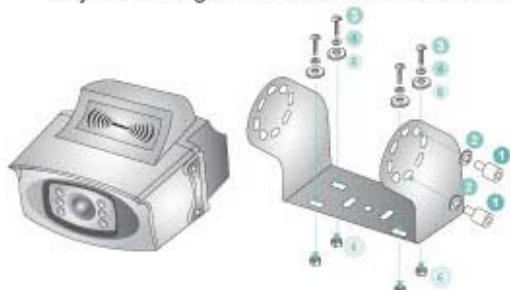
- The camera is automatically turned on when the monitor is turned on.
- The camera utilizes a CCD image sensor having a high quality picture.
- The camera automatically adjusts the picture quality with changing in light.
- Wide field of view : (option)
96 degree in the horizontal plane.
120 degree in the diagonal plane.
- Water resistant housing.
- Operates over a wide temperature range.

CAMERA CONTROLS



INSTALLATION

Adjust the angle of the camera and fasten the screws firmly.



	① Inner Hexagonal Screw x 4EA
	② Washer x 4EA
	③ Stainless Bolt or Cap Screw x 4EA
	④ Spring Washer x 4EA
	⑤ Plain Washer x 4EA
	⑥ Nut x 4EA
	Hexagonal Spanner x 1EA

WIRELESS CAMERA SETTING

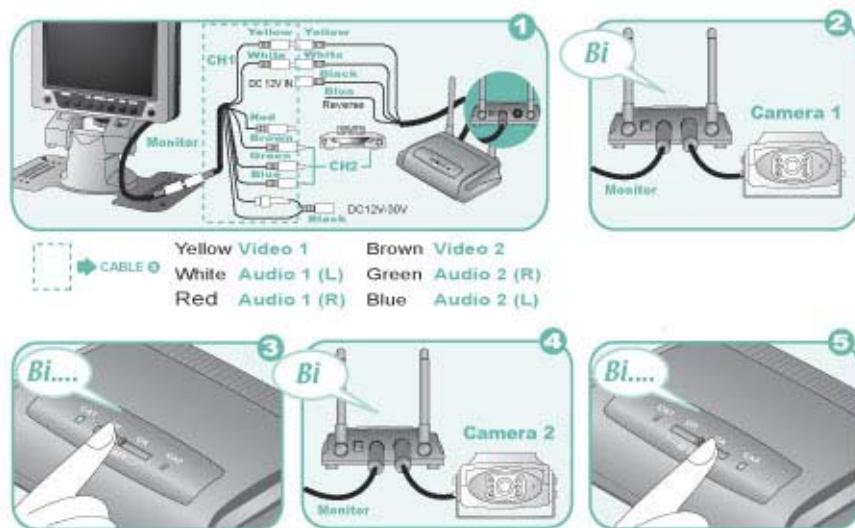
Please connect the camera control box to the dedicated monitor.-----picture 1

Camera 1 Setup :

1. Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a short beeping sound, immediately after that , the unit is exactly under setup status.-----Picture 2
2. Press "CH"key with beeping sound happening and the CA1 indicator stably lamp lights up . It means the setup completeness of CA1.-----Picture 3

Camera 2 Setup :

1. Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a long beeping sound (approximately 3 seconds of duration), the unit is therefore exactly under setup status.-----Picture 4
2. Press "CH"key with beeping sound happening and the CA2 indicator stably lamp lights up . It means the setup completeness of CA2.-----Picture 5

