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COFDM -

DIGITAL VIDEO TRANSMISSION SYSTEMS



DISCOVER CCTV TECHNOLOGY PTE LTD

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BACKPACK DIGITAL WIRELESS VIDEO TRANSMITTER

[DIS-W2000TBH / DIS-W2025TBH]



DIS-W2000TBH / DIS-W2025TBH

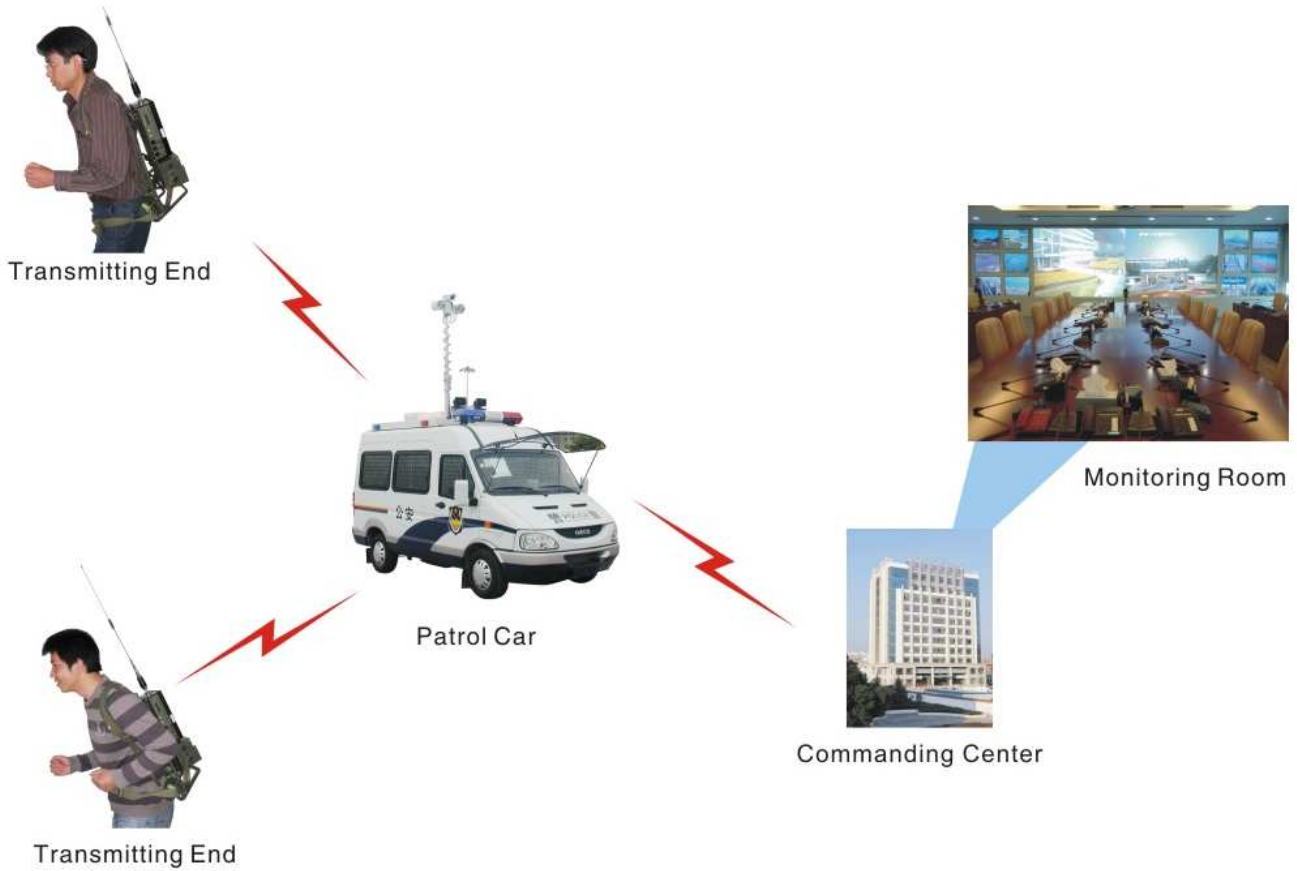
Introduction

The Backpack Digital Wireless Video Transmitter adopts the latest technologies of COFDM modulation and MPEG-2 image compression that enables good NLOS (Non line-of -sight) transmission with DVD quality video. The transmitter is compact size with power amplifier for longer-range transmission. This system has been widely used in many fields such as: Police Forces, First Responders, Security Services, Fire Services, Port Security, Homeland Security, Traffic Management, Police Technical Support Units, Special Forces, Military Command and Control Posts, Airport, Border Control, Major Incident Support.

Features

- ❖ COFDM modulation, stable transmission
- ❖ MPEG-2 video compression, DVD video quality
- ❖ Lithium battery for power supply
- ❖ Mobile and NLOS(Non line-of-sight) transmission
- ❖ Great security by encryption of AES 128 bit / Basic scrambling
- ❖ Low system latency
- ❖ Modular design, compact structure, small cubage
- ❖ Several wavebands available: VHF/L/S
- ❖ Strong casing with built-in cooling plates, waterproof and shockproof
- ❖ In LOS (line-of-sight) environment, the transmission range is up to 80km

Application



The Backpack Digital Wireless Video Transmission system is the ideal solution for first responders or military personnel entering hazardous environments. The first responder can carry the equipment on the back to enter accident ground and then the transmitter send the camera's digital, compressed signals to the commanding center.

Transmitter Specification

Modulation	COFDM	Flatness	≤2dB (within full frequency range)
DC Input	DC12.5V~DC16.8V		≤0.5dB (within 8MHz)
Working Current	≤3.8A/DC12.5V	Carrier	2K
RS232 Control Interface	Standard RS232 level, 9600, 8, N, 1	Power Output	27~33dBm(adjustable) in 1dB step
RS232 Data Interface	Standard RS232 level, supporting 1200~115200	CNR	≥-30dB@30dBm power output
Constellation	QPSK, 16QAM, 64QAM (optional)	Second Harmonic	≤-43dB
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	Video Signal	1Vp-p@75Ω, PAL
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	CBER	<2.0E-4

Bandwidth	6/7/8MHz 2.5/1.25MHz (optional)	Video Compression	MPEG-2 4:2:0/MPEG-4 (optional)
A/V Interface	BNC/RCA	Resolution	720x576@8MHz 352x288@1.25MHz
Frequency	325~399MHz 400~500MHz (customized)	Battery	14.8V/8.2AH
	560~760MHz 760~860MHz (customized)	Frame Weight	1.1kg
	1.0~1.4GHz (customized), 2.3~2.5GHz (customized)	Casing Protection	IP66 (dustproof, waterproof)
	Frequency is adjustable continuously	Video Rate	500Kbps~15Mbps(maximum)
Encryption	AES 128 bit/Basic scrambling	Dimension	238x140x78.5mm
	RS232 serial port for configuration	Weight	2.7kg

