



# CHINOWING Product Catalog 华之翼产品手册 2022

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|  
**手持地面站**  
HAND-HELD GCS



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**地面站**  
GCS



|  
**数传链路**  
Digital link

## 关于华之翼

深圳市华之翼科技有限公司成立于2015年，致力于多旋翼无人机，垂直起降无人机，固定翼无人机的研发与制造，2018年评为国家高新技术企业。

公司以创新为驱动，以发展为宗旨，致力于无人飞行器和机器人的一体化无线通信链路和控制系统的研发，生产；公司专注于无线遥控遥测，无线数据传输，无线高清实时图像传输相关通讯的研发，实现高度集成的通信链路和控制系统。

通过多年的潜心研究和实际应用，已形成了具有自主知识产权的多频段无线通信核心技术体系，已取得多项发明与实用新型专利，公司旗下产品包含工业级一体化链路遥控器，多串口数传电台，无线高清图传等产品，可以实现超视距稳定通讯和控制。产品广泛应用于军事、农业和国土资源的调查，电力、石油管线的巡检，气象、警情和森林防火的监控和应急处理，城市规划、电子地图、导航POI的采集等众多领域。

公司拥有雄厚的技术和人才储备，研发团队由一批行业内高素质、高技能的人才组成，并与国内众多研发机构及高校进行技术合作，追寻行业最前沿的技术领域，不断地融合和创新，丰富产品的内容和层次，满足行业和社会的需求。

公司始终坚持“诚信做人，良心做事；客户为本，追求卓越”的核心价值观，以“正念、利他、厚德、包容”的精神为引领，致力于“把企业做成受社会尊重的企业，使员工成为受社会尊重的员工”。

## 深圳市华之翼科技有限公司 CHINOWING TECHNOLOGY CO.,LTD



### ABOUT

Chinowing Technology Co., Ltd, established in 2015, has been engaging in the research, development and manufacture of wireless communication links and control systems for UAV, UGV, USV, etc, and realized the high integration of communication links and remote control system. Until now, 7 generations of portable GCS have been developed.

Through years of research and practical application, Chinowing has formed a core technology system of wireless communication with independent intellectual property rights and has obtained several invention and utility model patents.

The product line involves data & RC link, video&data&RC link, portable ground control station. They have been widely used in defence, agricultural and land resources investigation, inspection of electric power and oil pipelines, monitoring and emergency rescue, public safety and forest fire prevention, etc.

The engineering team is made up of passionate, dedicated, motivated, experienced and interdisciplinary communications and UAS experts. With the aim of pursuing cutting-edge technology and keep constant innovation, Chinowing works with customers to understand their real problems and take the products more suitable for the customers' and industrial requirement.

Our commitment does not end with goods delivery. The more we add value, the better.

Read about this catalogue and discover how Chinowing solution can help take your business to new heights.



# 华之翼产品应用领域

## APPLICATIONS

华之翼科技有限公司的领先技术和产品可应用到影像航拍、遥感测绘、森林防火、电力巡线、石油巡检、警用安防、搜索及救援、影视广告等工业及商业用途，同时已被中国及世界各地的用户普遍的选择使用。华之翼科技有限公司将结合自身的积累和优势，不断开发创新技术，为用户设计和创造更多更卓越的产品和服务。



影像航拍  
Aerial photography



电力巡检  
Power line inspection



石油巡检  
Oil pipeline inspection



警用安防  
Public security



应急救援  
Emergency rescue



地理测绘  
Mapping and surveying



风力发电巡检  
Wind blade inspection



交通勘察  
Traffic surveillance

# 地面站系列产品

## GCS series products



华之翼科技 研发并生产多款地面站产品，其中包括地面站、手持一体地面站、航模遥控器等产品。手持一体地面站是集成工业级三防电脑和一体化链路遥控系统的单兵手持设备，具有遥控飞机、遥控云台、实时飞行状态反馈、实时遥控状态反馈、航线规划等功能，工业级电脑和军工级传输链路不仅能确保飞行器的安全性，和稳定性，且操作简单，易于携带。适用于无人机，无人船，消防机器人，排爆机器人等应用。

Chinowing portable ground control station is a high integration of industrial-grade IP rating computer, data link and remote control system, which has the functions of remote control aircraft, and camera gimbal, real-time flight status feedback, real-time remote control status feedback, mission planning, etc. The industrial-grade computer and military-grade transmission link can not only ensure the safety and stability of the aircraft but also simple operation and ease to carry. It is suitable for unmanned aircraft vehicle, unmanned surface vehicle, firefighting robot, explosive detonation robot and other applications.

**T40**  
双屏地面站  
DUAL-SCREEN GCS

**T31**  
手持一体地面站  
ALL-IN-ONE HAND-HELD GCS

**T18**  
手持安卓地面站  
ALL-IN-ONE ANDROID HAND-HELD GCS

**T30s**  
手持一体地面站  
ALL-IN-ONE HAND-HELD GCS

**T16**  
手持外挂设备地面站  
HAND-HELD GCS WITH MOBILE DEVICE

**T30**  
手持一体地面站  
ALL-IN-ONE HAND-HELD GCS

**T10**  
航模遥控器  
MODEL REMOTE CONTROLLER

**T26**  
手持一体地面站  
ALL-IN-ONE HAND-HELD GCS

**T21**  
手持一体地面站  
ALL-IN-ONE HAND-HELD GCS

# T40 DUAL-SCREEN GCS

## 双屏地面控制站



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 the aviation-grade aluminum alloy shell, the overall weight is only 5.98kg.

The remote control system has 4 joysticks for use, it also supports traditional RC access for remote control. Add HID USB and programmable switches that can be set in the software. Various external input and output ports make it convenient to integrate with the 3rd party data link. It is especially suitable for UAV, UGV, USV, etc.

### Product Features

- Aviation grade aluminum shell, the overall weight only 5.98kg
- Dual touch screens with high definition and brightness and extended touch pad
- Programmable channels, supporting traditional RC access
- Add HID USB and programmable switches that can be set in the software.
- Compatible with 100% data link in the market

T40地面站是新一代多功能、高集成度的便携式工业级一体双屏地面站。它集成了图像传输系统、数据传输系统、手持遥控器、图像显示系统和工业笔记本电脑的所有功能,采用航空铝合金外壳,重量仅为5.98KG。摇杆系统4组摇杆可用外,还支持传统RC摇杆接入进行远程控制,增加HID通道再映射,可编程多态软开关。齐全的外部输入输出接口更快捷接入第三方设备,更方便适配无人机,无人车,机器人等无人机设备。

### 产品特点

- 航空铝外壳重量仅为5.98KG,行业中最轻
- 高清高亮双触屏同时扩展触摸板
- 摇杆系统可以自由映射,支持传统RC接入
- 国内首创软按键设置
- 支持市场100%链路
- 支持外部HDMI口视频输入
- 高度集成一体化
- 支持外部供电,可以热拔插



### 产品参数 Product Parameters

软件	SBUS	Dual SBUS independent output, HID input
图传系统	Video system	Built-in
通道	Channel	27 physical channels
遥控延时	Remote control latency	30ms
天线	Antenna	4dB rod antenna / 10dBi fibre-glass epoxy antenna (other antennas also can be connected externally)
辅助通道及数量	Sub-Channel	Main joysticks*2 (industrial joysticks with hall sensors) Sub joysticks*4 Key button*12 Simulate keystrokes*7
遥控距离	Remote control range	5km-20km
射频功率	RF power	V20: 0.1-1w(adjustable) V21: 0.1-1w(adjustable) V30: 0.1-1w(adjustable)
工作频率	Frequency	840MHz/900MHz 800MHz/1.4GHz//2.4GHz
电池容量	Battery capacity	16.8V/13600mAh(external battery also supported)

搭配V20 / R20 / V21/V30/无链路使用

Match V20 / R20 / V21 / V30/datelink use

显示屏	Screen	13.3inch 1920*1080 1000CCD + 12.1inch 1280*800 1500CCD
触摸	Touch panel	Capacitive 10-finger multi-touch display
处理器	CPU	Intel i7 8565U/10500U
内存	ROM	8GB
存储容量	Storage	256GB
操作系统	System	Win 7/Win10/Linux
网络接口	Network	WIFI/Bluetooth/4G
外部接口	External interface	USB3.0, LAN, HDMI in, VGA out, Hi-fi
串口接口	Serial port	RS232*3 ,SBUS out/in
充电接口	Power supply interface	DC 16.8V
工作温度	Operation temperature	-20~+60°C
整体尺寸	Dimension	354mm(l)*280mm(w)*80mm(h)
整机重量	Overall weight	5980g

# T31 ALL-IN-ONE HAND-HELD GCS

## 手持一体地面站



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.

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.

### Product Features

#### Large Electronics Compartment

The large electronics compartment offers a wide range of connection ports for connecting 3rd party devices. The T31 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.

#### Ground-Breaking Buttons Settings in the Software

Each 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.

All the commands from the joysticks, switches, buttons are output from the airborne end through two independent SBUS signal. The computer can also access these commands via COM port or USB HID. Supports self-define for HID keyboards, CAN protocols.

