

Chinowing Technology Co., Ltd

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Room 1106, Building B4, Yunzhi Park, No.138, Xingxin Road, Guangming Street, Guangming District, Shenzhen city, Guangdong Province, China

Office: 86 0755-21386581

Hand-held Ground Control Station

T30

Version: T30 202212



The T30 hand-held ground control station is a portable lightweight and rugged ground computer station with FHD sunlight readable touch screen display. The industrial grade PC system, data link and remote control system are all integrated in one system. T30 provides the function such as mission planning, attitude control, payload control, remote monitoring, real-time video display, etc.

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With Windows/Linux platform, T30 supports the most ground control station software. Industrial-grade computer and military grade data link ensure the safety and stability of the flight. Easy operation and transportation. It is suitable for all types of UAVs, UGVs, robots and remote-controlled vehicles.



- **Ultra-bright screen: sunlight readable and touch screen**
- **Dual SBUS input and output; 9 quick buttons for GCS quick operation.**
- **Provide SDK and underlying communication protocol to facilitate secondary development of users;**

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- Universal platform, suitable for most flight controllers in the market
- Provides command, control and information of drone and camera, real time video display
- 3 frequency modules in one(800MHz, 1.4GHz, 2.4GHz can be chosen in software), communication range 10km+
- Dual SBUS input and output with 23 programmable channels, able to control the



Parameters

T30 GCS

Dimensions	
Overall weight	2400g
Dimension	364mm*190mm*40mm
Screen size	10.1inch sunlight readable touch screen, 1280*800, 1000CCD(standard), 1920*1200, 800CCD(optional)

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Computer Peripherals		
CPU	Intel i5 6200U/2.3GHz	
Touch pad	10 point capacitive touch screen	
Operating system	Windows10/Linux	
RAM	8G(default), support 32G max	
SSD storage	128G(default), support 1T max	
Network	WIFI&Bluetooth(default); 4G(optional)	
Interface	Serial port	TTL, RS232*2
	Power input interface	XT30, DC 12.6V charging port
	External interface (T30V21, T30 with communication version)	RF antenna connector, Hi-fi audio, USB2.0, LAN port, USB3.0*2, VGA, HDMI, RF antenna connector(From left to right)
	External interface (T30N, T30)	Aviation connector, Hi-fi audio, USB2.0, LAN port, USB3.0*2, VGA, HDMI, aviation connector (From left to right)




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	without communication version)	
Remote Control		
Physical channel	23	<p>Main Joystick*2 (Industrial joysticks)</p> <p>3-position switch*4</p> <p>Knob *2</p> <p>Key button*11</p> <p>Pull wheel*2</p> <p>(Each channel programmable, the user can assign each channel to preferred joystick, switch, button, etc)</p>
Human interface	USB HID device	
Remote control function	Dual SBUS independent output	
SBUS port	SBUS IN*1; SBUS OUT*2	
Remote control latency	40ms	

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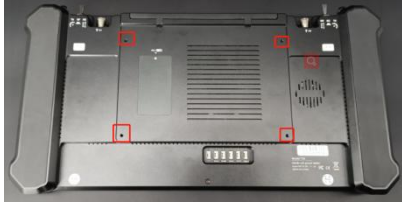
Battery Peripherals	
Battery capacity	Built-in 12.6v/10200mAh 3S Li-ion battery(external battery also supported, 10.5-12.6V)
Working time	4hs with full battery capacity
Charging port	DC12.6V
T30	
Operating Temperature	-10°C-+50°C
IP rating	IP53
Communication Link	
V21 Video&telemetry&RC link	10km grade, V21 Ground built-in T40
	Air unit antenna: 4dBi rod antenna*2
	Ground unit antenna: 4dBi rod antenna*2 (*Other types of antennas also supported)
V31 Video&telemetry&RC link	Max 50km grade, V31 Ground unit built-in T40
	Air unit antenna: 4dBi rod antenna*2
	Ground unit antenna: 4dBi rod antenna*2, 10dBi fiber-glass epoxy antenna*2

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	(*Other types of antennas also supported)
The 3rd party communication link	Supported
	<p>* It can be connected to T30 externally.</p> <p>*A mounting case can also be attached to the back to lay the radio link. Behind the device there are 4 mechanical screwing points, as marked on the photo.</p> 

