

Ground Control Station

T40



T40 GCS is a portable and universal solution for controlling the unmanned vehicle and payload. With dual screens, it is a highly integrated system and has the function such as video transmission, data transmission, remote control, video display and industrial-grade computer.

With aeronautical aluminum alloy housing, the overall weight is only 5.98kg.

The remote control system has 4 joysticks for use, it also supports traditional RC access. Add HID USB function and programmable switches that can be set in the software.

Various input and output ports make it convenient to be integrated with the 3rd party communication device. It is especially for UAV, UGV, USV, etc.

T40

- * High definition, high brightness dual touch screens with extended touchpad
- * Control system can be freely mapped, supporting traditional RC access
- * Ground-breaking technology: switches can be set in the software
- * Supporting all the datalink in the market
- * Aeronautical aluminum housing, the overall weight only 5.98kg
- * Supporting the external video input
- * High integration



High Definition&High Brightness Dual Touch Screens with Extended Touchpad



Dual LCD screens with image display on the top screen and GCS interface on the bottom screen

Ergonomic design, user friendly

The top screen is an industrial grade 13.3" super bright LCD, the definition is 1920*1080.

The bottom screen is 12.1" LCD screen with 1500nits, sunlight-readable even in the strongest sunlight.

Ultra-sensitive 10-finger touch screen, able to avoid interference caused by accidental touch

Able to work in the complex environment, high stability

Remote control system can be freely mapped, supporting traditional RC access



The control system provides multiple programming modes, able to map to each channel of 2 SBUS.

Ground-breaking technology: switch can be set in the software to be used as one position switch, 2-position switch, or 3-position switch.

Switch combination is able to simulate the linear output function and multi-function switching.

Remote control data supports 2 channels of SBUS output and is transmitted directly to the airborne unit by data link.

Meanwhile, PC can get the data by COM5 or USB HID, which can satisfy the user's complicated applications.

More instructions

* Keys Combination Function

Max 5 groups can be set: CKey1 - CKey5

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Any combination of 2 physical keys, one incremental and one decremental.

* Super Key Combination Function

Max 2 groups can be set: SCKey1, SCKey2

Any combination of up to 6 physical keys that can be used as a super combination.

* Key Property Setting

F1-F12 can be set in 3 modes: mono-state, bi-state and tri-state.

Mono-state: a conventional mechanical key, pressed or released to output max or min value.

Bi-state: the key will be virtually a two-position switch with two positions, 0 and 1, indicating that the output is kept at a max or min value.

Tri-state: the key will be virtually three-position switch with three positions, 0, 1 and 2, indicating that the output is maintained at min, medium or max value.

**Supporting
all the datalink
in the market**



T40 is integrated with a long-range video&data&RC link, 3 frequency modules in one (800MHz, 1.4GHz and 2.4GHz), max bandwidth up to 40M.

All the data is the transparent transmission.

LAN port can be extended with an interchanger to realize 8 channels of video stream transmission.

T40 supports dual SBUS output, serial port data transmission.

All in one video&data&RC link is free from the problem of frequency interference and incompatibility and optimizes the whole system installation and debugging.

Aeronautical aluminum alloy housing

The weight is only 5.98kg.



Parameters

T40 GCS	
Dimensions	
Overall weight	5980g

Technology moves rapidly. Specifications subject to change.


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Dimension	354mm(L)*280mm(W)*80mm(H)
Screen size	13.3inch 1920*1080 1000nit (top screen) 12.1inch 1280*800 1500nit (bottom screen)
Computer Peripherals	
CPU	Intel i7 8565U(standard)
Touch pad	10-finger capacitive touch screen
Operating system	Windows10/Linux
RAM	8G(standard), 32G max
SSD storage	128GB SSD(standard), 1T max
Network	WIFI/Bluetooth(standard), 4G(optional)
Interfaces	RS232*4, USB3.0*2, LAN, HDMI in, VGA out, Hi-fi
Remote Control	
Physical channel	27 Main joystick*2 (industrial joysticks with hall sensors) Auxiliary rocker*4 Key buttons*12 Simulate keystrokes*7
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*2
Remote control latency	40ms
Battery Peripherals	
Battery capacity	16.8V 6A/13600mAh (external power source also supported)
Working time	3hs@full battery capacity
Charging port	DC16.8v
Battery cabin	194.3mm*72.4mm*34.9mm
T40	
Operating Temperature	-20°C-+60°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, 10dBi fiber-glass epoxy antenna*2 (*Other types of antennas also supported)
The 3 rd 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

