

Chinowing Technology Co., Ltd

www.chinowing.com

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Ethernet Video&Data&RC Link

V21



V21 Digital video and data transmission module is the wireless digital data link based on LTE wireless communication, adopting OFDM and MIMO technology.

It can transmit telemetry data and real-time video stream, and has 2*SBUS ports, able to provide the control of the drone and the payload.

RF modules of 800M, 1.4G, 2.4G frequency bands are integrated into one product, the frequency can be modified in the software and meanwhile, using the corresponding antennas, based on the environment.

High integration greatly reduces the power consumption and the dimension of the product, which can satisfy the requirement of UAV, UGV, etc.

Technology moves rapidly. Specifications subject to change.

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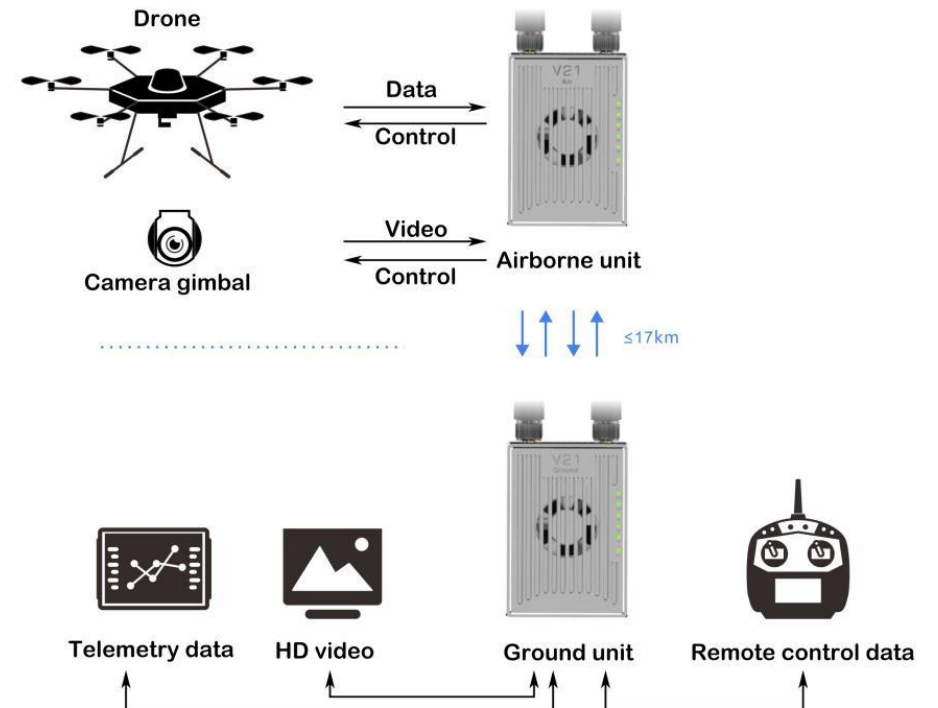
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Multi links in one module

- ◆ Transparent network transmission, able to transmit video, compatible with all the networking protocol
- ◆ Transparent data transmission, supporting TTL/RS232 Level
- ◆ Dual SBUS input and output, increasing remote control range