#### Abundant Physical Channels

25 buttons, 1 stop button, 1 directional key, 2 hall-effect joysticks, 4 knobs, 2 pull wheels

#### Anti-Knock Design

Fully rubberized handle for better grip and control. Strap position adjustable; anti-knock

T31是一款高度集成的单兵手持设备，专门针对无人车、机器人控制需求研发，同时也可以应用于遥控无人机、无人船、云台等控制。实时数据状态反馈、实时遥控状态反馈、航线规划等功能，Windows或LINUX系统平台支持市面大部分地面站软件。工业级电脑和军工级传输链路不仅能确保飞行器的安全性，和稳定性，且操作简单，易于携带。

T31集成了远距离图数一体数据链路，无线链路采用三频合一技术同时支持800MHZ,1.4GH,2.4GHZ，最大带宽可达40M;所有数据均为透明传输，网口扩展交换机可以提供多达8路视频回传；同时数据控制站支持两路独立S-BUS上行、串口和其他连接器，允许实时双向数据传输。一体化链路省去了频率干扰和不兼容问题，简化了系统安装和调试工作。

### 产品特点

#### 可更换其他厂家无线电设备

设备仓提供丰富的接口，与第三方设备融为一体，兼容市场大部分链路。支持扩展CAN接口，上位机可设置CAN协议自定义功能。提供串口协议，可获取底层通讯协议方便用户二次开发；

#### 国内首创软按键设置

每个功能按键可以实现单态，双态，三态控制，增加组合按键，超级组合按钮功能，可以用按键模拟出线性输出功能及多能功切换。遥控系统数据本地支持输出两组S-BUS,并通过链路直接传至机载端；并且PC系统可以通过COM口或者USB HID方式获取，独创USB HID各通道再映射功能，HID键盘、CAN协议自定义功能等，满足用户更为灵活的应用

#### 丰富的物理通道

25个按键、2个霍尔摇杆、4个旋钮、2个拨轮、急停按钮、云台控制键。

#### 防摔设计

手柄触感全橡胶包裹，更好的手持感和操控感。巧妙的连档设计可调节挂带位置，具有防磕碰等作用



### 产品参数 Product Parameters

通道	Channel	35 physical channels
摇杆类型	Joysticks	2 industrial joysticks with hall effect
辅助通道及数量	Sub-Channel	Main joysticks*2 (industrial joysticks with hall sensors) Knob*4 Key button*25 Pull wheel*2
射频功率	RF power	25dBm
遥控延时	Remote control latency	40ms
电池容量	Battery capacity	12.6V/10200mAh, external battery also OK
续航时间	Duration	3.5H with full capacity
外观尺寸	Dimension	360mm*190mm*40mm
重量	Weight	2.8kg
显示屏	Screen	10.1inch+ industrial touch screen
分辨率	Resolution	1920×1200/1280×800
操作系统	System	Windows/Linux
显卡	Graphics	Intel® HD Graphics 520 , support DirectX 12 OpenGL 4.5, support 4K
处理器	CPU	Intel i5 6200U/ 2.3GHz
内存	ROM	8GB DDR3L,The highest support 32G
存储容量	Storage	128GB/256GB
网络类型	Network	Bluetooth,WIFI /4G
外部接口	External interface	USB*2,LAN, 12V/4A OUT, RS232 * 2
工作温度	Operation temperature	-10~+60°C
遥控距离	Remote control range	20KM
三防特性	Remote control range	IP54

# T30S ALL-IN-ONE HAND-HELD GCS

## 手持一体地面站



The T30S all-in-one hand-held GCS is a portable lightweight and rugged ground computer station with dual-screen FHD sunlight readable touch screen displays, integrated industrial-grade PC system, video& data link and remote control system. T30S provides the function such as mission planning, attitude control, payload control, remote monitoring, real-time video display, etc. With Windows/Linux platform, T30S supports the most ground control station software. Easy operation and carrying.

### Product Features

- Dual high brightness touch screens, support the main and secondary screen settings.
- The max resolution of the HD screen is 1920\*1200, and the max brightness can reach 800CCD.
- Common platform, adaptation in most of the flight control system on the market;
- 3 frequency bands integrated into one(800MHz, 1.4GHz, 2.4GHz),it can be modified in the software, communication range: 10km+
- Multiple external expansion ports: TTL, RS232, RS485, RS422; Extensible aviation plug port.
- The upper screen can be inputted the HDMI video, also can be used for computer screen expansion.
- Universal platform, compatible with most of the flight control systems in the market
- High integration of video&data&RC link, highly convenient for individual operation in the field.
- Self-developed dual independent SBUS output with every channel programmable enables to control the drone and the payload together.
- WiFi, Bluetooth,4G, Gigabit LAN port, HDMI output, built-in hi-fi, able to connect headphones.

T30S双屏一体手持地面站是具有一款高清高亮双触屏，集成工业级PC系统和一体化链路遥控系统的单兵手持设备，具有遥控飞机、和实时飞行状态反馈、航线规划等及视频传输显示，视觉识别，云平台数据分享功能，Windows或LINUX系统平台支持市面大部分地面站软件，工业级电脑和军工级传输链路不仅能确保飞行器的安全性，和稳定性，且操作简单，易于携带。

### 产品特点

- 多合一，三频合一，图数控合一
- 高清高亮双触屏设计，支持上下分屏，主副屏设置。
- 上屏可以直接外接HDMI 视频数据，也用于电脑扩展显示。
- 高清屏最大分辨率1920\*1200，最高亮度可达到800CCD。
- 全航空铝机身，窄边柜设计，重量仅传统地面站的1/10。
- 通用平台，适配于市面上绝大多数飞控系统；
- 图数控遥电一体化设计，最大程度方便单兵外出作业任务；
- 三频全一通信链路同时支持800MHz,1.4GHz,2.4GHz。用户可根据需求软件设置，通讯距离10-30km；
- 独创的可编程双SBUS独立输出，一机两用，控飞机控挂载，随心所欲，自由设置；
- WIFI,BULETOOTH,4G,千兆网口，HDMI 输出，内置高保真音响，也可外接监听耳机。
- 超多的对外输出接口 6个串口，分别有TTL,RS232 ,Rs485, RS422接口，可扩展航插接口；



### 产品参数 Product Parameters

软件	SBUS	Dual SBUS independent output, HID input	显示屏	Screen	10.1inch 1920*1200 800CCD *2
图传系统	Video system	Built-in	触摸	Touch panel	Capacitive 10-finger multi-touch display
通道	Channel	23 physical channels	处理器	CPU	Intel i5 6200U
遥控延时	Remote control latency	40ms	内存	ROM	8GB
天线	Antenna	4dB rod antenna / 10dBi fibre-glass epoxy antenna (other antennas also can be connected externally)	存储容量	Storage	128GB/256GB
辅助通道及数量	Sub-Channel	Main joysticks*2 (industrial joysticks with hall sensors) 3-position switch*4 Knob *2 Key button*11 Pull wheel*2	操作系统	System	Win10/Linux
遥控距离	Remote control range	10km grade	网络接口	Network	WIFI/Bluetooth/4G
射频功率	RF power	V21: 0.1-1w(adjustable) V30: 0.1-1w(adjustable)	外部接口	External interface	Hi-fi, USB2.0, LAN, USB3.0, VGA, HDMI
工作频率	Frequency	840MHz/900MHz	串口接口	Serial port	TTL, RS232*2
续航时间	Duration	2.4hs with full capacity	充电接口	Power supply interface	XT30/DC 12.6V
电池容量	Battery capacity	12.6V/12000mAh(external battery also supported)	三防特性	IP rating	IP53
			工作温度	Operation temperature	-10~+60°C
			整体尺寸	Dimension	364mm(l)*190mm(w)*95mm(h)
			整机重量	Overall weight	3200g

搭配V20 / R20 / V21/V30/无链路使用  
Match R20/ V21/V30/3rd party communication

# T30 ALL-IN-ONE HAND-HELD GCS

## 手持一体地面站



-   
Intel i7
-   
10.1 inch screen
-   
Long duration
-   
long distance control
-   
One key turn back
-   
ODM/OEM

T30 is a universal and portable ground control station, built on top of industrial-grade computer system. With built-in all one video&data&RC link, it is especially for individual operation in the field. A professional hand-held remote controller features 3 frequency modules in one, telemetry data and real-time video transmission as well as remote control function. Self-developed dual SBUS output with every channel programmable enables T30 to control the drone and the payload simultaneously. The computer is developed with an i7 high-performance processor based on the X86 architecture, which can greatly meet the computing requirement of any aircraft to the ground station, and also supports video decoding and local recognition. The system can be installed with LINUX or WINDOWS operating system. The T30 hand-held ground station is the versatile, well-proven, easy-to-use, portable device for remote control of the UAV, UGV and other remote-controlled vehicles.

### Product Features

- Super CPU
- 23 physical channels
- Mission planning
- High brightness FHD touch screen
- Dual SBUS output
- HID device input
- Remote control of the drone and the payload simultaneously



T30是一款集成工业级电脑系统和一体化链路遥控系统的单兵手持地面站。采用三频合一链路同时完成影像传输，飞机的遥控遥测功能，独创可编程双SBUS 更灵活控制吊仓或转台。主控电脑采用X86架构的I7高性能处理器，可满足任何飞机对地面站的功能运算需求，还支持视频解算本地识别。系统可自主安装LINUX或者WINDOWS, 现有应用软件无需再次开发可以直接安装运行。T30手地面站是行业里最通用易用，高便携性的无人设备控制终端。

### 产品特点

- 超强CPU
- 23个物理通道
- 航线规划
- 高亮超清触摸屏
- 双S-BUS
- HID摇杆输入
- 飞机吊仓控制
- 图数控一体链路



### 产品参数 Product Parameters

通道	Channel	23 physical channels
通信频率	Frequency	V21(10km grade): 800MHz/1.4GHz/2.4GHz V30(10km grade): 800MHz/1.4GHz/2.4GHz
射频功率	Radio RF power	V21: 0.1-1w (adjustable) V30: 0.1-1w (adjustable)
遥控延时	Remote control latency	40ms
电池容量	Battery capacity	12.6V/10200mAh, external battery also OK
续航时间	Duration	3hs with full battery capacity
外观尺寸	Dimension	360mm*190mm*40mm
整机重量	Weight	2.4kg
显示屏	Screen	10.1inch+ industrial touch screen+800CCD/1000CCD sunlight readable
分辨率	Resolution	1920×1200 800CCD/1280×800 1000CCD
处理器	CPU	Intel i5 6200U
内存	ROM	4GB/8GB DDR3L
存储容量	Storage	128GB/256GB
网络类型	Network	WIFI /Bluetooth/4G
外部接口	External interface	Hi-fi, USB2.0, LAN, USB3.0, VGA, HDMI
工作温度	Operation temperature	-10~ +50°C
遥控距离	Remote control range	10km grade

搭配V20 / R20 / V21/V30/无链路使用  
Match R20 / V21 / V30/3rd party communication



# T26 ALL-IN-ONE HAND-HELD GCS

## 手持一体地面站



T26 is military-grade portable command and control platform in high integration of Panasonic FZ-M1 and video&data&RC link. It provides the function such as mission planning, attitude control, payload control, remote monitoring, real-time video display, etc. To ensure high-performance and convenient operation, features of T26 includes sunlight-readable, multi-touch display, lightweight, 16 channels, window 10 operating system and strong hardware enabling the scalability. The rugged, water and dust-proof design, is especially suitable for the operation in the harsh environment.

