

Focus on wireless make transmission easier

<http://brushlessgimbal.ca>
email: sales@brushlessgimbals.ca Phone: 1(421)468-4063



Microwave Wireless Transmission System

LOS/NLOS video, audio & duplex data transmitting



SUNTOR

2.4GHz UAV Video and Data Links



- Latency: 15ms
- Output: HDMI & Ethernet
- HD vide input: HDMI/SDI/Ethernet
- Duplex Data: SBUS/PPM/TTL
- Telemetry link: Mavlink
- Long Range: 5km/10km/30km/50km/100km+



ST5NPT(5km)



ST10NPT(10-14km)



ST20NPT(20km)



ST5XHPT(5km)



ST5HPT(5km)



ST11HPT(12km)

Ethernet Type

Features

- Modulation: TDD-COFDM
- Transmitting Range: 5-20km
- Double Ethernet Input
- Duplex Data Transmitting: Support SBUS/PPM/TTL
- Support MavLink
- Working Temperature: -40°C~+85°C
- Net Weight: Tx: 68g Rx: 68g

Frequency	2.4GHz (2.402-2.478GHz)
RF Transmitting Power	500mW/ 1W/ 2W
Transmission Range	Air to ground 5km/ 10km/ 20km
Frequency Bandwidth	2/4/6/8MHz
Adjustment Mode of Bit Rate	Software adjustment
Communication Channel Encryption	WEP, WPA(PSK), WPA2(PSK), WPA+WPA2 (PSK), AES 125/256
Two-way Function	Support video and duplex data simultaneously
Data	Support SBUS/PPM/TTL
Date Rate	Duplex 3-5Mbps
Power Supply	DC 7-18V
Power Consumption	ST5NPT: Tx: 3Watts Rx: 3Watts ST10NPT: Tx: 4Watts Rx: 4Watts ST20NPT: Tx: 6Watts Rx: 6Watts
Size	68 × 48x15mm

HDMI Type

Features

- Modulation: TDD-COFDM
- Transmission Distance: 5-12km
- System Latency: ≤12-25ms
- Support SBUS/PPM/TTL/232/485
- Support MavLink
- HDMI and ethernet output
- Weight: 94g

Frequency	2.4GHz (2.402-2.478GHz)
Frequency Bandwidth	2/4/6/8MHz
Latency	≤12-25ms
Video Input/output Interface	HDMI mini TX/RX, or transform FFC to HDMI-A RX/TX
Video Compressed Format	H.264+H.265
Adjustment mode of bitrate	Software adjustment
Receive Sensitivity	-100dbm ~ -90dbm
Two-way function	Support video and duplex data simultaneously
Data	Support SBUS/PPM/TTL
Power supply	DC 7-18V (DC 12V advised)
Working Temperature	-40°C~+85°C

Ultra long range 2.4GHz UAV video and Data Links



ST30HPT (30km)

Features

- Transmission Distance: 30km
- System Latency: $\leq 12-25\text{ms}$
- Support SBUS/PPM/TTL/232/485
- Support MavLink
- HDMI/ SDI input
- HDMI and ethernet output
- Weight : Tx: 148g/ Rx: 93g

Modulation	TDD-COFDM
Frequency	2.4GHz (2.402~2.478GHz)
RF Transmitted Power	1.5W
Frequency Bandwidth	2/4/6/8MHz
Latency	$\leq 12-25\text{ms}$
Resolution	Full HD 1080P/60
Video Input/output Interface	HDMI mini TX/RX, or transform FFC to HDMI-A RX/TX
Video Compressed Format	AVC adds H.265 feature TS stream
Adjustment mode of bitrate	Software adjustment
Antenna Gain	Tx: 5dBi / Rx: 12dBi
Receive Sensitivity	-100dbm ~ -90dbm
Two-way function	Support video and duplex data simultaneously
DataSupport	SBUS/PPM/TTL
Power supply	DC 7~ 18V (DC 12V advised)
Working Temperature	-40°C ~ +85°C
Dimension	73x48x20mm



ST50HPT (50km)