BACKPACK DIGITAL WIRELESS VIDEO & AUDIO TRANSMITTER

[DIS-W2025TBHE-P]

PORTABLE MULTIFUNCTION RECEIVER (WITH AUDIO)

[DIS-W2025RH7-JP/H.264]



DIS-W2025TBHE-P

DIS-W2025RH7-JP/H.264

Introduction

The product is developed with COFDM technology and designed specially for the transmission of audio and video data. The COFDM modulation and MPEG-2 video compression guarantee the stability and quality of the transmission. The AES 128 bit encryption and Basic Scrambling ensure the transmission security. In addition, the feature of voice intercommunication strengthens the function and utility of the system. By voice intercommunication, the first responder can get dictation from the commanding center. This product is the ideal solution for NLOS (non line-of-sight) transmission and widely applied in many fields, such as: Police Forces, First Responders, Security Services, Fire Services, Port Security, Homeland Security, Traffic Management, Police Technical Support Units, Special Forces, Military Command and Control Posts, Airport, Border Control, Major Incident Support.

Features

- ❖ Voice intercommunication
- ❖ Inset high-performance power amplifier
- ❖ Stable transmission with omni-directional antenna
- ❖ Aluminum casing with built-in cooling plates, waterproof and shockproof
- ❖ COFDM modulation, Stable transmission, MPEG-2

- ❖ Great security by encryption of AES 128 bit/ Basic Scrambling
- ❖ Mobile and NLOS(Non line-of-sight) transmission
- ❖ video compression, DVD video quality
- ❖ In NLOS (non line-of-sight) environment, the transmission range is 0.5~2km (depends on the height of antenna)

Application



Transmitting End



Multifunctional Receiver



Supervising Car

The product is new equipment in remote surveillance. The outstanding feature is voice intercommunication that strengthens the system with greater stability and practicability. The first responder can carry the equipment on the back to enter accident ground and then the transmitter send the camera's digital, compressed signals to the commanding vehicle. Especially, through the voice intercommunication, the first responder can get instructions from the commanding center.

Transmitter Specification

Frequency	325~399MHz	RS232 Control Interface	Standard RS232 level, 9600, 8, N, 1
	460~500MHz(customized)		
Frequency	560~760MHz	RS232 Data Interface	Standard RS232 level, supporting 1200~115200
	760~860MHz(customized)		

	1.0~1.4GHz (customized) 2.3~2.5GHz (customized)	Audio Rx Sensitivity	≤-110dBm
	Frequency is adjustable continuously	Audio Modulation	GFSK
Bandwidth	6/7/8MHz, 1.25/2.5MHz optional	Audio Decoding	4800bps
Power Output	≥32dBm	Frequency Step	150KHz
CNR	≥-30dB@32.5dBm power output	Audio Output	2.1Vp
Modulation	COFDM	DC Input	DC12V~DC16V
Constellation	QPSK, 16QAM, 64QAM	Working Current	≤3A@DC12.5V
FEC	1/2, 2/3, 3/4, 5/6, 7/8	Battery	14.8V/8.2AH
Carrier	2K	Casing Protection	IP66 (dustproof, waterproof)
Guard Interval	1/4, 1/8, 1/16, 1/32	Encryption	AES 128 bit/Basic scrambling
Video Amplitude	1~1.2Vp-p@75Ω		RS232 serial port for configuration
Video Input	PAL/NTSC	Dimension	140x238x90mm
Magnitude Frequency	-0.5~1.5dB(0~4.8MHz), -4.0~1.5dB(5.5MHz)	Weight	2.7kg
Audio Channel	Stereo/left and right		

Receiver Specification

Working Voltage	AC220V±20V, DC14V~DC16V	Audio Channel	Stereo/left and right
Working Current	≤2.2A@DC15.5V (if voice intercommunication does not work)	RS232 Control	Standard RS232 level, 9600, 8, N, 1
	≤6A@DC15.5V (if voice intercommunication works)	RS232 Data	Standard RS232 level, supporting 1200~115200
Rx Frequency	170MHz~860MHz	Audio Tx Frequency	475~479.950MHz Default frequency: 34th channel
Bandwidth	1.25/2.5MHz 6/7/8MHz (optional)	Audio Power Output	≥39dBm
Rx Sensitivity	≤-105dBm@1.25/2.5MHz ≤-94dBm@6/7/8MHz	Audio Modulation	GFSK
Demodulation	COFDM	Frequency Step	150KHz
Constellation	QPSK, 16QAM, 64QAM	Audio Latency	1~60S
FEC	1/2, 2/3, 3/4, 5/6, 7/8	USB Interface	USB 2.0 (Flash memory disk can be connected)
Carrier	2K	Decryption	AES 128 bit/Basic scrambling, RS232 serial port for configuration
Guard Interval	1/4, 1/8, 1/16, 1/32		
Video Output	PAL/NTSC	Network Interface	10/100Base-T, RJ45
Rx Voltage Output	DC10V~DC12V	Dimension	460x370x180mm
Rx Current Output	800mA/Line	Weight	8.3kg

PORTABLE DIGITAL WIRELESS VIDEO REPEATER

[DIS-W2025SS2FA-BEJ2]

RACKMOUNT DIGITAL WIRELESS VIDEO RECEIVER

[DIS-W2025RJ7]