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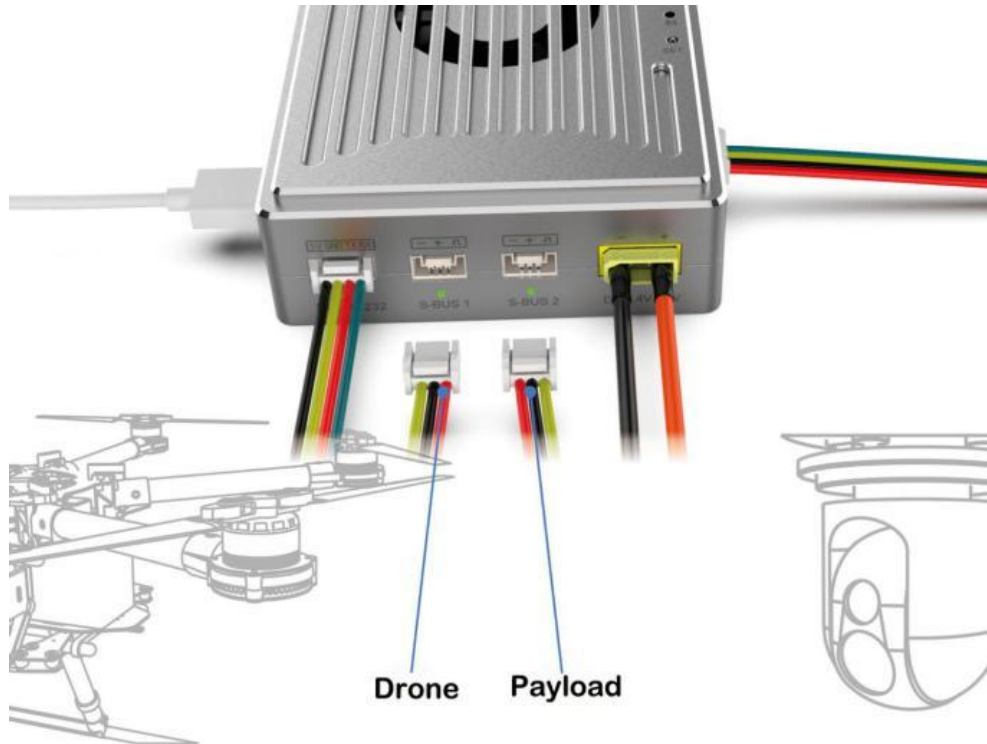
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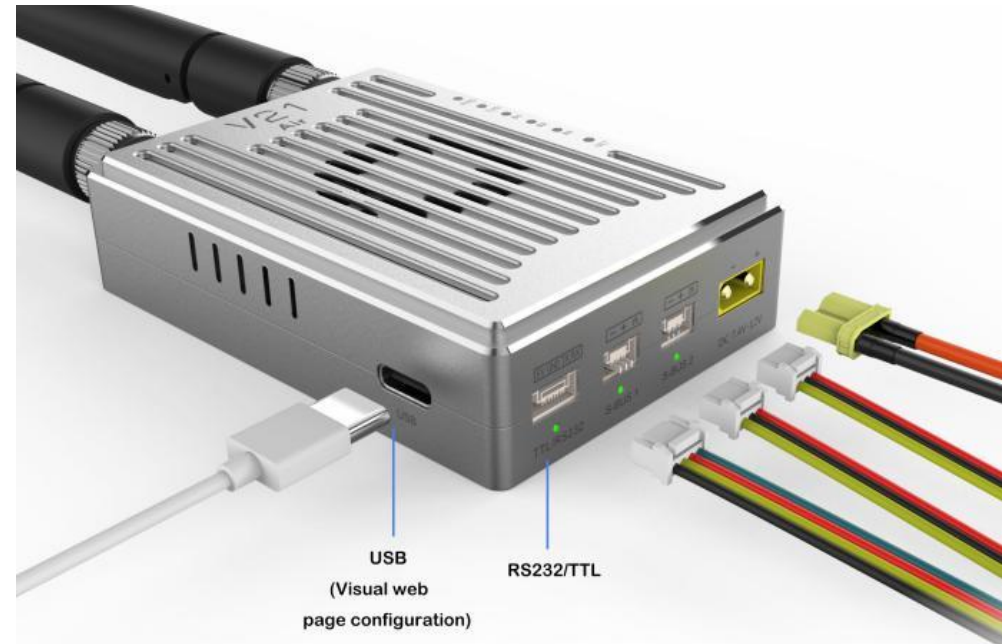
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Dual S-BUS

Able to control both the drone and the payload



RS232/TTL

Data transmission can choose RS232/TTL interface, baud rata adjustable

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LAN interface

Support H.264/H.265 video input

Bandwidth: 3MHz/5MHz/10MHz/20MHz

Compatible with all the network protocol



Transmission range:

10km grade@LOS condition

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Parameters

Item	Parameters	Description
Frequency band	800MHz	806-826MHz
	1.4GHz	1427.9-1447.9MHz
	2.4GHz	2401.5-2481.5MHz
Power	-40-25dbm	adjustable
Transmission range	10km grade@LOS	LOS condition
S-BUS port	2*S-BUS ports	NA
Serial port	1*serial port (default: TTL; optional: RS232)	Full duplex, baud rate adjustable
Video latency	200-300ms	
Power supply voltage	7.4-12V	NA
Operation current	180mA	12v power supply