### Performance upgrade

- Integration of panasonic is three computer FZ - M1
- The original 10 Windows system
- Intel core processors
- Sunshine can video, brightness 800 CD / m<sup>2</sup>
- IP65 rating

### Perfect remote control experience

- Double hall rocker
- Double round rocker
- Light alloy buttons

### Big long battery life

- Battery capacity is 3220 mah + 6800 mah
- Remote sensing length test about 9 h
- The web browsing time about 12 h

### Modelling design

- Aviation aluminum alloy shell, strong and lightweight
- Product the total weight is only 1.5 kg
- Around with soft rubber, skid resistance to knock against

T26 是一款集成工业级PC系统和一体化链路遥控系统的单兵手持设备，具有遥控飞机、遥控云台、实时飞行状态反馈、实时遥控状态反馈、航线规划等功能，Windows或LINUX系统平台支持市面大部分地面站软件，工业级电脑和军工级传输链路不仅能确保飞行器的安全性，和稳定性，且操作简单，易于携带。



### 性能升级

集成松下三防电脑FZ-M1  
正版Windows 10系统  
Intel 酷睿处理器  
阳光可视屏，亮度高达800cd/m<sup>2</sup>  
防水防尘等级达到IP65标准

### 完善的遥测体验

双霍尔摇杆  
双拨轮摇杆  
发光合金按键

### 大电池 续航长

电池容量 3220mAh+6800mAh  
遥测时长测试 约9h  
网页浏览时长 约12h



### 造型设计

航空铝合金外壳，坚固且轻  
产品总重量仅 1.5kg  
周身附软胶，具有防滑耐磕碰等作用  
人机工程设计

### 产品参数 Product Parameters

通道	Channel	16 physical channels
遥控距离	Remote control range	+V21 : 10KM
射频功率	Frequency	+V21: 800MHz/1.4GHz/2.4GHz
射频功率	RF power	+V21: 0.1W-1W(adjustable)
遥控延时	Remote control latency	40ms
电池容量	Battery capacity	7.4V/3220mAh(RC)+8.4V/6800mAh(PC)
续航时间	Duration	9H with full capacity
整机重量	Weight	1.5kg
显示屏	Screen	7inch+ industrial touch screen+800CCD sunlight readable
分辨率	Resolution	1280×800
集成电脑	Integrated computer	Panasonic FZ-M1
处理器	CPU	Intel i5 7Y57
内存	ROM	4G
存储容量	Storage	256GB SSD
操作系统	System	Windows 10
整体尺寸	Dimension	300mm*158mm*40mm
三防特性	IP rating	IP65
网络接口	Network	wifi/bluetooth/4G
外部接口	External interface	USB3.0 * 2
工作温度	Operating temperature	-20~+60°C

搭配 V21 数字网络图传 使用

Match V21 use



# T21 ALL-IN-ONE HAND-HELD GCS

## 手持一体地面站



T21 hand-held ground control station is a portable industrial-grade ground computer station with an independent programmed dual SBUS design. T21 provides function such as mission planning, attitude control, payload control, navigation & positioning, remote monitoring, etc.

Industrial-grade computer and military-grade data link ensure the safety and stability of the flight. Easy operation and transportation.

### Product Features

- Industrial joysticks with hall effect
- IP rating industrial computer
- Dual auxiliary joysticks
- Dual SBUS output
- Each channel programmable



T21是一款集成工业级三防电脑和一体化链路遥控系统的单兵手持地面站，可独立编程的双S-BUS设计，具有遥控飞机、遥控云台、实时飞行状态反馈、实时遥控状态反馈、航线规划等功能，双系统平台支持市面大部分地面站软件，工业级电脑和军工级传输链路不仅能确保飞行器的安全性，和稳定性，且操作简单，易于携带。广泛应用于无人机、无人船、消防车、排爆机器人。

### 产品特点

- 工业霍尔摇杆
- 三防工业电脑
- 双副摇杆
- 双S-BUS
- 可独立编程



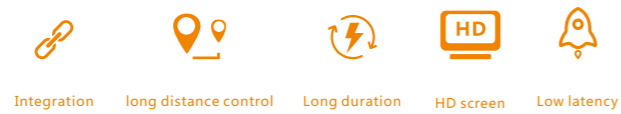
### 产品参数 Product Parameters

通道	Channel	16 channel×2
通信频率	Frequency	902-928MHZ
射频功率	RF power	R20: 0.1-1w(adjustable)
遥控距离	Remote control range	5-30km(based on the environment)
遥控延时	Remote control latency	10ms
电池容量	Battery capacity	3.7V/7500mah
续航时间	Duration	3H with full capacity
外观尺寸	Dimension	300mm*160mm*40mm
整机重量	Weight	1.2kg
电脑类型	System	Win10
显示屏	Screen	8inch+1280*720+350CCD
分辨率	Resolution	1280×720
处理器	CPU	Intel Intel Cherry Trail Z8350
内存	ROM	4GB DDR3
存储容量	Storage	64GB
三防特性	IP rating	IP53
外部接口	External interface	USB2.0

搭配 R20数传接收机 使用  
Match the R20 use

# T18 ALL-IN-ONE ANDROID HAND-HELD GCS

## 手持安卓地面站



T18 hand-held all-in-one control adopts an integrated body and moulding. Grip position for the rubber material, antislip and resistant to knocking, with an excellent hand feel.

All the functions in one unit: remote control, payload control, real-time video display, route planning, etc. Reserved UART serial port, can be connected to external devices such as RTK, 4G individual device, handgrips, etc.

### Product Features

- Six-core high-speed processor
- In perfect combination with Pixhawk
- 300min endurance
- Built-in customized QGC software
- 5km remote control range
- Support 2nd development

T18手持一体控由模具一体成型，握手位置为橡胶材质，防滑耐磕碰，有着极佳的手感。集遥控、挂载控制、图像显示、航线规划等功能于一体；预留UART串口，可与RTK、4G单兵、手柄等外部设备通信。

### 产品特点

- 六核高速处理器
- PIXHAWK完美支持
- 300min超长待机时间
- 预装定制版QGC
- 5km超远控制
- 支持二次开发

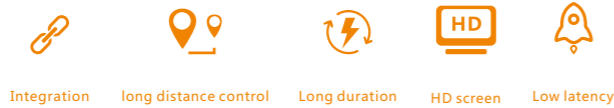
### 产品参数 Product Parameters

通道	Channel	14 physical channels
通信频率	Frequency	2.4GHZ
遥控距离	Remote control range	3-8km
图传天线增益	Antenna	3.5dBi@2.4GHZ
电池容量	Battery capacity	11.1V/8000mah
续航时间	Duration	5H with full capacity
外观尺寸	Dimension	320mm*142mm*54mm
整机重量	Weight	1.5kg
电脑类型	System	Android7.1
显示屏	Screen	7inch+1200nit
分辨率	Resolution	1920x1200
触摸屏	Touch screen	Capacitive 10-finger multi-touch display
处理器	CPU	Dual-core Cortex-A72+ Quad-core Cortex-A53
内存	ROM	2GB/4GB DDR3
存储容量	Storage	32GB/64GB
三防特性	IP rating	IP67
外部接口	External interface	USB、HDMI、MICRO SD、MICRO SIM、UART
工作环境温度	Operational temperature	-20°C~60°C
适配器	Charging interface	15V/5A



# T16 HAND-HELD GCS WITH MOBILE DEVICE

## 手持外挂设备地面站



T16 is a compact portable GCS that enables safe and easy operation of the drone and its payload, especially suitable for individual operation. Supporting Windows and Android systems, T16 can control the aircraft, the payload, display real-time flight status and remote control status, which supports mainstream tablets and mobile phones. Military grade data link ensures the safety and stability of the flight. Easy operation and transportation.

### Product Features

Main and secondary joysticks, programmable dual SBus independent output  
10 linear channels meeting various control demand  
Multiple joystick options, left and right handed mode, back center mode, industrial hall effect joystick

Universal platform, compatible with the most flight controllers  
Remote control, telemetry data, real-time HD video display, suitable for individual operation

The physical channel supports USB HID input to the computer, with up to 8 quick buttons available for quick ground station operation  
Long endurance, up to 8h with full battery capacity, meanwhile supporting external battery powering.

