

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

Handheld Ground Control Station

T31



Handheld GCS T31 is a universal solution for controlling the unmanned vehicle and its payload. It is especially designed for unmanned ground vehicle and robot. The system offers functions like real-time data feedback, remote control status display, route planning, etc. With Windows and Linux OS for choice, T31 supports the most GCS software on the market.

A high-reliability industrial computer and MIL-grade data link ensures flight safety and stability. Compact size and lightweight make it easy to transport and deploy.

T31 incorporates a long-range video, telemetry and RC link V21 with 3 frequency modules integrated in one, supporting 800MHz, 1.4GHz and 2.4GHz. V21 has a video channel, a serial data channel, and two SBUS control signal channel, all of which are transparent transmission.

The large electronics compartment allows for the integration of 3rd party devices, which is very convenient for users.

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T31

Handheld Ground Control Station

手持一体地面站



Aluminum alloy shell, anti-knock design

Long range video&telemetry&RC link

Large electronics compartment
for the 3rd party data link

Support the most GCS software

Programmable channels

Multiple physical channels



Aluminum alloy shell, anti-knock, waterproof design

Refined aerospace grade aluminium alloy shell

Fully rubberized handle for better grip and control

IP54 rating

Strap position adjustable

Technology moves rapidly. Specifications subject to change.

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Long range video&telemetry&RC link

T31 incorporates a long-range video, telemetry and RC link with 3 frequency modules integrated in one, supporting 800MHz, 1.4GHz and 2.4GHz. It has a video channel, a serial data channel, and two SBUS control signal channel, all of which are transparent transmission.



35 Physical Channels

25 buttons, 2 hall-effect joysticks
4 knobs, 2 pull wheels
1 stop button, 1 gimbal control button

The RC system be freely mapped and supports the traditional RC access.

It offers various programming modes and can be mapped to each channel of 2 SBUS; supports custom protocol output.

Each function button can be used for single-state, bi-state, or tri-state control, or combined with another button(buttons) to simulate linear output functions and multifunction switching.

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Large Electronics Compartment

It offers a wide range of
connection ports for connecting
the 3rd party communication link.

It supports extended CAN ports and
CAN protocol can be self-defined by
the host computer.

It is possible to access underlying
communication protocols via serial port
protocols to facilitate user secondary development.



Supports the most GCS software on the market

Real-time data feedback, remote control status display, route planning, etc.

With Windows and Linux OS, it supports the most GCS software.

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Designed specially for unmanned ground vehicles, robots

Also can be used for the remote control of UAV, USV, gimbal control.

Parameters

T31 GCS

Dimensions	
Overall weight	2800g
Dimension	378mm(L)*221mm(W)*54mm(H)
Screen size	10.1inch industrial touch screen 1280x800 1000nits(standard) 1920*1200 800nits(optional)
Computer Peripherals	
CPU	Intel i5 6200U/2.3GHz
Touch pad	10-finger capacitive touch screen
Operating system	Windows10/Linux
RAM	8G(standard), 32G max
SSD storage	128GB SSD(standard), 1T max

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Network	WIFI/Bluetooth(standard) 4G(optional)
Interfaces	HDMI IN*1, RS232*3, USB*2, LAN, VGA OUT, 12V/4A OUT, Audio IN and OUT
Remote Control	
Physical channel	35
	2 Main joystick (industrial joysticks with hall sensors) 25 buttons 4 knobs 2 pull wheels 1 stop button 1 5-directional pad 7 Simulate keystrokes
Human interface	USB HID
Remote control function	Dual SBUS independent output, able to control the vehicle and the payload simultaneously
SBUS port	SBUS IN*1; SBUS OUT*1
Remote control latency	40ms
Battery Peripherals	
Battery capacity	12.6V/10200mAh (external power source also supported)
Working time	3.5hs@full battery capacity
Charging port	Type-C port (65W rapid charge)
T31	
Operating Temperature	-10°C-+60°C
IP rating	IP54
Electronics Compartment	173(L)*117(W)*17.5(H) (mm) (customizable)

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dimension	
Communication link	
V21 Video&telemetry& RC link	10km grade, V21 Ground built-in T40
	Air unit antenna: ZYJB antenna*2
	Ground unit antenna: ZYJB antenna*2, fiber-glass epoxy 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: ZYJB antenna*2
	Ground unit antenna: ZYJB antenna*2, fiber-glass epoxy antenna*2 (*Other types of antennas also supported)
The 3rd party communication link	Supported

Airborne Unit

V21 LAN (10Km grade video&data&RC link)		
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
Power	-40-25dbm	adjustable
Transmission range	10km grade@LOS condition	Depend on environment
S-BUS port	2*S-BUS ports	NA