Airborne Unit

V21 LAN (10Km grade video&data&RC link, LAN video input interface)		
Item	Parameters	Description
Frequency band	800MHz(806-826MHz) 1.4GHz(1427.9-1447.9MHz) 2.4GHz(2401.5-2481.5MHz)	3 frequency modules in one, frequency can be modified in the software

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Power	-40-25dbm	Adjustable
Transmission range	10km grade@LOS condition	Depend on environment
Communication mode	Point to point, point to multipoint	Star topology
S-BUS port	2*S-BUS ports	NA
Serial port	1*serial port(default: TTL; RS232 optional) (It can be extended by E11.)	Full duplex, baud rate adjustable
Video latency	20ms	Transmission latency from Tx to Rx
Encryption	AES128	
Power supply voltage	7.4-24V	NA
Operation current	300mA	12v power supply
Bandwidth	1.4-20M	1.4M/3M/5M/10M/20M
Video input/output	LAN	Connecting IPC device/PC


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Power supply interface	XT30
Antenna	2-4dB rod antenna
Dimension	85mm*55mm*20mm
Weight	100g(exclude antenna)
Operation temperature	-10°C-+50°C

V31 LAN (50Km grade video&data&RC link)		
Item	Parameters	Description
Frequency band	800MHz 1.4GHz	806-826MHz 1427.9-1447.9MHz
RF power	2w-5w	

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Transmission range	V31C: 5km grade (ground to ground) V31: 20km grade (air to ground) V31 Plus: 30km grade (air to ground) V31 Pro: 50km grade (air to ground)	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	DC 7.4-24V	2S-6S battery
Bandwidth	1.4-20M	1.4M/3M/5M/10M/20M
Video input/output	LAN	Connecting IPC device/PC
Power supply interface	XT30	
Antenna	2-4dBi rod antenna&8-9dBi fiber glass antenna	
Dimension	80mm*56mm*25mm	
Weight	160g(exclude antenna)	
Operation temperature	-20°C-+50°C	

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<p>E11</p> <p>Network Port Expansion Dock</p> <p>(It can work with V21/V31 to extend the serial and LAN ports)</p> <p>(Optional)</p>	
<p>Power supply voltage</p>	<p>7.4v-24v</p>
<p>Serial port interface</p>	<p>TTL*1; RS232*2 (able to work simultaneously)</p>
<p>Serial port working mode</p>	<p>Support TCP Server, TCP Client, UDP Client, UDP Server, Httpd Client</p>
<p>Ethernet port</p>	<p>LAN*3</p>
<p>Weight</p>	<p>60g</p>
<p>Dimension</p>	<p>85mm*55mm*13mm</p>
<p>Operating temperature</p>	<p>-10°C~+50°C</p>

Product Details

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T30V21 Package Content

Main Components	
T30 GCS(with built-in V21 transmitter)	V21 Receiver
	
Antenna for ground unit (TNC ZYJB antenna*2)	Antenna for V21 airborne unit (SMA ZYJB antenna*2)
	

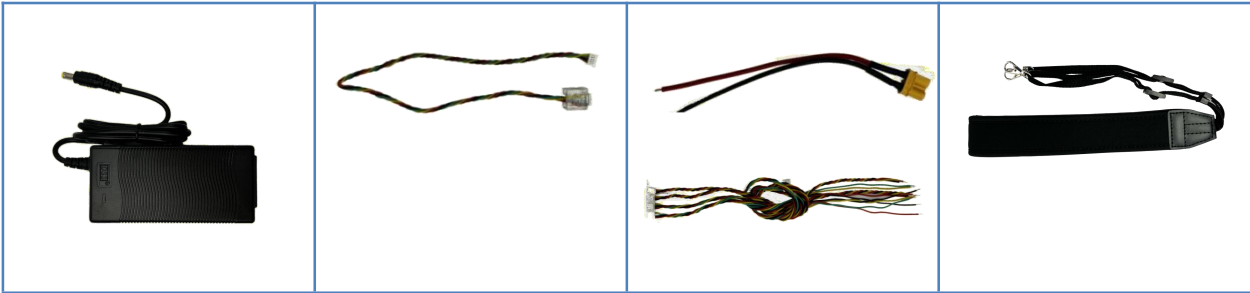
Accessories			
Charger (12.6V 4A, for T30 GCS)	LAN-to-4pin cable (LAN cable*1)	Other cables (XT30 power cable * 1 SBUS GH 3PIN *3 TTL signal cable GH 4PIN *1)	Neck strap