Programmable dual SBus independent output, able to control the payload and the drone

800MHz, 1.4GHz, 2.4GHz can be chosen in the software, communication range 10km+

T16 是一款一体化链路遥控系统的单兵手持设备，支持Windows或Android系统平台，具有遥控飞机、遥控云台、实时飞行状态反馈、实时遥控状态反馈，支持市面主流平板与手机，军工级传输链路不仅能确保飞行器的安全性，和稳定性，且操作简单，易于携带。

### 产品特点

主副摇杆设计 加可编程的双SBus独立输出;  
10个线性通道，满足更多的控制需求;  
多种摇杆可选，左右手模式，双回中模式，工业级霍尔摇杆

通用平台，适配于市面上绝大多数飞控系统;  
图数控遥电一体化设计，最大程度方便单兵外出作业任务;  
独创的可编程双SBus独立输出，一机两用，控飞机控挂载;  
三频全一通信链路同时支持800MHz,1.4GHZ,2.4GHZ;  
用户可根据需求软件设置，通讯距离10km+

物理通道支持USB HID 直接接入电脑，  
高达8个快捷可用于地面站快捷操作;  
提供SDK及底层通讯协议方便用户二次开发;  
续航强劲 在满负荷状态下工作可达8小时;  
同时支持外挂移动电源让续航更加持久;



5-10.1inch Mobile Device

### 产品参数 Product Parameters

通道	Channel	22 physical channels
频率	Frequency	806~826MHz 1427.9-1447.9MHz 2401.5-2481.5MHz
射频功率	RF power	V21: 0.1-0.5w(adjustable)
遥控延时	Remote control latency	30ms
电池容量	Battery capacity	8.4V/6800mAh built-in battery, external battery supported
续航时间	Duration	8h@full battery capacity
整机重量	Weight	1060g
S-BUS	S-BUS	2*SBus ports
图传系统	Video&data link	Built-in
摇杆类型	Joystick	left and right handed mode/back center mode/Hall effect
辅助通道	Other channels	Auxiliary joystick*2, position switch*4, Knob *2, Key button*8, Pull wheel*2
移动设备	Mobile devices	5-10.1inch Mobile Device
操作系统	System	Windows 10/Android
三防特性	IP rating	IP53
外部接口	External interface	USB3.0, LAN
工作温度	Operating temperature	-10~+60°C
整体尺寸	Dimension	290mm(L)*150mm(W)*60mm(H)
遥控距离	Remote control range	10km grade

搭配 V21 数字网络图传 使用  
Match V21 use

# T10 MODEL REMOTE CONTROLLER

## 航模遥控器



T10遥控器 采用2.4G FHSS跳频技术, 信号传输更灵敏, 同时提升同一地区多台设备的抗干扰性。全新全角度天线, 增强信号遥控稳定性。双向传输系统, 实时掌握飞行状态。增强操控的安全性, 同时提升遥控体验感。提供10个物理通道: 包含4个三挡拨杆, 2个旋钮, 4个快捷按键。采用便捷电源设计, 能够使用4节5号电池或者锂电池供电, 快捷转换插头, 同时能够防反插。无冗余设计, 让飞行无忧。

T10 USES 2.4 G FHSS frequency hopping technology, remote control signal transmission more sensitive, while increasing the same area anti-interference of multiple devices. All new Angle of the antenna, the enhancement signal remote control stability. Two-way transmission system, the real-time control flight condition. Enhance control security, at the same time, remote control experience of ascension. Provide physical channel 10: contains four three gear shifter lever, two knobs, 4 shortcut keys. Convenient power supply design, can use 4 S batteries or lithium batteries, quick conversion plug, at the same time to the counter-attack. No redundant design, make flying safe.

### 产品参数 Product Parameters

通道	Channel	14 physical channels
频段		2.4GHz ( interactive )
跳频	Frequency	New FHSS frequency hopping
存储	Storage	20 groups of models
编程	Programming	Mixed control of multi-group programming
语言	Language	English
分辨率	dpi	Full channel 4096 dpi
应用	Application	Helicopter /fixed-wing/ multi-rotor/ vehicle and ship
传输距离	Transmission distance	1-3km
PWM	PWM	8 way
S.BUS	S.BUS	Compatible with Futaba S.Bus protocol
失控保护	Fail-Safe	Support
工作电压	Voltage	7V-12V
工作电流	Current	100mA
尺寸	Size	190mm*180mm*60mm
重量	Weight	480g



### R10 接收机 Match the R10 use

尺寸	Size	46.5mm*27.0mm*14.0mm
适合机种	Application	Helicopter /fixed-wing/ multi-rotor/ vehicle and ship
灵敏度	Sensitivity	-105dBm
调制方式	Modulation method	GFSK
系统模式	System model	Automatic frequency hopping number system
数据分辨率	Data resolution	1024级



long distance control

S-BUS

s-bus support



anti-interference



Two-way transmission



FHSS

# R20

## 接收机 RECEIVER

R20接收机为通用接收机，可配合华之翼多款产品使用。采用成熟性高的军工级数传模块，搭配一体化链路设计，分时复用提高信道利用率，可同时传输一路透传数据，两路S-BUS控制数据。产品体积小，重量轻，低功耗和抗干扰能力强。

The R20 receiver for common receiver, can be used with CHINOWING products. USES the high maturity of military level digital module, tie-in integration link design, time-sharing multiplexing improve channel utilization, can transmit a Reuters data at the same time, two way S - BUS control data. Products small size, light weight, low power consumption and strong anti-jamming capability.

可搭配的机型为  
match models

**T30s T30 T21 D04**

### 产品参数 Product Parameters

工作频段	Frequency of communication	840MHZ/900MHZ
供电电压	Power supply voltage	7.4V~24V
工作电流	Operation current	300mA ( 12V )
串口输出	Serial port	TTL * 1+S-BUS * 2
遥控器输出	S-BUS	S-BUS * 1
功率	Power	100mW~1W
天线	Antenna	3dB rod antenna
串口波特率	Port baud rate	115200 ( adjustable )
空速	The air rate	100K ( adjustable )
尺寸	Size	53mm*40mm*14mm
重量	Weight	43g
工作温度	Operational environment	-10 ~ +60°C



# 数传链路系列产品

## Digital link series products

华之翼研发多种数传电台产品,均达到军工级别链路要求，采用分时复用提高信道利用率，可同时传输多路数据。搭配一体化链路设计，保证非视距数据传输的距离和稳定性。外壳均采用航空铝合金自动化加工而成，将体积做到最小最优，并保证良好的散热性能，并不占用过大的安装体积。

CHINOWING research and development of a variety of digital radio products, all meet the requirements of military level link, using time-sharing multiplexing improve channel utilization, can transmit multiple data at the same time. Link with integration design, to ensure that the non line-of-sight data transmission distance and stability. The shell adopts aviation aluminum alloy automation and will do the optimal minimum volume, and ensure good heat dissipation performance, the installation of doesn't take up too much volume.



## D02

数传电台  
DATA LINK

## V20

网络图传  
VIDEO&DATA&RC LINK

## D03

多链路数传  
DATA&RC LINK

## V21

数字网络图传  
VIDEO&DATA&RC LINK

## D03s

双串口数传  
DOUBLE LINK DATA TRANSMISSION

## V40

多功能数字网络图传  
MULTI FUNCTION VIDEO&DATA&RC LINK

## D04

无线连接数传  
WIRELESS DATA&RC LINK

## D13

4G无线数传  
4G WIRELESS DATA LINK

# D02 DATA LINK

## 数传电台



D02电台数传具有超远传输距离，具有点对点，中继，点对多设备功能，发射端可选择TTL或者RS232电平；通用调参软件，可在PC端易于操作，简单易用。机身小巧，航空铝合金外壳，重量很轻。

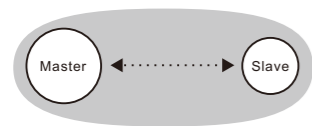
### 产品特点

- 双USB和TTL/232接口
- 免费易用可视化调参软件
- MICOHARD P900/P840/HP840模块
- 30km传输距离
- 点对点 中继 点对多
- 高速跳频

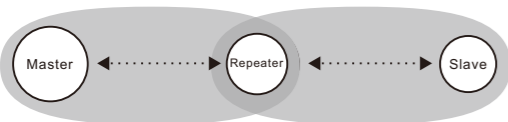
D02 is a data link working in 900MHz frequency band, and the transmission range can reach 30km. It supports point to point, reply, point to multipoint communication. With the compact size, high integration, high sensitivity, D02 is ideal for aerial service.

### Product Features

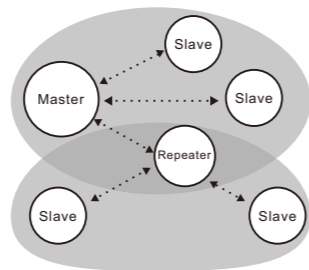
- Double USB port, TTL/232
- Parameter setting software
- Developed based on P900/P840/HP840
- 30km transmission range
- Point to Point, relay, Point to Multipoint
- High speed frequency hopping



Point to Point Master

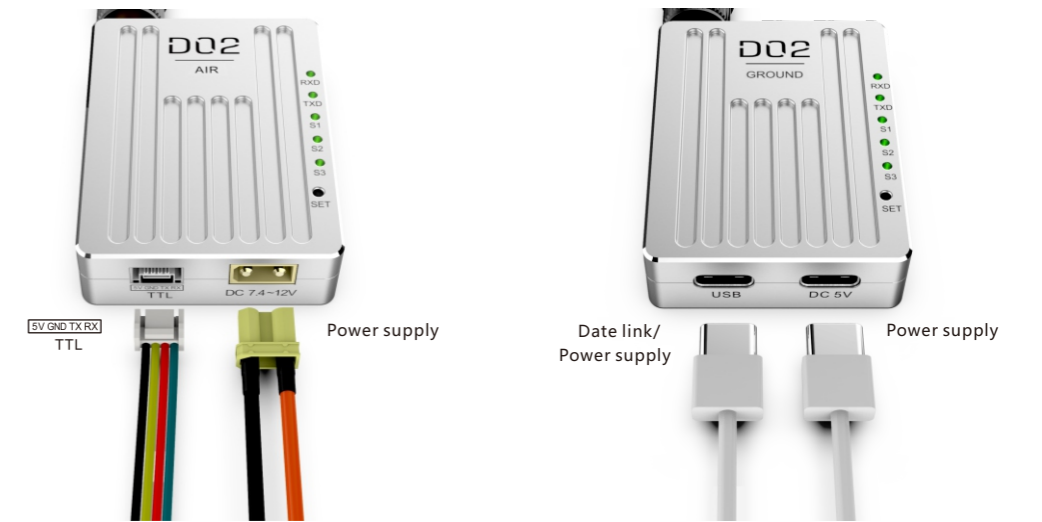


Point to Point Repeater



Point to Multipoint Slave

### 连接方式 Connection



发射端 TTL接口  
(可定制232电平)