DIS-W2025SS2FA-BEJ2



DIS-W2025RJ7

Introduction

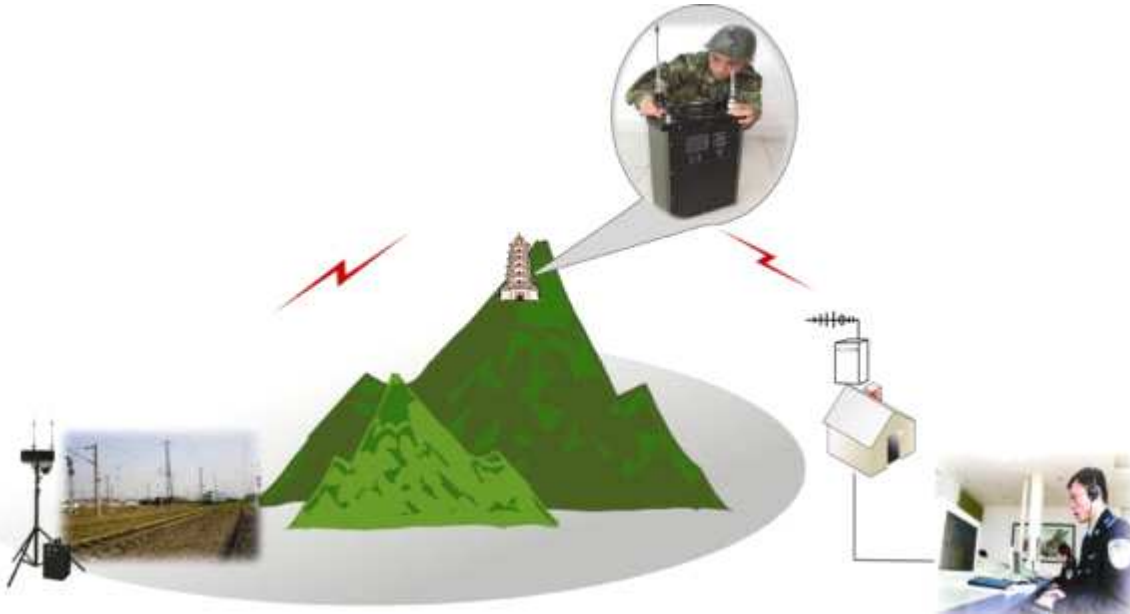
The portable repeater is developed with the latest technologies of COFDM modulation and MPEG-2 video compression. This equipment can realize wireless transmission with high definition video and stereo audio. Especially, in the urban and mountainous environments, the portable repeater is the ideal solution for the NLOS (non line-of-sight) transmission. Since its powerful function and it is easy to be carried and installed everywhere, the repeater has many application fields such as: Broadcasting, Military, Public Security, Forest Fire Prevention, Firefighting, Oil and Gas Industries, Traffic Police, Disaster Management, Railway.

Features

- ❖ High-performance amplifier
- ❖ Lithium battery for power supply
- ❖ Convenient to be carried and installed
- ❖ COFDM modulation and MPEG-2 video compression
- ❖ Great security by encryption of AES 128 bit/Basic Scrambling
- ❖ Adjustable working frequency, LCD board displays the working frequency
- ❖ Firm aluminum enclosure with built-in cooling fans, waterproof and shockproof
- ❖ Stable transmission in NLOS(non line-of-sight)and high speed mobile condition

- ❖ Good transmission with high definition image and stereo audio
- ❖ Transmission range can be up to 100km in LOS(line-of-sight)environment

Application



For the wireless transmission system, if there are high buildings and mountains between the first responder and the receiving center, the transmission quality is easy to be disturbed. We can use the portable repeater to relay the camera's output signals from the first responder to the commanding center.

Repeater Specification

Rx Frequency	170~860MHz	Tx Power Output	27.5~29.5dBm
Rx Bandwidth	6/7/8MHz, 2.5/1.25MHz(optional)	Tx Flatness	≤1dB@8MHz
Rx Setting Frequency	170~860MHz	Tx CNR	≥28dB@27.5dBm power output
Rx Sensitivity	≤-105dBm@1.25MHz;≤-94dBm@8MHz	Second Harmonic	≤-43dB
Rx Default Frequency	300~450MHz	Encryption:	AES 128 bit /Basic scrambling
Rx Voltage Output	DC12.5V±0.5V		RS232 serial port for configuration
Rx Current Output	400mA(MAX)	Battery	14.8VDC/32AH (6 hours continuous working time)
Tx Frequency	550~810MHz	DC Input	DC12.5V~DC16.8V
Tx Bandwidth	6/7/8MHz,2.5/1.25MHz(optional)	Working Current	≤3.5A@DC12.5V
Tx Setting Range	560~760MHz	Dimension	360x268x127mm

Tx Default Frequency	Custom-made	Weight	9.5kg (including the battery)
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Receiver Specification

Rx Frequency	170~860MHz VHF & UHF	Aspect Ratio	4:3, 16:9
Bandwidth	6/7/8MHz 2.5/1.25MHz (optional)	Resolution	720x576@8MHz, 352x288@1.25MHz
RF Level Input	-92dBm~-20dBm -105dBm~-20dBm	Audio Output	Stereo unbalanced (300/200mV)
RF Impedance	50Ω	AV Output	2 audio + 2 video
RF Interface	N female	Decryption	AES 128 bit/Basic scrambling
Modulation	COFDM		RS232 serial port for configuration
Constellation	QPSK, 16QAM, 64QAM (optional)	Working Voltage	AC220V/DC12V
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	Temperature	-20°C~+50°C
Carrier	2K, 8K	Dimension	480x260x44mm (1U aluminium alloy box)
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	Weight	3.5kg
Video Decoding	ISO/IEC13818-2 MPEG-2MP@ML		

MINI VIDEO TRANSMITTER

[DIS-W2025TTSE]

MULTIFUNCTION AMPLIFIER

[DIS-W2000AT2Q]



DIS-W2025TTSE



DIS-W2000AT2Q

Introduction

The mini transmitter is highly integrated digital video transmission equipment that can realize wireless video transmission in mobile and NLOS (Non line-of-sight) conditions. With professional clothes and pinhole camera, it can be used in public security bureau or security department to finish covert missions (technical investigation and covert intelligence gathering). It can be also applied in emergency and evacuation, railway, marine and so on. We can use the mini transmitter with a specially designed multifunctional amplifier to meet the requirement of longer transmission range.