Features

- Transmission Distance: Air to ground 40~70km
- System Latency: $\leq 12-25\text{ms}$
- Support SBUS/PPM/TTL/232/485
- Support MavLink
- HDMI/ SDI input
- HDMI and ethernet output
- Weight : Tx: 146g/ Rx: 146g

Modulation	TDD-COFDM
Frequency	2.4GHz (2.402~2.478GHz)
RF Transmitted Power	2W
Frequency Bandwidth	2/4/6/8MHz
Latency	$\leq 12-25\text{ms}$
Resolution	Full HD 1080P/60
Video Input/output Interface	HDMI mini TX/RX, or transform FFC to HDMI-A RX/TX
Video Compressed Format	AVC adds H.265 feature TS stream
Adjustment mode of bitrate	Software adjustment
Antenna Gain	Tx: 5dBi/ Rx: 10dBi
Receive Sensitivity	-100dbm ~ -90dbm
Two-way function	Support video and duplex data simultaneously
Data	Support SBUS/PPM/TTL
Power supply	DC 7~ 18V (DC 12V advised)
Working Temperature	-40°C ~ +85°C
Dimension	76x73x24mm



ST100HPT (100km)

Features

- Transmission Distance: Air to ground 100~120km
- System Latency: $\leq 12-25\text{ms}$
- Support SBUS/PPM/TTL/232/485
- Support MavLink
- HDMI/ SDI input
- HDMI and ethernet output
- High gain double omni antenna transmitting & receiving
- Weight : Tx: 251g/ Rx: 146g

Modulation	TDD-COFDM
Frequency	2.4GHz (2.402~2.478GHz)
RF Transmitted Power	3W
Frequency Bandwidth	2/4/6/8MHz
Latency	$\leq 12-25\text{ms}$
Resolution	Full HD 1080P/60
Video Input/output Interface	HDMI mini TX/RX, or transform FFC to HDMI-A RX/TX
Video Compressed Format	AVC adds H.265 feature TS stream (support code stream output)
Adjustment mode of bitrate	Software adjustment
Antenna Gain	2T2R, Tx: 5dBi/ Rx: 12dBi
Receive Sensitivity	-100dbm ~ -90dbm
Two-way function	Support video and duplex data simultaneously
Data	Support SBUS/PPM/TTL
Power supply	DC 7~ 18V (DC 12V advised)
Working Temperature	-40°C ~ +85°C
Dimension	Tx: 76x73x44mm/ Rx: 76x73x23mm

UHF UAV Mini COFDM Video Links



ST6200BM-HD(1-5km)

Features

- Modulation: COFDM
- Frequency: 300MHz~2GHz
- Video Input/ Output: HDMI
- Resolution: HD720P (1280*720)
- Transmission Range: 1-5km
- Power Supply: DC9-16V
- Weight: 120g

Frequency	300MHz~2GHz (customizable)
RF Transmitted Power	400mW
Transmission Distance	Air to ground 1-5km, NLOS: ≥200meters
Code Stream	2Mbps~8Mbps
Channel Bandwidth	6MHz
Compression Format	H.264/MEG-2
Video Input/ Output:	HDMI
Power supply	DC 9-16V
Dimension	Tx: 89*62*22mm/ Rx: 108*88*21mm
Weight	Tx: 120g, Rx: 170g



ST6200TPS-HD(10-15km)

Features

- Modulation: COFDM
- Frequency: 300MHz~2.4GHz
- RF Power: 400mW
- Resolution: 1080P
- Transmission Range: Air to ground 10-15km, NLOS: 200-500meters
- Video interface: HDMI/ SDI/ CVBS

Frequency	300MHz~2.4GHz (customizable)
RF Transmitted Power	400mW
Transmission Distance	LOS Earth to Earth : 3-5km, Air to Ground on UAV: 10km~15km NLOS(Earth to Earth with Barriers): 200-500meters
Code Stream	1.5Mbps~12Mbps
Channel Bandwidth	2/4/6/8MHz Manually adjustable on LCD
Compression Format	H.264
Video Input/ Output	HDMI/ SDI/ CVBS
Power supply	1. Built-in Lithium Battery: DC 7.2V/140mA 2. External Power In: DC 7.2-12V
Dimension	100*58*29mm
Weight	Tx: 175g Rx: 4kg