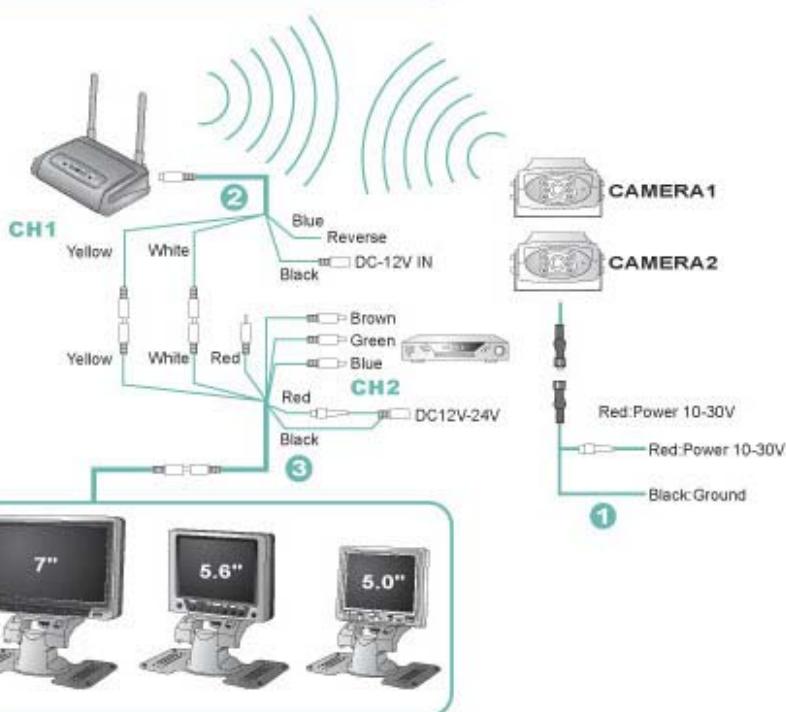


Car Safety Video System

Car Safety Video System

CONNECT

WIRING DIAGRAM [1]



CABLE

For LCD Monitor



- ① Power cable for camera
- ② Power cable for camera control box
- ③ Power cable for LCD monitor