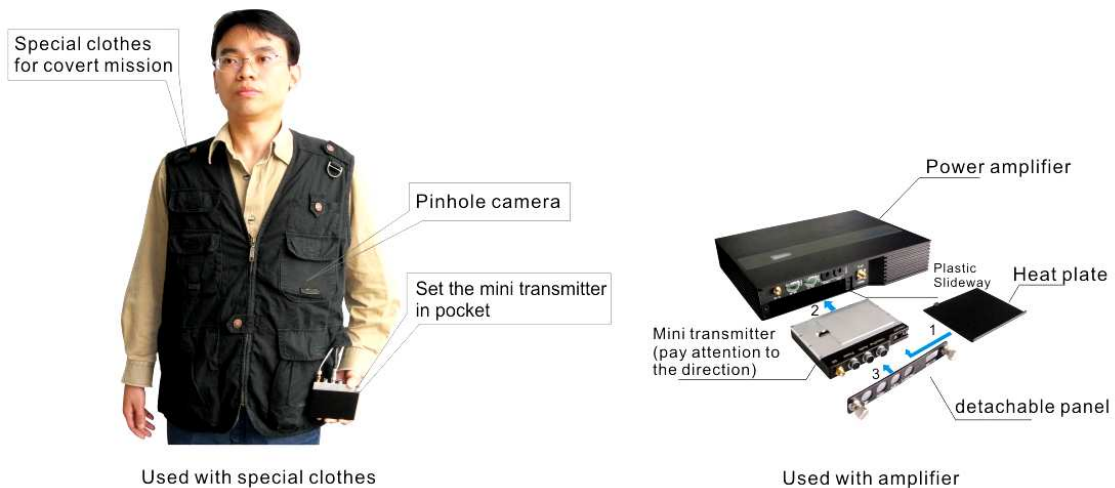
Features

- ❖ COFDM modulation, stable transmission
- ❖ MPEG-2 video compression, DVD video quality
- ❖ Mobile and NLOS(Non line-of-sight) transmission
- ❖ High strength aluminum enclosure, dustproof, waterproof and shockproof
- ❖ Lithium battery for power supply(continuous working time of every battery is an hour)
- ❖ Modular design and highly integrated
- ❖ Adjustable working frequency
- ❖ Can be used conveniently with the specially designed clothes
- ❖ Transmission security by encryption of AES 128 bit/ Basic Scrambling
- ❖ Matched with multifunction amplifier for longer range requirement. The transmission range can be up to 80km in LOS (line-of-sight) condition

Application



The product is an ideal solution in remote surveillance, designed specially for the covert intelligence gathering market. By using a pinhole camera, the first responder can catch live scenes at the accident ground. Then the mini transmitter sends real-time images to the receiving center.



The COFDM mini transmitter is a new concept in remote surveillance, designed specially to meet the special requirements of covert missions. This product is modular design and highly integrates the antenna, digital modulation and AV compression into one. Every lithium battery can support the system to work for an hour continuously. If used with the power amplifier, longer transmission range can be up to 80kms in LOS (line-of-sight) environment.

In the receiving center we use a portable multifunctional receiving suitcase that can record the real-time video by USB interface and control the PTZ in NLOS (non line-of-sight) condition.

Transmitter Specification

Modulation	COFDM	Working Voltage	AC 220V/DC12V
Bandwidth	1.25/2.5/6/7/8MHz (optional)	Motion Speed	More than 180km/h
Constellation	QPSK, 16QAM, 64QAM	Power Interface	Standard
FEC	1/2, 2/3, 3/4, 5/6, 7/8	RF Interface	Standard N female
Guard Interval	1/4, 1/8, 1/16, 1/32	Protection	Antirust and shockproof
Video Signal	1Vp-p@75Ω, PAL	Power Output	22~24dBm (up to 33 dBm with the amplifier)
Resolution	720x576@8MHz, 352x288@1.25MHz	Latency	≤80ms
Video Compression	MPEG-2(4:2:0)/MPEG-4 (optional)	Battery	50 minutes continuous working time
Frequency	300~399MHz 400~500MHz (customized),	Temperature	-20°C~+50°C
	560~760MHz 760~860MHz (customized)	Humidity	≤95%
	1.0~1.4GHz (customized), 2.3~2.5GHz (customized)	Encryption	AES 128 bit/Basic scrambling (RS232 serial port)
	Frequency is adjustable continuously	Second Harmonic	≤-43dB
Transmission Range	LOS: more than 20kms (mini transmitter only)	Dimension	Mini transmitter 101x84x15mm
	LOS: more than 80kms (mini transmitter with amplifier)		Power amplifier 251x195x47mm
	NLOS: more than 500m (mini transmitter only)	Weight	0.21kg (mini transmitter + battery)
	NLOS: more than 1~2km (mini transmitter with amplifier)		2.7kg (mini transmitter + power amplifier)

VIDEO-CAMERA MOUNTABLE TRANSMITTER

[DIS-W2000TKMD / DIS-W2025TKME]



DIS-W2000TKMD / DIS-W2025TKME

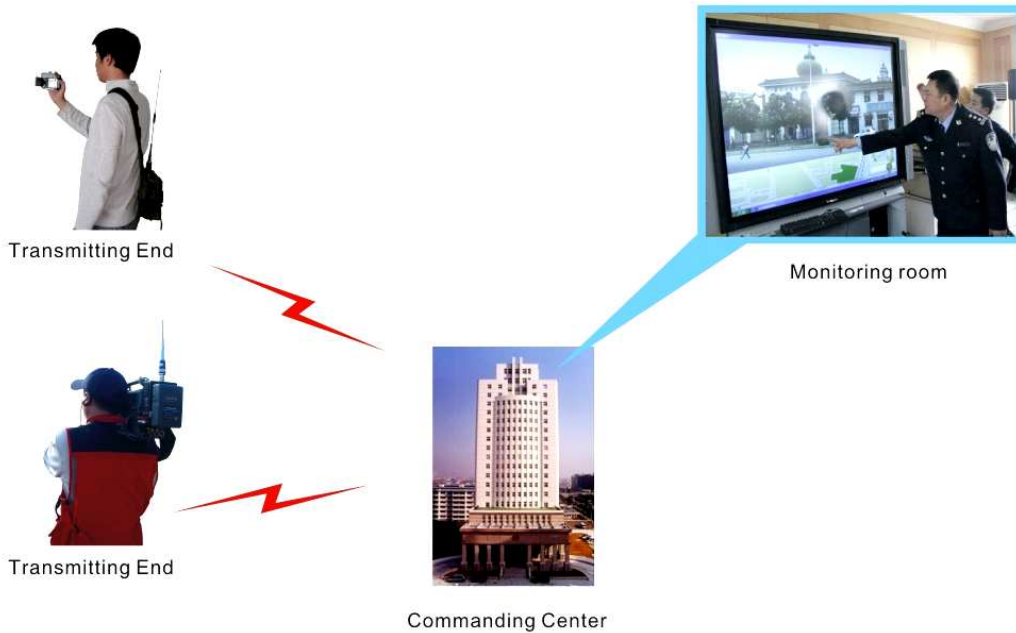
Introduction

This product is a new kind of broadband wireless video equipment that adopts the latest technologies of COFDM modulation and MPEG-2 video compression that can complete video transmission in high-speed motion and NLOS (non line-of-sight) conditions. The diversity receiving technology greatly improves the receiving quality in all conditions. This transmitter is specially designed to meet all necessary transmission requirements of broadcasting standard .It has been widely used in many fields such as: Police Forces, First Responders, Security Services, Fire Services, Port Security, Homeland Security, Traffic Management, Police Technical Support Units, Special Forces, Military Command and Control Posts, Airport, Border Control, Major Incident Support etc.