ST6215SH(5-20km)

Features

- Modulation: COFDM
- Frequency: 300MHz~900Mhz
- RF Power: 1W/ 1.5W
- NLOS Range: 200-500 meters
- LOS Range: Air to Ground 2-20km
- SD Format: PAL 720 X 576/ NTSC 720 X 480
- Net Weight: 285g

Frequency	300MHz~900MHz		
RF Transmitted Power	ST6210SH: 1Watts	ST6215SH: 1.5Watts	
Transmission Distance	Air to Ground on UAV	ST6210SH: 5~15km	ST6215SH: 5~20km
	Higher vertical flight height, longer transmission distance NLOS(Earth to Earth with Barriers): 200~500meters		
Code Stream	1.5Mbps~12Mbps		
Channel Bandwidth	2/4/6/8MHz Manually adjustable on LCD		
Compression Format	H.264		
Video Input/ Output	CVBS		
SD Format	PAL 720 x 576	NTSC 720 x 480	
Power supply	External Power In: DC 7.2~12V		
Dimension	115*564*26mm (L × W × H)		
Weight	285g		



COFDM Vehicle-mounted wireless mobile video transmission system

Ethernet Type



ST3080TDC

Features

- Modulation: TDD-COFDM
- Frequency: 300~800MHz
- Video port: Ethernet
- Image resolution: HD1080P
- Two-way communication NLOS by signal frequency
- Support PTP&PTMP network composing

Frequency	300MHz~800MHz
RF Transmitted Power	10Watts
Transmission Distance	LOS: 15~20km, NLOS: 2~10km
Transmission rate	2~8Mbps
Transmission type	10/100Bate-T, Ethernet self-adapting
Transmission Protocol	Standard TCP/IP, transparent transmission
Ethernet interface	RJ45 Ports with connection indicator light
Resolution	HD1080P
Power supply	AC110~230V
Dimension	2U case 485 × 340 × 90 mm (L × W × H)
Weight	4kg

HDMI/SDI/CVBS Type



ST6240CZ-SD ST6240CZ-HD



ST6242CZ-SD ST6242CZ-HD

Features

- Modulation: COFDM
- Frequency: 300~4400MHz
- Support range: LOS 20~30km, NLOS: 10~15km
- Video port: HD-SDI or HDMI, CVBS (optional)
- Image resolution: HD1080P or SD 720*576 (optional)
- Two way voice: Handle microphone/RS485 (optional)

Frequency	300MHz~4400MHz
RF Transmitted Power	20W/ 40W
Transmission Distance	20W:LOS Horizontal Distance: 20~30km NLOS Distance: 10~15km Air to Ground: 30~50km 40W:LOS Horizontal Distance: 30~50km NLOS Distance: 15~20km Air to Ground: 50~100km
Code Stream	2Mbps~12Mbps
Channel Bandwidth	2/2.5/4/8MHz Manually adjustable on LCD
Compression Format	H.264/MEG-2
Video Input	HD-SDI or HDMI, CVBS (optional)
ResolutionHD	1080P or SD 720*576 (optional)
Aviation Interface	Hand Microphone(on front panel) (optional) RS485(on back panel) (optional)
Power supply	AC110~230V/DC12V
Dimension	19" 2U standard crate, 485mm × 340 mm × 90mm
Weight	5kg



Manpack/ Body worn COFDM Device

Ethernet Type



ST-3080TDA

Features

- Modulation: TDD-COFDM
- Frequency: 300~800MHz
- Video port: Double Ethernet
- Image resolution: HD1080P
- Two-way communication NLOS by signal frequency
- Support PTP&PTMP network composing

Frequency	300MHz~800MHz
RF Transmitted Power	5Watts
Transmission Distance	LOS: 10~15km, NLOS: 2~8km
Transmission rate	2~8Mbps
Transmission type	10/100Bate-T, Ethernet self-adapting
Transmission Protocol	Standard TCP/IP, transparent transmission
Ethernet interface	Two RJ45 Ports with connection indicator light
Resolution	HD1080P
Power supply	DC 12V/5A
Dimension	186 × 126 × 58mm (L × W × H)
Weight	1.2kg