The receiver TTL interface  
232 level (customizable)

接收端 TYPE-C双接口  
USB 3.0数据接口供电可达满功率输出

The receiver TYPE - C double interface  
USB 3.0 data port power supply can reach  
full power output

### 产品参数 Product Parameters

传输技术	Modulation hopping	Frequency hopping
转发错误检测	Forwarding error	Hamming /BCH/Golay/Reed-Solomon
错误检测	Error Detection	32 bits of CRC, ARQ
加密	Encryption	Optional (see -AES option)
输出功率	Output power	100mW - 1W (20-30dBm)
传输距离	Transmission range	30-60 km
串行接口		3.3V CMOS TTL(RS232 optional)
灵敏度	Sensitivity	-110 dBm @ 115.2 kbps -108 dBm @ 172.8 kbps -107 dBm @ 230.4 kbps
传输协议	Transmission protocol	Transparent transmission
波特率	Baud rate	9600bps~230400bps ( adjustable )
空速	Wireless Link Rate	276kbps max
供电电压	Power supply voltage	Ground unit: 5.0v; airborne unit: 7.4v~24v
天线接口	Antenna interface	SMA
数据接口	Data interface	GH1.25-4P&USB Type-c
尺寸大小	Dimension	62mm(L)*40mm(W)*13mm(H)
重量	Weight	40g exclude antennas )
工作温度	Operating temperature	-20°C ~ +85°C

# D03 DATA&RC LINK

## 多链路数传

D03多链路数传 采用成熟性高的军工级数传模块，搭配一体化链路设计，保证非视距数据传输的距离和稳定性。D03多链路数传的机身体积小，重量轻，适合较小安装空间和不占用多的重量，同时低功耗和抗干扰设计，适合无人机及机器人的非视距数据传输和控制系统。

D03 is a data link transmission device that can transmit both remote control signals and data signals simultaneously.

The remote control signal at the ground end can be enhanced and sent to the airborne end together with the data signal.

It is mainly used to solve the problem of the short distance and low transmission quality of the remote control signal and the data transmission signal.

D03 works in the 900MHz frequency band, and the transmission range can reach 30km, max 60km. Compact size, high integration, high sensitivity.



-   
long distance control
-   
low energy
-   
Low latency
-   
anti-interference

### 产品特点

- 遥测链路和控制链路
- 实现远距离控制
- 实测传输距离达50KM(0丢包)
- 较强的绕射能力和穿透能力
- 输出串口可选TTL、RS232、RS485

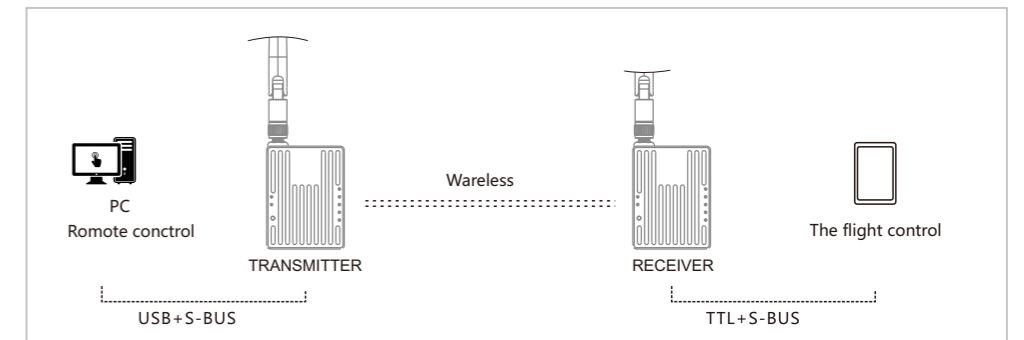
### Product Features

- Long remote control range
- Ultra low power consumption
- Real test range 50km( 0 packet loss)
- Strong anti-interference capability
- The output is optional TTL, RS232 and RS485 serial port

### 产品参数 Product Parameters

工作频率	Frequency	902-928MHZ
功率	Power	0.1~1W(adjustable)
波特率	Baud rate	9600-230400bps ( adjustable )
空中速率	Data rate	100k/200k ( adjustable )
工作电流	Operation current	500mA ( 12V power input )
供电电压	Power input	DC:7.4-24V
工业环境	Operational environment	-10°C~ +60°C ,Humidity 5-95%, RH
重量	Weight	43g
传输距离	Transmission range	5-60km ( Depend on the environment )
尺寸	Dimension	53mm ( L ) ×40mm ( W ) ×14mm ( H )
输入	Ground unit(Transmitter)	SBUS port*1; USB port*1
输出	Airborne unit(Receiver)	SBUS port*1; Serial port*1 (Serial port is full duplex serial port, TTL signal)

### 连接方式 Connection



# D03S DOUBLE LINK DATA TRANSMISSION

## 双链路数传

D03S双串口数传 针对行业的需求，开发了双行链路，可以同时进行两路数据的接收和发射，解决了行业内电台模块链路单一、无法兼顾的问题，简化了装机设备。除端口外的产品参数与D03电台相同。

D03S double serial data transmission according to the requirements of the industry, the development of the double line link, can two way data receiving and sending at the same time, solved the industry a single radio module link, cannot balance problem, simplify the installed equipment. In addition to the port of the product parameters are the same as the D03 radio station.

输入	Ground unit(Transmitter)	TTL port*2
输出	Airborne unit(Receiver)	TTL port*2



# D04 WIRELESS DATA&RC LINK

## 无线数传电台

D04无线连接数传 是一款位置可灵活架设并与电脑可无线连接，特别适用于测绘领域。可同时传输两路S-Bus信号和数传信号的数据链路传输设备。可将地面端原有的两路遥控器信号增强后连同数传信号一同发送给机载端。主要用于解决遥控器信号和数传信号传输距离近，传输质量低的问题。具有体积小，集成度高，灵敏度高等特点。D04工作在915MHZ频段，通信距离可达20-60KM。

D04 is a data transmission device wirelessly connected to the computer, which is particularly suitable for surveying and mapping. It can transmit two S-Bus signals and data signal simultaneously. It is mainly used to solve the problem of short transmission range and low transmission quality of remote control and data signals. Working in the 915MHZ frequency band, D04 the maximum communication distance can reach 30KM.



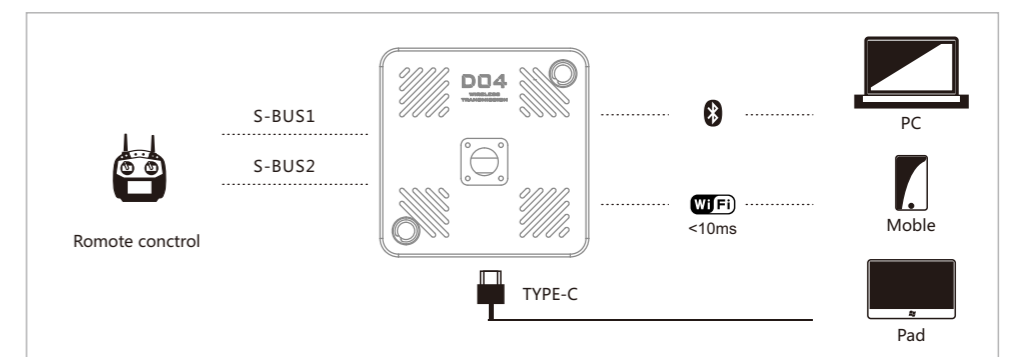
### 产品特点 Product Features

- 天线布置地点更灵活 Flexible layout
- 电脑与电台无线连接 Computer can be wirelessly connected to the ground unit
- 遥控器增程 Remote control range is extended
- 国内首创，无线自由布置电台 Wirelessly connected to the computer
- 50km传输距离（0丢包） 50km transmission range, 0 packet loss

### 产品参数 Product Parameters

工作频率	Frequency	840MHz/900MHz
功率	Power	0.1~1W(adjustable)
波特率	Baud rate	1200~230400bps(adjustable)
电池容量	Built-in battery(ground unit)	3000mAh(12V 18650 3S battery )
工作电流	Operation current	300mA
供电电压	Power supply	12.6V
续航时间	Duration	15h
工业环境	Operational temperature	-10°C- +60°C
网络类型	Wireless	WiFi+Bluetooth
重量	Weight	690g
外观尺寸	Dimension	113mm ( L ) ×113mm ( W ) ×44mm ( H )
WiFi距离	WiFi range	1-15M
连接方式	Connection	Type-C、WiFi

### 连接方式 Connection



搭配 R20数传接收机使用  
Match the R20 use



内置接收机  
RC receiver can be built-in

防水, 防雨  
Waterproof, Rain-proof

可配三脚架  
Tripod for installation

电量显示  
Battery status display

内置大电池  
Built-in large capacity battery



# D13 4G WIRELESS DATA LINK

## 4G 无线数传

D13 4G wireless data link is developed based on LTE, suitable for 4G of China Mobile, China Unicom, China Telecom and 3G of China Mobile, Unicom and 2G network standard. With transparent transmission, easy use with a 4G card, it is convenient for the user's operation. With high speed and low latency, D13 has two dial switches. Based on the dial switch status, the radio link can be switched in TTL, RS232, RS485, RS422. It is applicable to UAV, USV, firefighting robot, explosive disposal robot and other industrial applications.