Features

- ❖ Lithium battery for power supply
- ❖ Convenient to be carried and installed
- ❖ COFDM modulation and MPEG-2 video compression
- ❖ Firm enclosure with built-in cooling fans, waterproof and shockproof
- ❖ Great security by encryption of AES 128 bit/Basic Scrambling
- ❖ Modular design and highly integrated
- ❖ Good transmission with high definition image and stereo audio
- ❖ Adjustable working frequency, LCD board displays the working frequency
- ❖ Stable transmission in NLOS(non line-of-sight)and high speed mobile conditions.
- ❖ The transmission range is more than 50km in LOS (line-of-sight) environment

Application



This equipment can realize the wireless transmission with high definition video and stereo audio in NLOS (Non line-of-sight) condition. The first responder can carry the equipment to enter accident ground and then the transmitter send the camera's digital, compressed signals to the commanding center.

Transmitter Specification

DC Input	DC12.5V~DC16.8V	Power Control	27~33dBm(selectable) in 1dB step
Working Current	≤3.8A@DC12.5V		≤2dB (full frequency range);
RS232 Control Interface	Standard RS232 level, 9600, 8, N, 1	Encryption	AES 128 bit/Basic scrambling
RS232 Data Interface	Standard RS232 level, supporting 1200~115200		RS232 serial port for configuration
Modulation	COFDM	Power Flatness	≤0.5dB (within 8MHz)
Constellation	QPSK, 16QAM, 64QAM (optional)	CNR	≥-30dB@30dBm power output
FEC	1/2, 2/3, 3/4, 5/6,7/8 (optional)	Second Harmonic	≤-43dB
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	Video Signal	1Vp-p@75Ω, PAL
Bandwidth	6/7/8MHz	Resolution	720x576@8MHz,
	1.25/2.5MHz (optional)		352x288@1.25MHz
Carrier	2K	Video Rate	15Mbps(MAX)
Frequency	300~399MHz	CBER	<2.0E-4
	400~500MHz (customized), 560~760MHz 760~860MHz (customized),		

	1.0~1.4GHz (customized) 2.3~2.5GHz (customized)	Dimension	170x120x80mm
	Frequency is adjustable continuously	Weight	1.27kg

VEHICLE MOUNTABLE DIGITAL WIRELESS VIDEO TRANSMITTER

[DIS-W2000TJ20F / DIS-W2025TJ20E]

VEHICLE MOUNTABLE RECEIVER

[DIS-W2000RJ4-E]



DIS--W2000TJ20F / DIS-W2025TJ20E



DIS-W2000RJ4-E

Introduction

The vehicle mountable wireless video transmitter is the ideal solution for establishing rugged wireless video links in all environments including high-speed motion and urban environments. Especially, the latest technologies of COFDM modulation and MPEG-2/MPEG-4 video compression ensure high quality of NLOS (non line-of-sight) transmission. This system is high-powered and can realize longer transmission range with stable, real-time and high definition images. This product can be mounted in a car or helicopter to transmit real-time audio and video to the commanding center.

Features

- ❖ Inset high-powered amplifier and cooling fans
- ❖ Stable transmission with omni-directional antenna
- ❖ COFDM modulation and MPEG-2 video compression
- ❖ Adjustable working frequency, LCD board displays the working frequency
- ❖ Great security by encryption of AES 128 bit/Basic scrambling
- ❖ Rack mountable design, can be installed in a car or helicopter
- ❖ Good transmission with high definition image and stereo audio
- ❖ Stable transmission in NLOS(non line-of-sight)and high speed mobile condition
- ❖ The transmission range is 3-50km in NLOS(non line-of-sight)condition and more than 50km in LOS(line-of-sight) condition

Application



Supervising Car



Vehicle Mountable System

In the urban and mountainous environments, the vehicle mountable wireless video transmitter is suitable equipment that can realize the NLOS (non line-of-sight) transmission and can work well in high-speed mobile condition. Furthermore, this system is high-powered and can meet the requirement of longer-range transmission (3-50 km in NLOS condition).



Transmitter Specification

Frequency	300~399MHz 400~500MHz (customized)	Coding Mode	MPEG-2/MPEG-4 (optional)
	560~760MHz 760~860MHz (customized)	Audio Input	Stereo
	1.0~1.4GHz (customized) 2.3~2.5GHz (customized)	Antenna Interface	x1
	Frequency is adjustable continuously	Audio Input	x2
Bandwidth	6/7/8MHz 2.5/1.25MHz (optional)	Video Input	1Vp-p~1.2Vp-p@75Ω
Power Output	41.5~43.5dBm	Encryption:	AES 128 bit/Basic scrambling
Impedance	50 Ω		RS232 serial port for configuration
RF Interface	N female	Temperature	-25°C~ +45°C
Modulation	COFDM	AC Input	AC220V50Hz ≤ 2A@AC220V
Constellation	QPSK, 16QAM, 64QAM (optional)	Power Consumption	160W (Max)
FEC	1/2, 2/3, 3/4, 5/6, 7/8	Dimension	467x425x132mm (3U Aluminum alloy box)
Guard Interval	1/4, 1/8, 1/16, 1/32	Weight	13.8kg

Receiver Specification

Rx Frequency	170~860MHz VHF & UHF	Aspect Ratio	4:3, 16:9
RF Bandwidth	6/7/8MHz (optional)	Resolution	720x576
RF Level Input	-92~-20dBm	Audio Output	Stereo unbalanced (300/200 mV)
RF Impedance	50Ω	AV Output	2 audio + 1 video
RF Input Interface	N female	Working Voltage	AC220V/DC12V
Demodulation	COFDM	Temperature	-25°C~ +50°C
Constellation	QPSK, 16QAM, 64QAM (optional)	Decryption	AES 128 bit/Basic scrambling
FEC	1/2, 2/3, 3/4, 5/6,7/8 (optional)		RS232 serial port for configuration
Carrier	2K	Dimension	480x280x66mm(1.5U Aluminum alloy box)
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	Weight	3.5kg
Video Decoding	ISO/IEC13818-2 MPEG-2MP@ML		

BIDIRECTIONAL IP DATA AND VIDEO TRANSMISSION SYSTEM

[DIS-W2000SJxxFA-W]

MULTIFUNCTION AMPLIFIER

[DIS-W2000AJ20F]



DIS-W2000SJxxFA-W



DIS-W2000AJ20F

Introduction

The Digital Wireless Video and IP Data Transmission System is a new concept in remote surveillance. With the full-duplex working mode, this solution can realize the data transmission in NLOS (non line-of-sight) and high-speed mobile condition. The built-in MPEG-2 digital server provides the product with a video streaming capacity for network interfacing. Through a switching system we can connect microphone, camera, computer, IP phone and monitor to the transmitter. The COFDM modulation and MPEG-2 video compression ensure high quality of NLOS (non line-of-sight) transmission. The commanding center can receive real-time and high definition images and IP data.