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Serial port	1*serial port (default: TTL; optional: RS232)	Full duplex, baud rate adjustable
Video latency	20ms	Transmission latency from Tx to Rx
Encryption	AES128	
Power supply voltage	7.4-12V	NA
Operation current	180mA	12v power supply
Bandwidth	1.4-20M	1.4M/3M/5M/10M/20M
Video input/output	LAN	Connecting IPC device/PC
Power supply interface	XT30	
Antenna	ZYJB 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

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Power	2w-5w	
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	ZYJB antenna & fiber glass antenna	
Dimension	80mm*56mm*25mm	
Weight	140g(exclude antenna)	
Operation temperature	-20°C-+50°C	

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<p>E11 Network Port Expansion Dock (It can work with V21/V31 to extend the serial and LAN ports) (Optional)</p>	
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

T31V21 Package Content

Main Components	
T31 GCS(with built-in V21 transmitter)	V21 Receiver





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<p>Antenna for ground unit (TNC ZYJB antenna*2)</p>	<p>Antenna for V21 airborne unit (SMA ZYJB antenna*2)</p>
	

Accessories			
<p>Charger (65W fast charger, USB Type C*1)</p>	<p>4pin LAN cable (LAN cable*1)</p>	<p>Other cables (XT30 power cable * 1 SBUS GH 3PIN *3 TTL signal cable GH 4PIN *1)</p>	<p>Neck strap</p>
			

T30V31 Package Content

Main Components	
<p>T31 GCS(with built-in V31 transmitter)</p>	<p>V31 Receiver</p>





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<p align="center">Antenna for ground unit (TNC ZYJB antenna*2; fiber-glass epoxy antenna*2)</p>	<p align="center">Antenna for V31 airborne unit (SMA ZYJB antenna*2)</p>
	

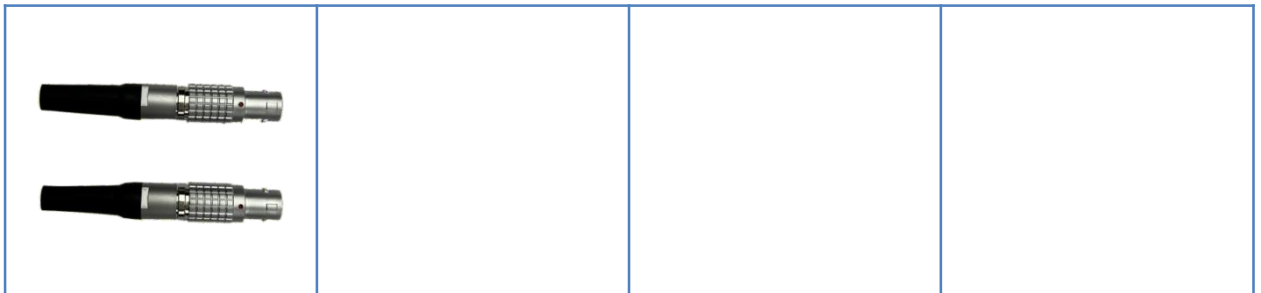
Accessories			
<p align="center">Charger (65W fast charger, USB Type C*1)</p>	<p align="center">4pin LAN cable (LAN cable*1)</p>	<p align="center">Other cables (XT30 power cable * 1 SBUS GH 3PIN *3 TTL signal cable GH 4PIN *1)</p>	<p align="center">Neck strap</p>
			
<p align="center">Aviation connector (4pin LAN*1 6 pin TTL&SBUS*1)</p>			

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T30N Package Content

Main Components	
T31 GCS(without communication link)	
	



Accessories	
Charger (65W fast charger, USB Type C*1)	Other cables (SBUS GH 3PIN *2; TTL signal cable GH 4PIN *1)
	

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<p>Aviation connector (4pin LAN*1 6 pin TTL/SBUS*1)</p>	<p>Neck strap</p>
	

Product videos

1	T31 product introduction	https://youtu.be/SY9pvCHhwtA
2	T31 remote controls Road Paving Machine	https://youtu.be/Vn-5Zv7bpfw

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.

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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, pls notify.

P/N	Range	Airborne unit video input interface	Frequency for choice	Airborne unit serial port	Operating system	Charger type
T31N	without communications	N	N	N	Windows or Linux	Local standard
T31V21	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
T31V31 Plus	30km (air to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard
T31V31 Pro	50km (air to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard

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T31V31C	3-5km (ground to ground)	V31: LAN	800MHz, 1.4GHz	TTL(default) RS232(optional)	Windows or Linux	Local standard
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