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Bandwidth	1.4-20M	1.4M/3M/5M/10M/20M
Video input/output	LAN	Connecting IPC device/PC
Power supply interface	XT30	
Antenna	ZYJB antennas&fiber glass epoxy antennas	
Dimension	85mm*55mm*20mm	
Weight	100g(exclude antenna)	
Operation temperature	-10°C-+50°C	

<p>E11</p> <p>Network Port Expansion Dock</p> <p>(It can work with V21 to extend the serial and LAN ports)</p> <p>(Optional)</p>	
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Power supply voltage	7.4v-24v
Serial port interface	TTL*1; RS232*2 (able to work simultaneously)
Serial port working mode	Support TCP Server, TCP Client, UDP Client, UDP Server, Httpd Client
Ethernet port	LAN*3
Weight	60g
Dimension	85mm*55mm*13mm
Operating temperature	-10°C~+50°C

Item List

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Main modules	
Ground Unit*1	Airborne Unit*1
	

Accessories			
Power supply cable*2	LAN-port-to-4-pin wire *2	GH signal wire 3pin*4 GH signal wire 4pin*2	Antenna*6

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Power for air and ground units (DC7.4-12V)	Used for parameters configuration for airborne unit and ground unit	Used for TTL and SBUS ports	ZYJB antenna*4, Fiberglass antenna*2

V21 Package



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Product Videos

Visit **Youtube** web, type in **Chinowing Technology Co., Ltd** to enter **Chinowing channel-Playlists-V21 video&telemetry&RC link** Column List

1	V21 product introduction	https://youtu.be/UR81NbL6Usc
2	T30V21(panel antennas) controlling VTOL fixed-wing drone with 18.7km range	https://youtu.be/nYzH6S5oW5I
3	T30V21(panel antenna) ground to ground test in the city environment(1.2km)	https://youtu.be/iGk0-ZPzyP4
4	T30V21(panel antenna) ground to ground test in the city environment(2.0km)	https://youtu.be/euTyBU34Qv0
5	V21 control gimbal camera Q10T	https://youtu.be/3VQE6c0yGFs
6	V21supports star topolpgies communication (1 master node communicates with 3 slave nodes)	https://youtu.be/I2wQrRaFIUQ

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	simultaneously)	
Instruction: V21 ground unit is built into T30 GCS.		

Operation Teaching Video		
1	V21 baud rate setting	https://youtu.be/qu-L8CXwHug
2	V21 serial port use	https://youtu.be/0JpDxsxYOlg
3	V21 SBUS port use	https://youtu.be/2PnAHRwQnj0
4	V21 LAN port video pull stream	https://youtu.be/cUI7A3FqRm4
5	E11+V21 use guide video	https://youtu.be/Q1BPt1EkYIQ
6	V21 returning to factory setting	https://youtu.be/x2SIYwhAtfI

Purchase Guide

1. V21 is a device with 3 frequency modules in one. Frequency is software-defined. The user can choose the frequency band in the software and install the corresponding antennas with the same frequency.

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2. The standard configuration is with one set of antennas with one frequency. When ordering, pls notify which frequency is needed. The supplier will make the pre-factory setup and configure the corresponding antennas.

3. V21 Air unit and Ground unit have one serial port, default: TTL(RS232 optional). If without special instruction, TTL port will be configured. If RS232 is needed, pls notify.

Pls refer to below list to specify your requirement when ordering.

No.	P/N	Frequency	Range	Serial port	E11
1	V21	800MHz, 1.4GHz, 2.4GHz	10km grade(air to ground)	TTL(default), RS232(optional)	Need or not
2	V31	800MHz, 1.4GHz	20km grade(air to ground)	TTL(default), RS232(optional)	Need or not
3	V31 Plus	800MHz, 1.4GHz	30km grade(air to ground)	TTL(default), RS232(optional)	Need or not
4	V31 Pro	800MHz, 1.4GHz	50km grade(air to ground)	TTL(default), RS232(optional)	Need or not
5	V31C	800MHz, 1.4GHz	3-5km(ground to ground)	TTL(default), RS232(optional)	Need or not

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