Features

- ❖ Full-duplex working mode
- ❖ Bidirectional audio/video transmission
- ❖ LCD board displays the working frequency
- ❖ COFDM modulation and MPEG-2 video compression
- ❖ Ethernet interface for IP data transmission
- ❖ NLOS(non line-of-sight) transmission with DVD
- ❖ Rack mountable design, can be installed in a car or helicopter
- ❖ Support to form LAN(local area network) by wireless connection
- ❖ Bidirectional IP data transmission with speeding rate of 4Mbps(uplink/down-link)

image quality

- ❖ Transmission security by encryption of AES 128 bit/Basic scrambling

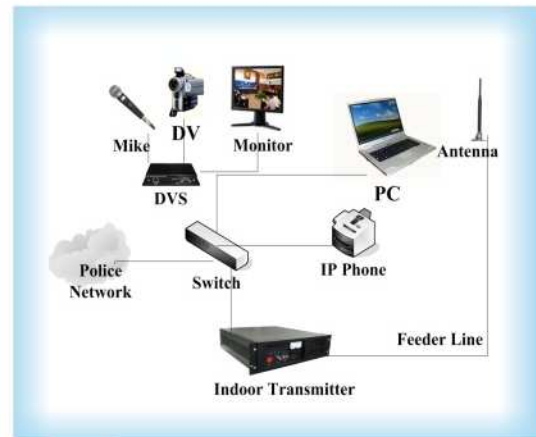
Application



Vehicle Transmission system



Patrol Car



Indoor Transmission System



Commanding Center



This transmission system can be installed in a car or helicopter. The inset MPEG-2 digital Codec is full-duplex working mode that can realize the bidirectional transmission of audio and video and IP data. The COFDM modulation and MPEG-2 video compression guarantee DVD image quality. By using this system, the commanding center can have a videoconference with the first responder. For the IP data transmission, the speeding rate of uplink and downlink is 4Mbps. The transmission is stable with high quality in NLOS (non line-of-sight) and high-speed mobile conditions. Since its multifunction, this product is widely used in many missions, such as: Security Services, Fire Services, Port Security, Homeland Security, Traffic Management, Police Technical Support Units, Special Forces, Military Command and Control Posts, Airport, Border Control, Major Incident Support.

Technical Specification

Video Input	x1 1~1.2Vp-p@75Ω	Data Rate	Uplink 4Mbps,down-link 4Mbps
Video Coding	ISO/IEC13818-2 (MPEG2 video) MP@ML	Ethernet Interface	Normal MII interface, 10/100Base-T
Resolution	720x576		Full duplex working mode, standard of IEEE802.3
Audio Coding	ISO/IEC11172-3 (MPEG1 audio) layer2	Power Output	≥40dBm
Audio Sample Rate	44.1KHz	Flatness	≤2dB (full frequency range); ≤0.5dB (within 8MHz)
Audio Rate	256Kbps	Second Harmonic	≤-43dB
RS232 Control Interface	Standard RS232 level, 9600, 8, N, 1	AC Input	220VAC±20V 50Hz
RS232 Data Interface	Standard RS232 level, supporting 1200~115200	Working Current	≤0.9A@AC220V
Modulation	COFDM	Network Interface	10/100Base-T; RJ45
Constellation	QPSK, 16QAM, 64QAM (optional)	Encryption and Decryption	AES 128 bit / Basic scrambling
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)		RS232 serial port for configuration
Guard Interval	1/4, 1/8, 1/16, 1/32 (optional)	MER	≤-30dB
Bandwidth	8MHz	Dimension	470x418x132mm(3U Aluminum alloy box)
Sensitivity	≤-92dBm	Weight	13.4kg

BROADCAST QUALITY VIDEO TRANSMITTER

[DIS-W2422TKLF]

RACK MOUNTABLE RECEIVER

[DIS-W2000RJ]



DIS-W2422TKLF



DIS-W2000RJ

Introduction

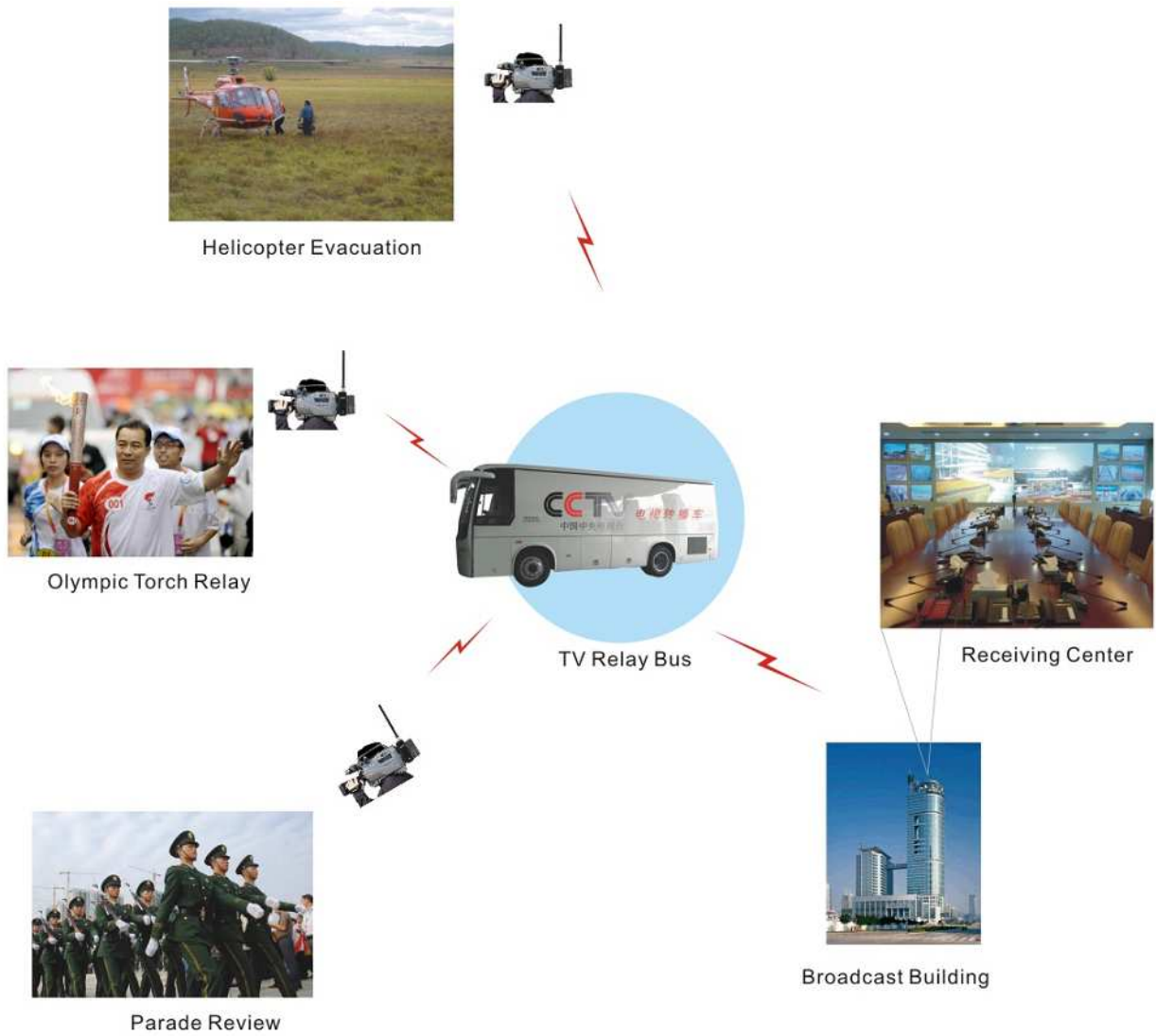
The broadcast quality shows that this system is an ideal solution to meet all necessary requirements of broadcasting missions. The latest technologies of COFDM modulation and MPEG-2 video compression can guarantee the wireless transmission with high definition video and stereo audio. In addition, this system adopts some other technologies such as: A/D conversion, SDI (Serial Digital Interface), Composite and S-video input, Balanced audio input. The system resolves the multi-path interface problem and the diversity receiving technology greatly improves the receiving quality even in high-speed mobile condition.