HDMI/SDI/CVBS Type



ST6200DB-SD/HD



ST6202DB-SD/HD



ST6200DBF/HD

Features

- Modulation: COFDM
- Frequency: 300~4400MHz
- Transmit power: 1~5W LCD adjust
- Support range: LOS 5~10km, NLOS: 1~2km
- Video port: HD-SDI or HDMI, CVBS (optional)
- Image resolution: HD1080P or SD 720*576 (optional)
- Two way voice: Handle microphone/full duplex
- Application: Individual soldier to car, Individual soldier to control center

Frequency	300MHz~4400MHz
RF Transmitted Power	5Watts
Transmission Distance	LOS 5~10km, NLOS: 1~2km
Code Stream	2Mbps~12Mbps
Channel Bandwidth	2/2.5/4/8MHz Manually adjustable on LCD
Compression Format	H.264/MEG-2
Video Input	HD-SDI or HDMI, CVBS (optional)
Resolution	HD1080P or SD 720*576 (optional)
Two way voice	Handle microphone/full duplex (ST6202DB-HD)
Special Function	IP66 Waterproof, dust-proof, moisture-proof (ST6200DB-HDF)
Power supply	Special battery DC14.4V
Dimension	200 × 125 × 50 mm (L × W × H)
Weight	1.5kg

HD Portable Wireless Video Receiving System



ST6000RMini

1CH Receiver BOX

Features

- Modulation: COFDM
- Frequency: 138MHz~860MHz
- Channel bandwidth: 2/2.5/4/8MHz
- Resolution: 1080P
- Size: 245*175*87mm
- Net weight: 1.3 kg

Channel bandwidth	2/2.5/4/8MHz
Error correction mode	Dual AES encryption can be set manually
Signal strength	LCD display
Receive technical	Space diversity reception technology
Decompression format	MPEG-2
Video output	HDMI
Resolution	1080P
Video output port	BNC female, HDMI
Audio output port	BNC female, HDMI
Display	Comes with LCD display, adjustable parameters, the received signal strength indication
Power supply	DC12V
Size	245*175*87mm



ST6201/2/4R-P

2/4CH Receiver BOX

Features

- Resolution: HD1080P(1920*1080)
- Built-in 15.6inch all view LCD to display video and audio
- Support 4channel display at same time
- Built-in 1TG HDD to store the video
- Support HDMI, CVBS & Ethernet output
- Double USB External data communications interfaces

Modulation	COFDM
Frequency Range	170~860MHz VHF & UHF/ four ways
Frequency Bandwidth	2/3/4/5/6/7/8MHz (Optional)
Video decoding	MPEG-2MP@ML@ML/H.264/MPEG-R
Aspect Ratio	4:3, 16:9
Video Image	1080P
Audio and video output	4 Audio output +4 Video output
Built-in battery capacity	40AH
Video recorder	SD H.264 (optional without recorders, four image splitter output, the receiver USB video)
Display size	15.6 inch
Working Voltage	AC220V / DC12.6V 3A
Temperature	-20° C~+50° C
Dimension	460*375*175mm
Weight	10kg

5.8GHz outdoor wireless ethernet bridge



ST58T8G(5-8km)



ST58T8G-23(8~10km)



ST58T8G-N(10~15km)

Features

- Modulation: OFDM
- Frequency: 5150~5825MHz
- Transmit Power: 29 ± 2dBm
- Wireless Mode: PTP and PTMP
- Support Range: 5~8km / 8~10km / 10~15(LOS)
- Antenna type: Built-in 18dBi/ 23dBi antenna/ External antenna
- Transmission rate: 2T2R 300Mbps
- Function: Audio video and network signal

Working frequency	5.15~5.825GHz
Processor	Atheros AR7240+AR9280
Standards Compliance	IEEE802.11a; IEEE802.3; IEEE802.3u
Interface	2*10/100M Ethernet port
Dimension	270*270*70mm
Packing weight	2.4kg
Input voltage	DC12~24V
Power Consumption	7.5 Watts
Waterproof grade	IP66
Working temperature	-30°C ~ +70°C
Security Systems	64-bit/128-bit/152-bit WEP encryption; WPA/ WPA2 (~PSK or ~EAP with TKIP/AES encryption); 802.1x Authenticator, EAP-PEAP/EAP-TTLS support for client mode; Hide SSID in beacons