### Product Features

- Transparent transmission
- 5 modes, 13 frequencies
- TTL/RS-to-4G
- High speed, low latency
- Socket link × 2
- FTP update
- FOTA update
- Passthrough cloud



4G  
TTL/RS232/485/422

- All netcom 全网通
- GSM WCDMA FDD-LTE
  - GSM TD-SCDMA TD-LTE
  - FDD-LTE

D13 4G无线数传是一款基于电信网络的远距离数据传输并及时响应的快速透传，适用于移动、联通、电信 4G 和移动、联通 3G 和 2G 网络制式。以“透传”作为功能核心，插卡即用，高度易用性，方便用户快速使用。具有高速率，低延时的特点。D13 带有两组拨码开关，根据拨码开关状态，电台可在TTL,RS232,RS485, RS422 4种输出输入线路快速切换。适用于无人机、无人船、消防机器人、排爆机器人等行业应用。

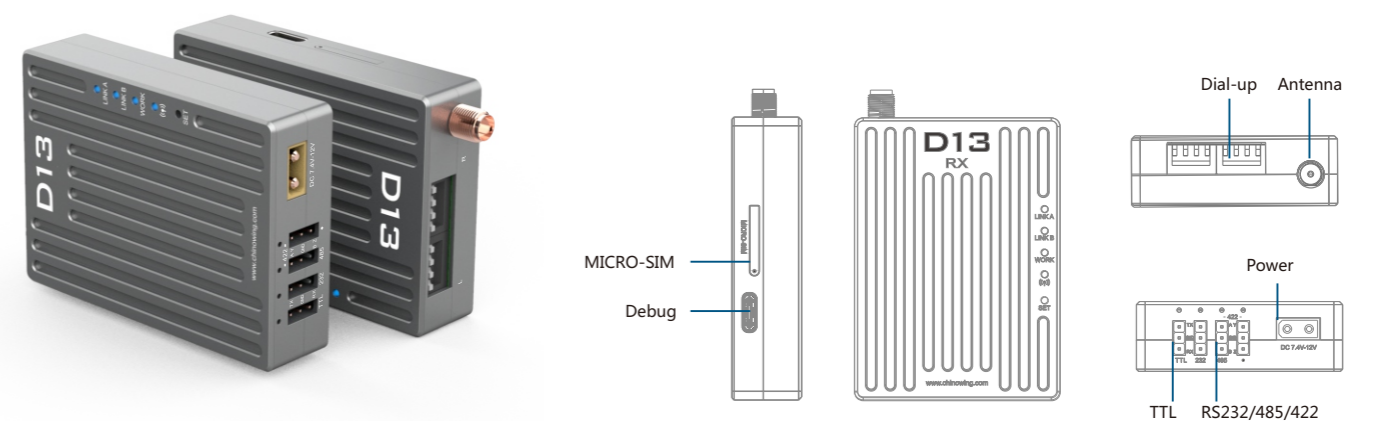
### 产品特点

- 及时响应快速透传
- 5模13频
- TTL/RS转4G
- 高速率低延时
- 2路Socket链接
- FTP他升级
- FOTA升级
- 支持透传云

### 产品参数 Product Parameters

网络制式	GSM	GSM WCDMA FDD-LTE GSM TD-SCDMA TD-LTE FDD-LTE	联通(4G 3G 2G) 移动(4G 3G 2G) 电信(4G)
功率	Power	+23DBM - +30DBM	NA
波特率	Baud rate	1200BPS-460.8KBPS	Adjustable
数据端口	Date ports	Two-way single data port	TTL,RS232,RS485,RS422
延时	Time delay	300MS	NA
供电电压	Voltage	7.4-12V	NA
工作电流	Operation current	100MA	12V
传输速率	Transmission rate	Depending on the network	Up:128kbps-50Mbps,Down384kbps-150Mbps
工业环境	Operational environment	-10-+60°C	Humidity 5-95%, RH
尺寸	Dimension	65mm (L) ×47mm (W) ×16mm (H)	
重量	Weight	52g	

### 连接方式 Connection



# V20 VIDEO&DATA&RC LINK

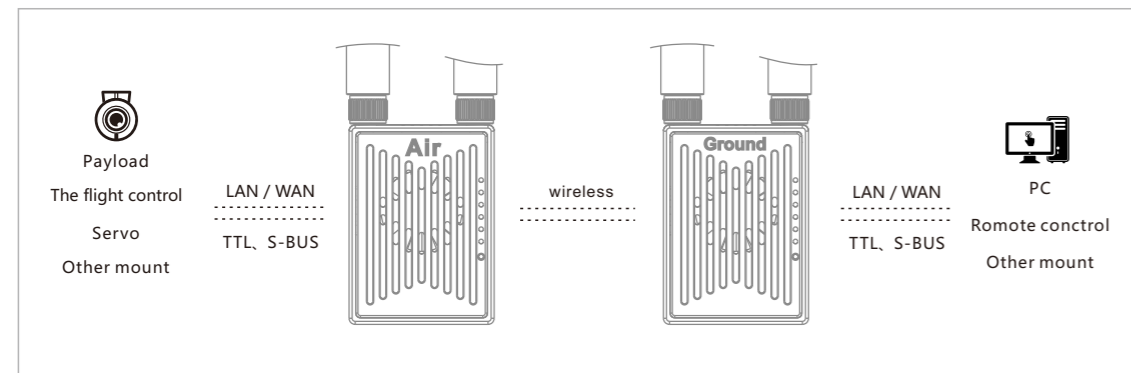
## 网络图传

V20 all-in-one module is 2X2MIMO wireless digital data link, with 10/100 Ethernet video transmission and serial gateway functions, and can transmit remote control, data and video signal simultaneously. Small size, high integration and high sensitivity.



### Product Features

- Adopt 2 X 2 MIMO wireless digital data link
- 10/100 Ethernet video link
- Serial gateway function
- Transmit video, data, remote control signal simultaneously
- Compact size, high integration, high sensitivity



V20图数控一体机采用2x2 MIMO无线数字数据链路，具有10/100以太网图传、串行网关功能，同时传输遥控器信号、数传信号、图像信号，体积小，集成度好，灵敏度高。

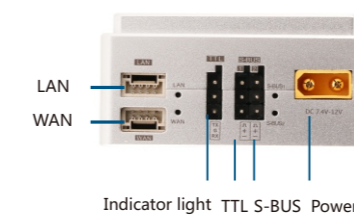
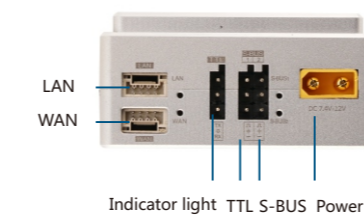
### 产品特点

- 采用2x2MIMO无线数字数据链路
- 10/100以太网图传
- 串行网关功能
- 同时传输遥控器信号、数传信号、图像信号
- 体积小，集成度好，灵敏度高



### 产品参数 Product Parameters

工作频率	Frequency	2.3G 2.4G 2.5G	2.304 - 2.390 GHZ 2.402 - 2.482 GHZ 2.500 - 2.570 GHZ
功率	Power	0.1-1W	Adjustable
传输距离	Transmission range	3-7KM	Depending on the network
S-BUS端口	S-BUS port	S-BUS*2	NA
串口数量	Port numbers	1Port	Full duplex, baud rate adjustable
延时	Time delay	10MS	NA
供电电压	Power input	7.4-24V	NA
工作宽带	ADSL	4MHZ,8MHZ	Options
视频输出/输入	Video output/input	LAN/WAN	NA
尺寸	Dimension	65mm ( L ) × 47mm ( W ) × 22mm ( H )	
网络协议	IP	TCP, UDP, TCP/IP, ARP, ICMP, DHCP, HTTP, HTTPS*, SSH*, SNMP, FTP, DNS	



# V21 VIDEO&DATA&RC LINK

## 数字网络图传



V21数字网络图传 具有多功能合一的图传，集成双SBUS，1路串口数据，1路网口，支持一对多组网，800MH、1.4G、2.4G三频自由切换，适应不同工况需求。LAN串口均为透明传输，用户可用于所有取代有限传输需求。内置web配置网页，方便易用。

V21 is an all in one link, adopting OFDM and MIMO technology. It can transmit 1 channel serial port data, 1 channel LAN port data and 2\*SBUS control signal. RF modules of 800M, 1.4G, 2.4G frequency bands are integrated into one product, the frequency can be modified in the software. Transparent transmission. With web configuration, V21 is of easy operation.

### 产品特点 Product Features

透明网络传输，可以传送图像，兼容所有网络协议；  
透明数据传输，支持TTL/RS232电平接口；  
双S-BUS输入输出，提供遥控增程，摆脱传统RC控制距离不足。

支持H264\H265视频编码格式输入  
带宽分配最高30M  
空口延时:从节点到主节点传输延时≤60ms；  
兼容所有网络协议。

支持800Mhz、1.4Ghz、2.4Ghz频段可选择；  
安全：模块接入鉴权，防止非法接入；  
支持用户自定义加密；  
通过频段扫描避开干扰；  
支持内跳频降低干扰影响；

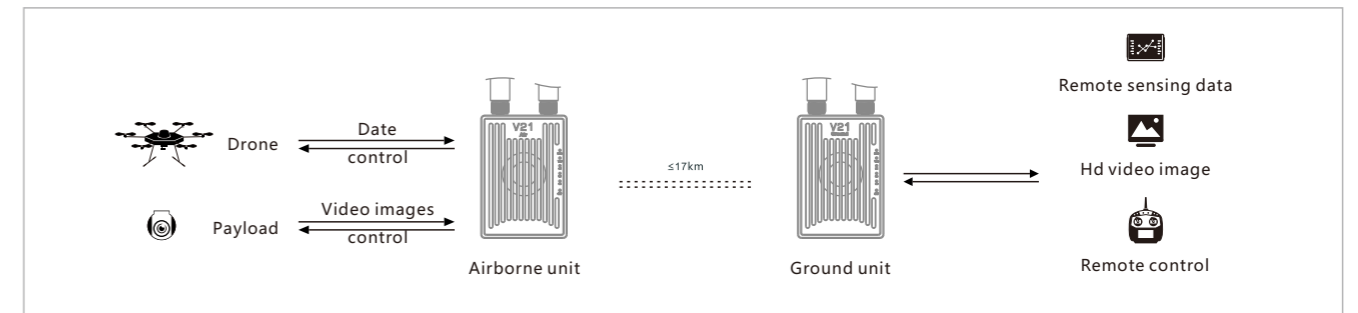
Transparent network transmission, able to transmit images, compatible with all network protocols;  
Transparent data transmission, support TTL/RS232 level;  
Double S-BUS input and output, remote extended range is extended.