Features

- ❖ COFDM modulation, MPEG-2422@ML 4:2:2 and MP@ML 4:2:0
- ❖ NLOS(Non Line-of-sight) wireless video transmission
- ❖ SDI, Composite and S-video input, Balanced audio
- ❖ Adjustable frequency range
- ❖ 8MHz output frequency bandwidth
- ❖ Selectable TS rate (6MHz and 12MHz)
- ❖ MPEG-2 video compression with a maximum speeding rate of 15Mbps

- input
- ❖ Several wavebands available: VHF/L/S
- ❖ Compact size, light weight, low power consumption
- ❖ Transmission security by encryption of AES 128 bit/Basic Scrambling
- ❖ Transmission range can be up to 3km in NLOS (non line-of-sight) condition; And more than 50km in LOS(line-of-sight) environment

Application



Transmitter Specification

DC Input	DC12.5V~DC16.8V	Frequency	325~399MHz 400-500MHz (customized),
Current	≤3A@DC12.5V		560~760MHz, 760~860MHz (customized)
RS232 Control Interface	≤3A@DC12.5V		1.0~1.4GHz (customized) 2.3~2.5GHz (customized),
RS232 Data Interface	Standard RS232 level, supporting 1200~115200		Frequency is adjustable continuously
Encryption	AES 128 bit/Basic scrambling, RS232 serial port for configuration	CNR	≥-30dB@30dBm power output
Modulation	COFDM	Video Coding	MPEG-2/4:2:0(4:2:2) selectable
Constellation	QPSK, 16QAM, 64QAM (optional)	Video TS	6M, 12M (selectable)
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	Video Input	x1 1~1.2Vp-p@75Ω,PAL
Guard Interval	1/4, 1/8, 1/16, 1/32 (optional)	Resolution	720x576 (DVD)
Carrier	2K	Video Rate	15Mbps (MAX)
Bandwidth	6/7/8MHz (optional)	Dimension	195x125x80mm
Power Control	27-33dBm(selectable) in 1dB steps	Weight	1.5kg

Receiver Specification

Rx Frequency	170~860MHz VHF & UHF	Video Coding	ISO/IEC13818-2 (MPEG2 video) MP@ML
Bandwidth	6/7/8MHz (optional)	Aspect Ratio	4:3, 16:9
RF Level Input	-92~-20dBm	Resolution	720x576
RF Impedance	50Ω	AV Input	SDI, CVS, Balanced audio, S-video
Decryption	AES 128 bit/Basic scrambling, RS232 serial port for configuration	Audio Output	Stereo unbalanced (300/200 mV)
		AV Output	2 audio + 2 video
RF Interface	N female	TS Output	ASI interface
Demodulation	COFDM	TS Output Rate	188 bytes
Constellation	QPSK, 16QAM, 64QAM (optional)	Working Voltage	AC220V/DC12V
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	Temperature	-25°C~ +50°C
Carrier	2K, 8K	Dimension	480x260x44mm (1U Aluminium alloy box)
Guard Interval	1/4, 1/8, 1/16, 1/32 (optional)	Weight	3.5kg

NIGHT VISION TRANSMITTING SYSTEM

[DIS-W2000T/YJBK/YS]

PORTABLE MULTIFUNCTION RECEIVER

[DIS-W2000R/YJBK]



DIS-W2000T/YJBK/YS



DIS-W2000R/YJBK

Introduction

This surveillance equipment is developed with passive infrared imaging technology that enables the system to work in both daytime and pitch-black conditions. Especially, the latest technologies of COFDM modulation and MPEG-2 video compression ensure high quality of NLOS (non line-of-sight) transmission with stable, real-time and high definition images. The system is low power consumption and the double-lens camera that has complementary working mode enables the system to work continuously in conditions. In the receiving center we equip a portable multifunctional receiver that can record the real-time video by USB interface and control the PTZ in NLOS (non line-of-sight) condition. Since it is easy to be installed everywhere, this system has been widely used in many fields such as Battlefield Scouting, Frontier Defense, Airport Inspection, Oil Field Guarding, Coast Patrolling, Prison Monitoring, Safe-care Region Guarding and Hunting etc.

Features

- ❖ Frequency is adjustable by frequency controller
- ❖ High receiving sensitivity, low system latency
- ❖ Lithium battery and commercial power for power supply
- ❖ COFDM modulation and MPEG-2 video compression
- ❖ High quality video transmission under NLOS(Non line-of-sight) condition
- ❖ Active infrared imaging function (without any visible light)
- ❖ Thermal infrared imaging function
- ❖ USB recording of AVI format audio and video
- ❖ Control the PTZ in NLOS(non line-of-sight) condition
- ❖ With color LCD monitor, connection to outside monitor available
- ❖ Ethernet interface for compressed video output (MPEG-4/ H.264)
- ❖ Transmission security by encryption of AES 128 bit/Basic Scrambling
- ❖ Passive infrared imaging technology, work in pitch-black condition, easy to conceal