5.8GHz outdoor wireless ethernet bridge



ST5812H (1km)

Working frequency	5.125~5.850GHz
Core	AR9344
Modulation	802.n: 2x2MIMO
Interface	2*10/100M Ethernet port
Net Weight	0.29Kg
Packing size	36*14*7.5cm
Packing weight	0.72kg
Input voltage	Wide voltage input DC 11V~24V
Power Consumption	≤8W
Waterproof grade	IP66
Working temperature	-20℃ ~ +65℃
Saving temperature	-40℃ ~ +80℃

Features

- Modulation: OFDM
- Frequency: 5.125~5.850GHz
- Transmit Power: 23dBm (500mW)
- Support Range: 1km(LOS)
- Antenna type: Built-in 15dBi antenna
- Standard: IEEE 802.a/n
- Transmission rate: 300Mbps



ST5815E-BPS (2~3km)

Working frequency	5745~5825MHz (Supports frequency expansion, extended range: 4920~6100MHz)
Processor/Atheros	AR9342 (560MHz)
Modulation	802.n: 2x2MIMO
Interface	2*10/100M Ethernet port
Dimension	270*82*30mm
Packing size	28*12.5*8.5cm
Packing weight	0.5kg
Input voltage	DC24V PoE
Power Consumption	7.5 Watts
Waterproof grade	IP66
Working temperature	-30℃ ~ +70℃
Saving temperature	-40℃ ~ +85℃

Features

- Modulation: OFDM
- Frequency: 5745~5825MHz
- Transmit Power: 27dBm
- Support Range: 2~3km(LOS)
- Antenna type: Built-in 15dBi antenna
- Standard: IEEE 802.a/n
- Transmission rate: 2T2R 300Mbps



Smart MESH Network Digital Wireless Transmission Equipment



ST2401GB-M1
ST3501GB-M1
ST5801GB-M1



ST2401GB-M2
ST3501GB-M2
ST5801GB-M2



ST2401GB-M3
ST5801GB-M3

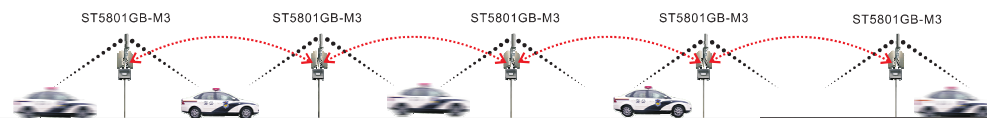
Features

- No need Wireless Mesh Central Gateways, any equipment can wireless ad hoc network with other equipment
- Two RJ45 ports have wireless Mesh function to form a decentralized mesh network.
- 16 mode of frequency bandwidth to choose, strong anti-interference.
- Client Roaming, clients can set a signal value as a standard for roaming between different station according to the signal strength.
- One board support 1RF, 2RF and 3RF
- GPS function to real time position the device.
- Coordinate position and topological graph can be display in the device
- The device Can be located out of latitude and longitude and altitude

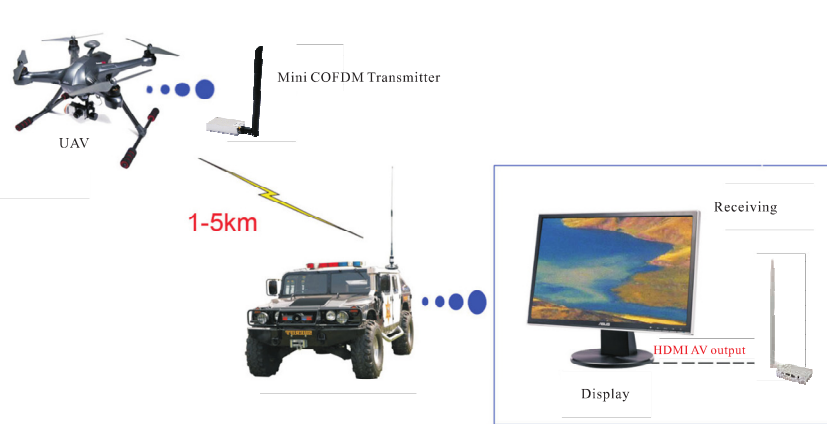
Working frequency	4800~6275MHz
Transmitting Power	26dBm/ 35dBm
Standard	IEEE 802.11a; IEEE 802.11a/n; IEEE 802.3; IEEE 802.3u
Connector	Two Ethernet 10/100/1000Base ports
Mode	Base Station, CPE, P2P (Bridge) 、 MESH
16 mode frequency band	2.5/3.3/5.4/5.6/7.8/10/12/14/15/20/30/40/52MHz
Input voltage	DC 9~24V, or Powered by POE Standard Operating system
Weight	NW: 2.3kg; GW: 3.75kg
Dimension	27*24*7.2cm (L × W × H)
Waterproof grade	IP66
Working temperature	-40℃ ~ +80℃