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T30V31 Package Content





Main Components	
T30 GCS(with built-in V21 transmitter)	V31 Receiver
	
Antenna for ground unit (TNC ZYJB antenna*2)	Antenna for V31 airborne unit (SMA ZYJB antenna*2)
	
Accessories	

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Charger	LAN-to-4pin cable	Other cables	Neck strap
(12.6V 4A, for T30 GCS)	(LAN cable*1)	(XT30 power cable * 1 SBUS GH 3PIN *3 TTL signal cable GH 4PIN *1)	
			

T30N Package Content

Main Components	
T30 GCS(without communication link)	
	





Accessories

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<p>Charger (12.6V 4A, for T30 GCS)</p>	<p>Other cables (SBUS GH 3PIN *2; TTL signal cable GH 4PIN *1)</p>
	
<p>Aviation connector (4pin LAN*1 6 pin TTL/SBUS*1)</p>	<p>Neck strap</p>
	

Package

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Purchase Guide

T30 has different configurations. When purchasing, pls refer to the below instruction and list.

1. T30 has **without communication version**(T30N), it can be integrated with the 3rd party communication link.

T30 has with **communication version**. There are several sub-models. Pls specify.

2. **Communication link V21** has 3 frequencies for choice, 800MHz, 1.4GHz and 2.4GHz for choice. Frequency can be changed in the software. In our standard package, we only configure antennas with one frequency. So when ordering, pls specify.

Communication link V31 has 2 frequencies for choice, 800MHz and 1.4GHz. Frequency **can't** be changed in the software. When ordering, pls specify frequency.

3. T30 has Windows and Linux versions. Different version, different software.

4. For charger type, we can configure in accordance with the local standard. When ordering,

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pls notify.

P/N	Range	Airborne unit video input interface	Frequency for choice	Airborne unit serial port	Operating system	Charger type
T30N	without communications	N	N	N	Windows or Linux	Local standard
T30V21	10km (air to ground)	V21: LAN	800MHz 1.4GHz 2.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard
T30V31	20km (air to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard
T30V31 Plus	30km (air to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard
T30V31 Pro	50km (air to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard

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T30V31C	3-5km (ground to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard
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Product Video

1	T30 product introduction	https://youtu.be/BE57fEtocX8
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	T30 controlling UGV and camera gimbal	https://youtu.be/zd2_126tMaE
6	T30 controlling EOD robot	https://youtu.be/ioqSdow5e0w
7	T30 controlling UGV in firefighting	https://youtu.be/xP--uk59Q3s
8	T30 without communications version (T30N) product demo	https://youtu.be/vQPMvQ3u4ls
9	T30N connecting with external video link	https://youtu.be/XkS-d1nLuIM

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10	T30V21 2022 version working time test	https://www.youtube.com/shorts/r7T2ZnPiP2E
11	T30V21 controlling gimbal camera with 3 sensors	https://youtu.be/SDO30Jg8IA4

Teaching Video		
1	T30V21 and (V21 Air) Pairing Configuration Operation Instruction	https://youtu.be/klusejLjVzU
2	T30 channel calibration	https://youtu.be/tE-Vg6bkYhM
3	T30 communication link connection failure troubleshooting	https://youtu.be/Djxi_6OFLmU
4	T30 USB HID setting	https://youtu.be/wGeVYcEMfG8
5	T30 data transparent transmission connection	https://youtu.be/Ezm2EJ4ou3I
6	T30 link connection failure troubleshooting	https://youtu.be/3RJmDdGEOu4
7	T30 transparent transmission troubleshooting	https://youtu.be/no4LBjpdUc
8	T30V21 Parameters Configuration	https://youtu.be/gW7MVvelqsw