Application



Night Vision Spot



Monitoring Room



Commanding Center



Night vision picture one



Night vision picture two



Daytime picture one



Daytime picture two

Transmitter Unit Specification

Lens			
Dimension	385x200x200mm	Mode1	Black-white/Color(auto-switch)
Weight	5.7kg	Illumination	Minimum 0.1Lux F1.2(color)
Power Consumption	55W (MAX)		Minimum 0.006Lux F1.2 (black-white)
Working Current	3.5A	Sensor	752(H)x582(V) Pels
Temperature	-10°C~ +50°C	Mode 2	Inferred (manual switch)
Humidity	30%~90%	Sensor	320(H)x240(V) Pels
DC Input	DC12V~16.8V	Illumination	Minimum 0 Lux
Lens	Fixed focus and aperture		
Transmitter			
DC Input	DC12.5V~DC16.8V	Carrier	2K
Working Current	≤3.8A@DC12.5V	Bandwidth	6/7/8MHz (optional)
Modulation	COFDM	Power Control	27-33dBm(selectable) in 1dB steps
Constellation	QPSK, 16QAM, 64QAM (optional)	Power Flatness	≤2dB (full frequency range); ≤0.5dB (within 8MHz)
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	CNR	≥30dB@30dBm power output
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	Video Input	X1 1~1.2Vp-p@75Ω, PAL

Frequency	325~399MHz, 560~760MHz,	Resolution	720x576
	760~860MHz (customized),	Video Rate	15Mbps(MAX)
	1.0-1.4GHz(customized), 2.3-2.5GHz (customized),	Encryption	AES 128 bit / Basic scrambling
	Frequency is adjustable continuously		RS232 serial port for configuration
PTZ Platform			
DC Input	DC12~16.8V/1.5A	Rotating Angle	Horizontally 355°; Up/down +20°to -90°
Enclosure	Aluminum alloy	Dimension	225(L)×180(W)×260(H)
Rotating Speed	Horizontal 0.5°to 10°/second	Load	15kg
	Up/down 0.5°to 10°/second		
Battery			
Battery	Lithium (12V*100AH)	Discharge Current	DC16.8V/4A
Charge Time	12 hours	Temperature	-25°C~ +50°C

Portable Receiver Specification

Bandwidth	6/7/8MHz (optional)	AV Output	2 audio + 1 video
RF Level	-94~-20dBm	Video Record	H.264
RF Impedance	50Ω	USB interface	USB 2.0 (Flash memory disk can be connected)
Default Frequency	Customized	Control Protocol	PELCO-P/D
DC Output	DC 10.5V+/-0.5V	Control Frequency	433MHz
Constellation	QPSK, 16QAM, 64QAM (optional)	Control Modulation	GFSK
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	Decryption	AES 128 bit /Basic scrambling
Carrier	2K		RS232 serial port for configuration
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	Power Supply	Lithium battery or 220VAC
Video Decoding	ISO/IEC13818-2 (MPEG2 video) MP@ML	Working Current	<2.5A@DC 12.5V
Aspect Ratio	4:3, 16:9	Temperature	-25°C~ +50°C
Resolution	720x576	Dimension	460x370x180mm
Audio Output	Stereo unbalanced (300/200 mV)	Weight	10.1kg

TRANSMITTING SYSTEM

[DIS-W2000T/YJB]

PORTABLE RECEIVING SUITCASE

[DIS-W2000R/YJBK]



DIS-W2000T/YJB

DIS-W2000R/YJBK

Introduction

The emergency response system can realize the wireless transmission in NLOS (non line-of-sight) environment. The COFDM modulation and MPEG-2 video compression mode guarantee the stability and quality of the transmission. In addition, at the receiving side we equip a portable receiving suitcase that can record the real-time video by USB interface and control the PTZ in NLOS (non line-of-sight) condition. Since its multifunction and it is easy to be carried and installed everywhere, the system has many mission fields such as: Military, Public Security, Forest Fire Prevention, Firefighting, Oil and Gas Industries, Traffic Police, Disaster Management and Railway etc.

Features

- ❖ Inset video server for network transmission
- ❖ High quality video transmission under NLOS(Non

- ❖ RF short circuit protection and indication
- ❖ Frequency adjustable by frequency controller
- ❖ COFDM modulation and MPEG-2 video compression
- ❖ line-of-sight) condition
- ❖ Convenient installation and dismantlement
- ❖ Lithium battery and commercial power for power supply

Application



The system is an ideal solution in remote surveillance. For the power supply, we set a lithium battery case (12V/100AH) that can support the system to work continuously for at least 6 hours and it can work well by commercial power. Since it is easy to be carried and installed everywhere, the system is widely used in many applications.



Forest Fire Prevention



Electric Emergency



Oil Field Surveillance



Railway Emergency

Transmitter Unit Specification

Frequency	300~399MHz, 560~760MHz,	Instruction Baud Rate	2400/4800/9600bps
	760~860MHz (customized),	Instruction Sensitivity	-110dBm
	1.0~1.4GHz (customized) 2.3~2.5GHz (customized),	Power Supply	12VDC/3A
	Frequency is adjustable continuously	Battery Capacity	12VDC/60AH (working time is more than 6 hours)
Power Output	0.5~1W	Aluminum Bracket	Three extensible sections (maximal length is 1.8 meters)
Modulation	COFDM	Camera Resolution	480 (horizontal)
Video Compression	MPEG-2	Illumination	Color in Day: Minimum 0.1Lux
Video Coding	4:02:00		Black-white at Night: Minimum 0.01Lux
Resolution	720x576	Rotating Speed	100°/second
Video Rate	4~15Mbps	Rotating Range	360°(continuously)
Audio Channel	Stereo/Left and Right	Preset Locations	64
Encryption	AES 128 bit/Basic scrambling	Dimension	318x238x101mm
	RS232 serial port for configuration	Weight	4.5kg
Instruction Frequency	433.302MHZ		

Receiver Specification

Bandwidth	6/7/8MHz (optional)	Resolution	720x576
RF Level	-94~-20dBm	Audio Output	Stereo unbalanced (300/200 mV)
RF Impedance	50Ω	AV Output	2 audio + 1 video
Default Frequency	Customized	Video Record	H.264
DC Output	DC 10.5V+/-0.5V	USB Interface	USB 2.0 (Flash memory disk can be connected)
Constellation	QPSK, 16QAM, 64QAM (optional)	Control Protocol	PELCO-P/D
FEC	1/2, 2/3, 3/4, 5/6, 7/8 (optional)	Control Frequency	433MHz
Carrier	2K	Control Modulation	GFSK
Decryption:	AES 128 bit/Basic scrambling	Power Supply	Lithium battery or 220VAC
	RS232 serial port for configuration	Working Current	<2.5A@DC 12.5V
Guard Interval	1/32, 1/16, 1/8, 1/4 (optional)	Temperature	-25°C~ +50°C

Video Decoding	ISO/IEC13818-2 (MPEG2 video) MP@ML	Dimension	460x370x180mm
Aspect Ratio	4:3, 16:9	Weight	12.4kg

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