CAMERA CONTROLS USING

CA1 Key



CA2 Key

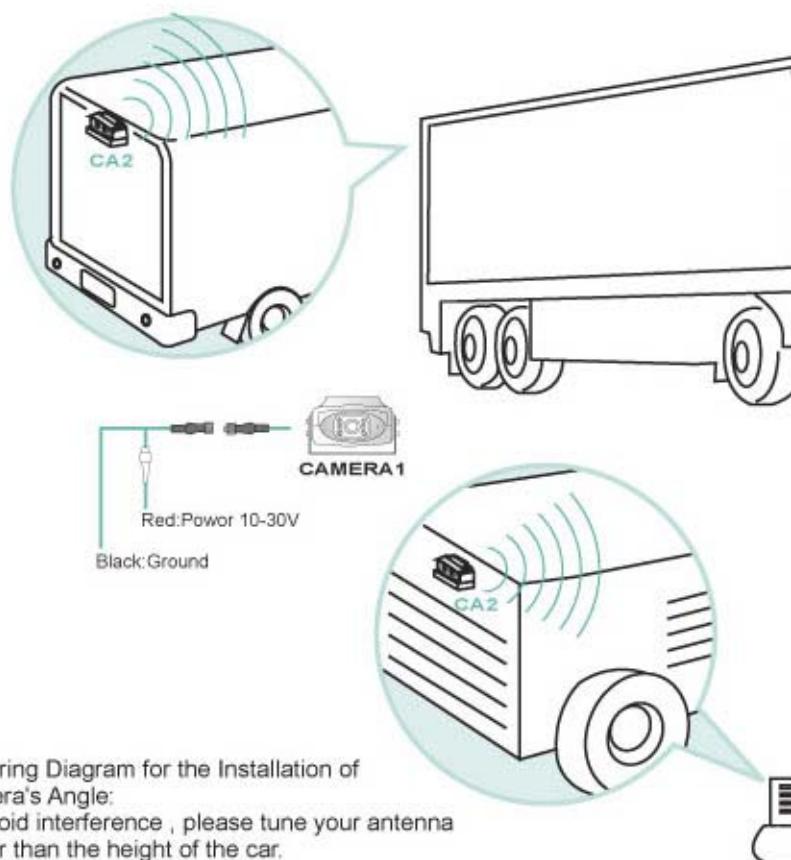


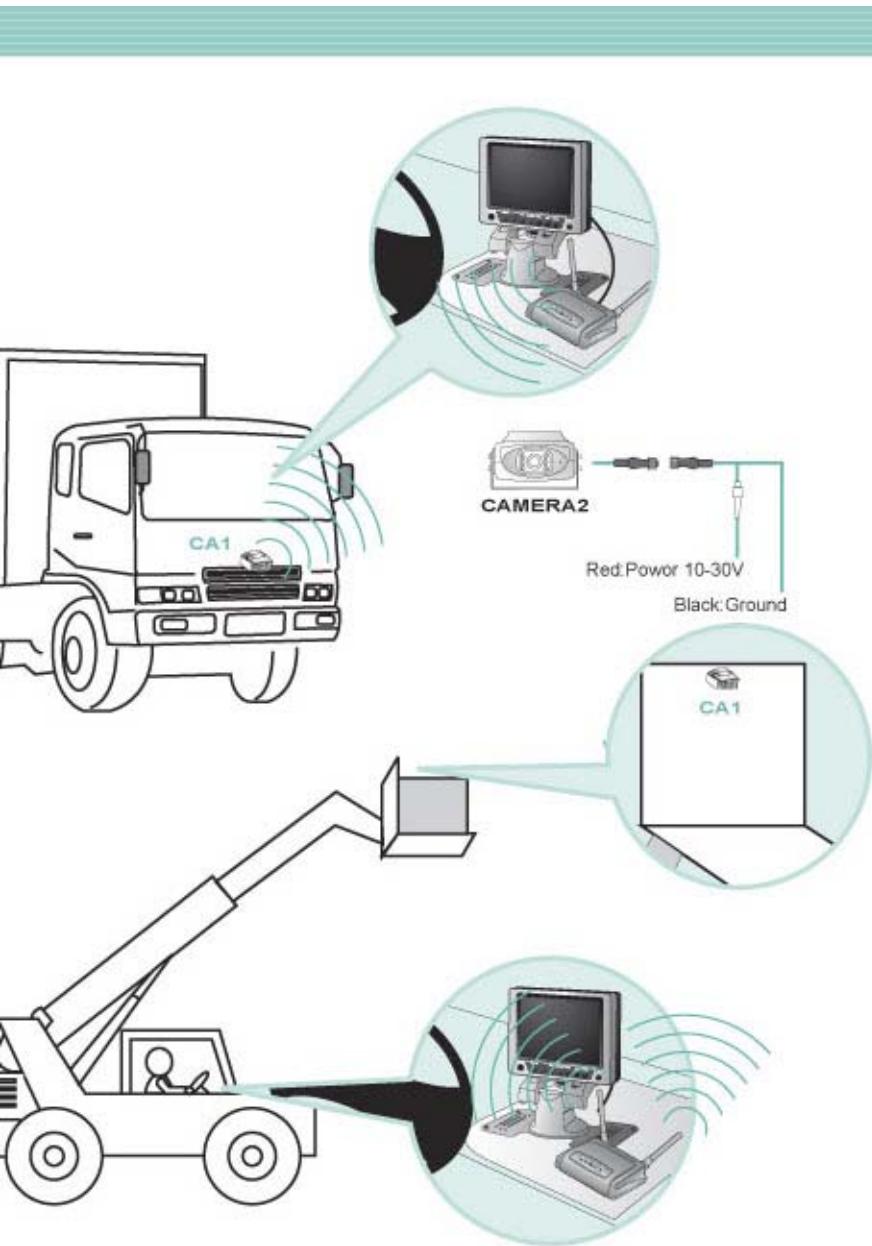
CH Key

Whenever the screen is blinking like figure (a), users can switch to the clear channel by pressing the CH key.