Support H264 \265 input video encoding format.  
Bandwidth:30MHz max  
The transmission latency from the node to the center node <=60ms

Support 800MHz, 1.4GHz and 2.4GHz frequency band;  
Security: access authentication module, to prevent illegal access.  
Support user-defined encryption;  
By spectrum scanning avoid interference;  
Support in frequency hopping to reduce interference.

### 产品参数 Product Parameters

工作频率	Frequency	800MHz 1.4GHz 2.4GHz	806~826MHz 1427.9-1447.9MHz 2401.5-2481.5MHz
功率	Power	-40 - 25dbm	Adjustable
传输距离	Transmission range	17km	Depend on environment
S-BUS端口	S-BUS port	S-BUS*2	NA
串口数量	Serial port	1 port	Full duplex, baud rate adjustable
视频延时	Latency	< 300ms	Transmission from Tx to Rx
供电电压	Power supply voltage	7.4 - 24V	NA
工作电流	Operation current	180MA	12V power supply
工作带宽	Bandwidth	1.4 - 20M	1.4M, 3M, 5M, 10M, 20M
视频输入/输出	Video input/output	WAN LAN	Connecting IPC device/PC
供电接口	Power supply interface	XT30	
天线	Antenna	2-4dB rod antenna	
尺寸大小	Dimension	85mm(L)*55mm(W)*20mm(H)	
重量	Weight	100g(exclude antenna)	
工作温度	Operation temperature	-10~+50°C	



# E11 NETWORK PORT DOCKING STATIONS

## 网络端口扩展坞

E11网络端口扩展坞 为V21数字网络图传 扩增3路独立IP网络串口，2路网口数据传输。

### 3路网络串口，支持同时使用

3路网络串口，支持同时使用3路串口，电平信号接口分别为TTL、RS232、RS232。

### 支持两路图像同时输入

同时支持两路LAN口数据传输  
(支持TCP, UDP, Httpd Client, TCP Auto, WEB to Serial等工作模式)

E11 network port docking stations to deliver amplification V21 digital network diagram 3 independent IP network serial port road, road 2 LAN data transmission.E11 network port docking station expands. For V21 digital network image transmission. 3 independent IP network serial ports. 2 LAN ports for data transmission

### 3-way network serial ports, support simultaneous use

3-way network serial port, support to use 3-way serial port at the same time, the level signal interface is TTL, RS232, RS232.

### Support two-channel image input at the same time

Supports two LAN ports for data transmission at the same time  
(Support TCP, UDP, Httpd client, TCP Auto, WEB to Serial and other working modes)



# V40 MULTI FUNCTION VIDEO&DATA&RC LINK

## 多功能数字链路系统



V40 multi-function digital link system integrates a variety of video and data ports, including HDMI, AV, LAN video input interfaces, 3 serial ports(TTL&RS232&RS485), 2 S-BUS ports. As for the communication mode, V40 supports point to point, point to multi-point communication, the center node can communicate with any node, which greatly expands the application scenarios. Ground unit has built-in wifi module and LED display for understanding the working condition of the device in real time

### Product Features

#### Multi-function

Dual S-BUS ports  
3 serial ports, TTL&RS232&RS485  
Multiple HD video, HDMI/AV/SDI  
WiFi wireless transmission

#### 3 serial ports

3 independent serial ports, support working simultaneously  
Level signal interfaces are TTL, RS232 and RS485.  
(support for TCP, UDP, Httpd Client, TCP Auto, WEB to Serial working mode etc.)

#### Built-in battery

Built-in battery capacity of 6800 mAh  
Endurance: 10 h

#### LED display

Visually read the working state of the device

#### Built-in WIFI module

Hundreds of meters transmission range, the latency of video relay transmission < 40 ms, supporting data rate at 300Mbps Max  
Able to wirelessly connect any interface of the airborne unit

#### Support video input by HDMI and LAN at the same time

#### Support double S-BUS

Able to control drones and payload simultaneously

#### Support dual LAN port

Support 2 LAN ports can work simultaneously

V40多功能数字链路系统 将多种易用的功能结合，将繁琐的连接过程简化，极大方便了设备布置；集成HDMI、LAN、AV视频接口、3个串口、2个S-BUS口，Wifi无线中转传输功能，可以连接到机载端任何端口。增加led显示屏，实时了解机器工作情况。

### 产品特点

#### 多功能合一

集成双S-BUS  
3路串口数据,不同电平接口  
多路高清视频,HDMI/AV  
WiFi无线传输,300M宽带高速连接  
支持网络服务器推送

#### 3路串口,支持同时使用

3路独立串口,采用专业航空插座,支持同时工作,互不影响;  
电平信号接口分别为TTL、RS232、RS485。  
(支持TCP、UDP、Httpd Client、TCP Auto、WEB to Serial等工作模式)

#### 内置电池 超长待机

内置电池容量6800mAh  
最长工作时间 10h

#### LED显示屏

直观了解机器通讯状态

#### 内置WiFi热点功能

百米传输,视频中转传输延时低至40ms以下  
最大支持300Mbps  
可以无线连接机载端任意端口

#### 支持双S-BUS

可同时控制无人机和吊舱等挂载

#### 支持两路图像同时输入

同时支持LAN口和HDMI视频图像输入,  
可选SDI视频输入

#### 支持双路LAN口

两路LAN口可以同时工作



### 地面端参数 The ground side Parameters

工作频率	Frequency	800MHz : 806-826MHz 1.4GHz : 1427.9-1447.9MHz 2.4GHz: 2401.5-2481.5MHz
功率	Power	300mW-2W(adjustable)
传输距离	Transmission range	10km grade/30km grade
S-BUS端口	S-BUS port	2*S-BUS port
串口数量	Serial port	TTL*1 RS232*1 RS485*1
传输协议	Transfer protocol	Transparent transmission
Wifi	Wifi	Wifi*1
Wifi速率	Wifi data rate	144Mbps-300Mbps
工作带宽	Bandwidth	3M, 5M, 10M, 20M
视频输出	Video output	LAN*2
视频延时	Video latency	≤300MS
供电接口	Power supply	XT30 12V
充电接口	Charging interface	DC 12.6V
接口类型	Interface type	Aviation plug/GH1.25
电池容量	Battery capacity	6800mAh
工作电流	Working current	600mA (DC 12V)
续航时间	Endurance	10h with full capacity
天线	Antenna	2-4dB rod antenna
尺寸	Dimension	139mm(L)*139mm(W)*48mm(H)
重量	Weight	1045g(exclude antennas)

### 天空端参数 The air side Parameters

工作频率	Frequency	800MHz : 806-826MHz 1.4GHz : 1427.9-1447.9MHz 2.4GHz: 2401.5-2481.5MHz
功率	Power	300mW-2W(adjustable)
传输距离	Transmission range	10km grade/30km grade
S-BUS端口	S-BUS port	2*S-BUS port
串口数量	Serial port	TTL*1 RS232*1 RS485*1
视频输出	Video output	LAN*1, HDMI*1, CVBS*1 (LAN and HDMI ports can be used together; HDMI and CVBS can not be used together)
工作带宽	Bandwidth	3M, 5M, 10M, 20M
供电接口	Power supply port	XT30
供电电压	Power supply voltage	DC 12-24v
接口类型	Interface type	GH1.25
电池容量	Battery capacity	6800mAh
工作电流	Working current	470mA (DC 12V)
天线	Antenna	2-4dB rod antenna
尺寸	Dimension	117mm(L)*70mm(W)*30mm(H)
重量	Weight	236g(exclude antennas)

# 无人机系列产品

Unmanned aerial vehicle (uav) series products

华之翼科技深耕工业级无人机多年，已有十几款无人机上市。具有长航时、大载重和高稳定性等特点可满足各种行业对工业无人机的需求。

CHINOWING technology has been engaged in the industrial-grade unmanned aerial vehicle(uav) for many years. Long-endurance, heavy load and high stability can meet the demand of various industries.