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Power	-40-25dbm	adjustable
Transmission range	10km grade@LOS condition	Depend on environment
S-BUS port	2*S-BUS ports	NA
Serial port	1*serial port(default: TTL; optional: RS232)	Full duplex, baud rate adjustable
Video latency	20ms	Transmission latency from Tx to Rx
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	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	
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

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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	

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

Product Details

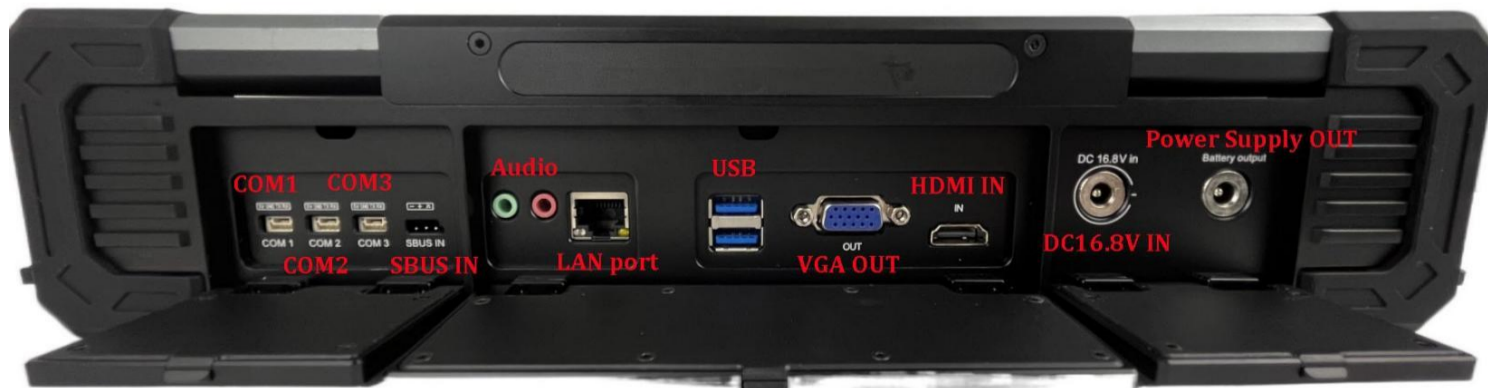
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Interfaces



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T40 Package





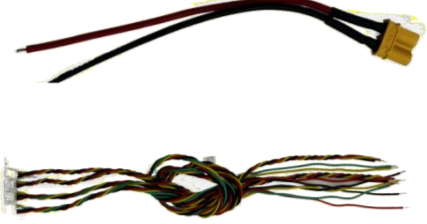

T40V21 Package Content

Main Components	
T40 GCS(with built-in V21 transmitter)	V21 Receiver
	
Antenna for ground unit (TNC ZYJB antenna*2+ fiber-glass epoxy antenna*2)	Antenna for V21 airborne unit (SMA ZYJB antenna*2)
	


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Accessories			
Charger (16.8V, 6A for T40 GCS)	LAN-to-4pin cable (LAN cable*1)	Other cables (XT30 power cable * 1 SBUS GH 3PIN *2 TTL signal cable GH 4PIN *1)	Aviation connector (4pin LAN*1 6 pin TTL&SBUS*1)
			

T40N Package Content

Main Components	
T40N GCS(without built-in V21 transmitter)	
	

Accessories		
Charger (16.8V, 6A for T40 GCS)	Other cables (SBUS GH 3PIN *2 TTL signal cable GH 4PIN *1)	Aviation connector (4pin LAN*1 6 pin TTL&SBUS*1)
		

Product videos

1	T40 portable GCS introduction	https://youtu.be/k3Kraag9JDA
2	T40 product details demo	https://youtu.be/RnUjJLhRzfl
3	T40 controlling gimbal camera with 3 sensors	https://youtu.be/dYVmimgXLAg
4	T40 controlling the drone and gimbal camera with triple sensors	https://youtu.be/PTwnULdl1bl
5	T40 GCS + 50km video&telemetry link +VTOL for gas well surveillance	https://youtu.be/O19kdepQyzw
6	T40 GCS +50km video transmitter test demo	https://youtu.be/cZ9AK2C2jSA

T40 Operation teaching video		
1	T40 button setting	https://youtu.be/Cb1J8zgzscc

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2	T40 connecting the 3rd party RC	https://youtu.be/xN80PBhnRwY
3	T40 external SBUS use	https://youtu.be/_n1tlBw-SQI