Frequency Bandwidth & Distance Set

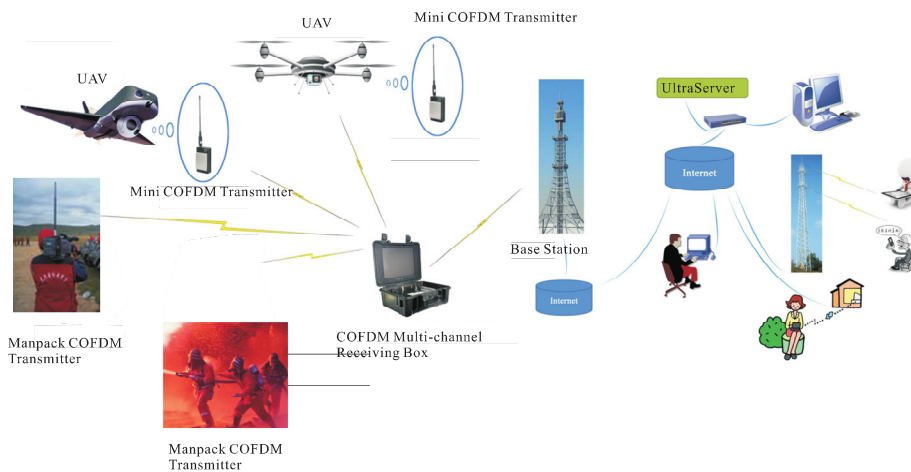
Bandwidth (MHz)	Distance (km)	Bandwidth (MHz)	Distance (km)	Bandwidth (MHz)	Distance (km)	Bandwidth (MHz)	Distance (km)
52	1~18	15	1~75	8	1~140	4	1~300
40	1~25	14	1~85	7	1~170	3.5	1~340
32	1~37	12	1~85	6	1~190	3	1~460
20	1~55	10	1~110	5	1~230	2.5	1~480



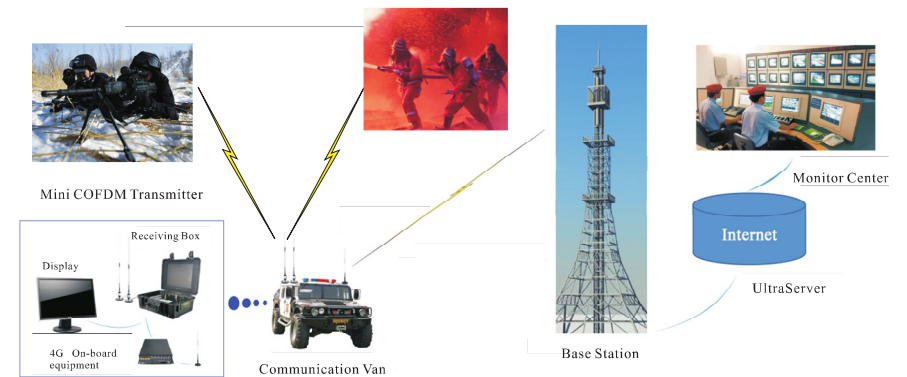
Wireless Video Transmission Solution on UAV



UAV Wireless Video Transmitting Solution



Tri-proof manpack COFDM Wireless Video Transmitting Solution



COFDM Comprehensive Video Transmitting System