WIRING DIAGRAM (2)





SPECIFICATIONS

2.4 GHZ Wireless

Camera Control Box --- W-2400R

2.4GHZ Receiving Band	2400MHZ~2483MHZ (ISM band)	ACC'Y Supplied	
2.4GHZ Channel Frequency	CH1: 2414MHZ CH2: 2432MHZ CH3: 2450MHZ CH4: 2468MHZ	Power cable	1EA
2.4GHZ Channel Setting	By Tact Switch	Touch Fasteners	1EA
2.4GHZ RF Sensitivity	-80 dBm (min.)		
433 MHZ Transmition Frequency	433.92 MHZ or 434.33 MHZ		
433 MHZ RF Output Power	For FCC or R&TTE		
433 MHZ Receiver Sensitivity	-95dBm (min.)		
Control Data Modulation	FSK		
Control Data Communication Type	Half-Duplex		
Camera Setting			
CA1/CA2 Camera Selection	Normal-DIP Switch Reverse Gear auto Change to CA1		
CA1/CA2 Camera Mirror Setting	By DIP Switch		
Power Supply			
Supply Voltage	DC12V		
Supply Current	≤350mA		

Monitor(5.6" LCD MONITOR)

Display Type	TFT LCD Panel for JEMITEK(CHI MEI) J560Q1-01	Input Terminals
Screen Size	5.6 inch	Input Signal
Active Area	113.28(W)×84.708(H) mm	NTSC/PAL Auto Switching
Screen Color	Full-Colors	Operation Temperatures
Resolution	960 (H) ×234 (V) dots	-10~+65°C
Brightness	250 cd/m ²	Storage Temperatures
Display Driver	TFT Active Matrix System	-20~+85°C
Display Frequency	NTSC: f _H =15.73KHz, f _V =60Hz PAL: f _H =15.63KHz, f _V =50Hz	Humidity
Back light	Cold Cathode Filament Tube	Overall Dimension
Operating Voltage	DC12V (11-30V)	148 (W) ×124 (H) ×35 (D) mm
Power Consumption	12 W 0.5A	Weight
Key Functions	Video Control: Power, Channel Reverse (Mirror), Color, Bright Contrast Audio Control VOL+, VOL-, Earphone	400gm 1EA 1EA
Video	1Vp-p/75ohm	Power cable
Audio Input	350 mv Rms	3EA
Audio Output	1w x 2 @ 6 ohms	

Wireless Camera(Color Outdoor Mounting Camera)

---CA-2400TC

2.4GHZ Receiving Band	2400MHZ~2483MHZ (ISM Band)
2.4GHZ Channel Frequency	CH1: 2414MHZ CH2: 2432MHZ CH3: 2450MHZ CH4: 2468MHZ
2.4GHZ Channel Setting	By Control Box @Reote side
2.4GHZ RF Output Power	For FCC or R&TTE
Video Modulation Type	FM
Audio Modulation Type	FM-FM
433MHZ Transmition Frequency	433.92 MHZ or 434.33 MHZ
433MHZ RF Output Power	For FCC or R&TTE
433MHZ Receiver Sensitivity	-95dBm (min.)
Control Data Modulation	FSK
Control Data Communication Type	Half-Duplex
Power Supply	
Supply Voltage	DC12~24V
Supply Current	≤350mA

Color Camera

Image Sensor	1/3"COLOR CCD	ACCY Supplied
Picture Elements	NTSC: 510(H) x 492(V) , PAL: 500(H) x 582(V)	Camera Bracket 1EA
Scanning System	525 TV Lines 2:1Interlace , 625 TV Lines 2:1Interlace	Screw kit 1EA
Min. Illumination	1.0Lux / F1.2	Power Cable 1EA
Electronic shutter	1/60(1/50)~1/100,000	
Sync. System	Internal	
Scanning Frequency	NTSC: 15.750Hz , PAL: 15.625 Hz	
Horizontal Resolution	330TV Lines	
S/N Ratio	45dB or more (AGC Off)	
Video Output Signal	VBS 1.0Vp-p/75Ω	
Shock Resistance	10G	
Lens	Angular Diagonal 120° F=3.0mm ± 5%	
Power Supply	DC12V±1V	
Power Consumption	200mA	
Audio Output	2V / 600Ω	
Operating Temp.	-20°C to 55°C	
Weight	280g	
Dimension	105 x 65 x 65 (W x H x D) mm	

Car Safety Video System

Made in Taiwan