## CP4-850

四旋翼  
FOUR-ROTOR VTOL

## CP6-1200

六旋翼  
SIX-ROTOR VTOL

## CP6-1550

六旋翼  
SIX-ROTOR VTOL

## X58

高空照明平台  
AERIAL LIGHTING PLATFORM

## CP-25

电动垂直起降固定翼无人机  
PURE ELECTRIC VERTICAL TAKE-OFF AND LANDING (VTOL) FIXED-WING UAV

## CP-50

电动垂直起降固定翼无人机  
PURE ELECTRIC VERTICAL TAKE-OFF AND LANDING (VTOL) FIXED-WING UAV

## CP-7

垂直起降固定翼无人机  
VERTICAL TAKE-OFF AND LANDING(VTOL) FIXED-WING UAV

## CP-15

垂直起降固定翼无人机  
VERTICAL TAKE-OFF AND LANDING(VTOL) FIXED-WING UAV

## CP4-850 四旋翼



轴距	850mm
最大起飞重量	9.3kg
标准载荷重量	2.5kg内
最大抗风能力	6级
最长留空时间	40min(空载)

## CP6-1200 六旋翼



轴距	1133mm
最大起飞重量	15kg
标准载荷重量	7kg内
最大抗风能力	5级
最长留空时间	60min(空载)

## CP6-1550 六旋翼



轴距	1550mm
最大起飞重量	25kg
标准载荷重量	2kg内
最大抗风能力	5级
最长留空时间	60min(空载)

# X58 AERIAL LIGHTING PLATFORM

## 高空照明平台



X58高空照明平台 采用无人机搭载照明设备，地面系留供电模式，实现长时间大范围照明。灯组最大功率720W，亮度高达108000lm，4000W发电机，稳定工作8小时，有效照明面积6500平方米。模块化设计，简洁人机交互，通过简单培训即可上手，多冗余设计，地面电源中断自动备降。

### 产品特点

- 持续驻空，亮如白昼，灯组最大功率720W，亮度高达108000lm，4000W发电机，稳定工作8小时，有效照明面积6500平方米
- 采用无人机搭载照明设备，地面系留供电模式，实现长时间大范围照明。智能力矩调节，自动收放线
- 模块化设计，简洁人机交互，通过简单培训即可上手，多冗余设计，地面电源中断自动备降
- 无需拆卸智能BMS电池管家
- 手拉180°旋转双开门机构
- 四组可旋转照射角度灯组（最大可调整角度45°）
- 一键视觉精准降落



X58 is a drone lighting system that allows long-term and large scale lighting via a tethered ground base station. The drone comes equipped with 4 lighting groups, while the ground station provides continuous power. The lighting groups have a maximum power of 720W and a maximum brightness of 108000LM. 4000W generator can enable stable operation for 8 hours. The effective lighting area can reach 6500 square meters. Multi-redundancy design, automatic landing in case of ground power interruption ensures the safety flight. Modular design, easy to learn.

### Product Features

- The lamp group has a maximum power of 720W and a brightness of 108000lm. The 4000W generator works stably for 8 hours, and the effective lighting area is 6500 square meters.
- The UAV is equipped with lighting equipment and ground tethered power supply mode, intelligent torque adjustment and automatic retraction and setting out, performs long-time and large-scale lighting
- Modular design, simple human-computer interaction, easy to start with simple training, multi redundancy design, automatic alternate landing when ground power supply is interrupted
- No need to disassemble the smart BMS battery
- Hand pull 180° rotary double doors
- Four groups of rotatable lamp (the maximum adjustable angle is 45°)
- One touch visual precision landing

### 产品参数 Product Parameters

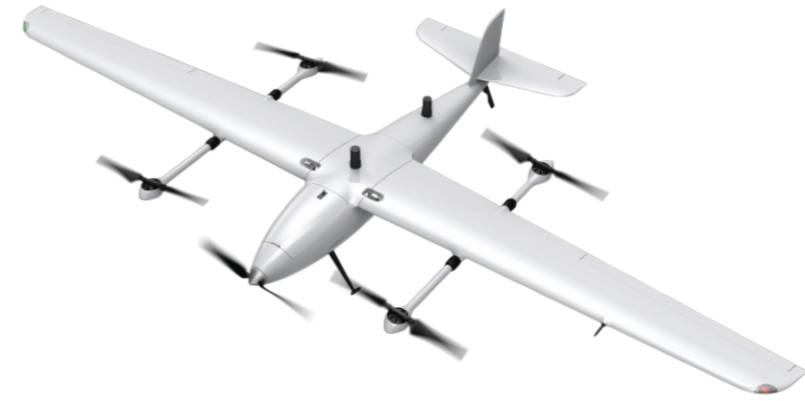
额定输入电压	Rated input voltage	200~240VAC
照明功率	Lighting power	720W
照明照度	Illuminating brightness	108000Lm
整机总功率	Overall power	4KW
发电机有效功率(推荐)	Generator effective power (recommended)	4KW
飞机最大功率	Aircraft maximum power	3KW
最大飞行高度	Maximum flight altitude	30m
起飞重量	Takeoff weight	3.8Kg
飞机备用电池容量	Aircraft backup battery capacity	2000mAh
飞机备用电池续航时间	Aircraft back up battery life	4 minutes@ full power; 3 minutes@60% power
最大灯光照射面积	Maximum lighting area	6500 m <sup>2</sup>
防水等级 (飞机)	Waterproof level (aircraft)	IPX3
防水等级 (机箱)	Waterproof level (base station) interface	IPX3
机箱内电源的电压(直流)	Power supply voltage in base station Power	400V
电机	Motor	4216KV370
桨叶	Propeller	1652(16" paddle blade)
螺旋桨轴距	Propeller wheelbase	610mm
整机可连续工作时间	Aircraft working time	Not less than 8 hours
整机外形尺寸 (mm)	Overall dimension (mm)	605*577*518
整机重量(Kg)	Net weight(kg)	26.8kg(aircraft 3.8Kg; base station 22.4Kg)



## CP-25 电动垂直起降固定翼无人机

CP-25是一款纯电动垂直起降固定翼无人机，立足于长航时，大载重，一机多用，满足多种应用场景。最大有效载荷10kg，最大飞行时间长达4小时，搭载6kg激光雷达飞行作业时间>2小时，满载10kg飞行90分钟。模块化设计，可实现快速部署。垂直起降、高速巡航，能够在移动平台和复杂环境下自主起降，适用更广泛。支持主流安防载荷（可见光，红外光）、测绘载荷（激光雷达、正射相机等）、物流载荷并可拓展多光谱、喊话器，气体检测等更多任务载荷，实现更多场景广泛应用。

标准起飞重量 <b>30 kg</b>	最大载荷重量 <b>10 kg</b>	经济巡航速度 <b>72 km/h</b>	最大飞行速度 <b>130km/h</b>	控制半径 <b>30km</b>	最大航时 <b>240 min</b> <small>(载荷:索尼A7RII相机-130min)</small>	最大航程 <b>280 km</b> <small>(载荷:索尼A7RII相机-160KM)</small>
最大爬升速度 <b>4 m/s</b>	最大下降速度 <b>5 m/s</b>	最大起飞海拔 <b>4000 m</b>	最大抗风能力 <b>6级</b>	工作环境温度 <b>-10~60 °C</b>	飞机尺寸 <b>4128*1927*749mm</b>	包装尺寸 <b>1580*660*760mm</b>



## CW-7 垂直起降固定翼无人机

CP-7是一款7KG级纯电动垂直起降固定翼无人机产品。针对测绘和巡防应用场景的特点，该款无人机开发初期立足长航时、大航程需求，气动控制上优化细节，动力系统上精益求精，最终达到了160分钟超长航时、190KM超远航程。通过模块化设计，实现现场1分钟快速部署，使用户获得更好的作业体验。独立的载荷仓设计，快速更换，用户可根据作业需求灵活选择载荷。

标准起飞重量 <b>7.0 kg</b>	最大载荷重量 <b>1.0 kg</b>	经济巡航速度 <b>70 km/h</b>	最大飞行速度 <b>100 km/h</b>	控制半径 <b>15 km</b>	航时 <b>130~160 min</b> <small>(载荷:索尼A7RII相机-130min)</small>	航程 <b>160~190 km</b> <small>(载荷:索尼A7RII相机-160KM)</small>
最大爬升速度 <b>4 m/s</b>	最大下降速度 <b>5 m/s</b>	最大起飞海拔 <b>4000 m</b>	最大抗风能力 <b>6级</b>	工作环境温度 <b>-10~60 °C</b>	飞机尺寸 <b>2400*1150*300 mm</b>	包装尺寸 <b>1150*400*350 mm</b>



## CP-50 电动垂直起降固定翼无人机

CP-50是一款纯电动垂直起降固定翼无人机，采用四旋翼加固定翼的复合气动布局，融合了旋翼的垂直起降和固定翼远航程的优点，机动、灵活，可以适应各种复杂起降条件。双发尾推动力设计，主副双载荷设计，电动使用方便，安静无污染，同时满足高原飞行。


标准起飞重量 <b>50 kg</b>	最大载荷重量 <b>15 kg</b>	经济巡航速度 <b>82 km/h</b>	最大飞行速度 <b>120km/h</b>	控制半径 <b>50km</b>	最大航时 <b>270 min</b> <small>(载荷:索尼A7RII相机-130min)</small>	最大航程 <b>350 km</b> <small>(载荷:索尼A7RII相机-160KM)</small>
最大爬升速度 <b>6 m/s</b>	最大下降速度 <b>5 m/s</b>	最大起飞海拔 <b>4200m</b>	最大抗风能力 <b>7级</b>	工作环境温度 <b>-10~60 °C</b>	飞机尺寸 <b>4800*2580*850mm</b>	包装尺寸 <b>5000*880*900mm</b>



## CW-15 垂直起降固定翼无人机

CP-15（安防版）是一款15KG级纯电动垂直起降固定翼无人机产品，采用四旋翼加固定翼的复合气动布局，融合了旋翼的垂直起降和超远航程的优点，机动、灵活，可以适应各种复杂起降条件。适配高精度机械增30倍变焦单光、双光、三光吊舱系统，创新的吊舱专属触控终端，降低了对移动目标锁定扣追踪的操控难度，在巡查追踪应用中可高效地完成作业任务。

标准起飞重量 <b>15.0 kg</b>	最大载荷重量 <b>3.0 kg</b>	经济巡航速度 <b>75 km/h</b>	最大飞行速度 <b>100 km/h</b>	控制半径 <b>30 km</b>	最大航时 <b>203 min</b>	最大航程 <b>265 km</b>
最大爬升速度 <b>4 m/s</b>	最大下降速度 <b>5 m/s</b>	最大起飞海拔 <b>4000 m</b>	最大抗风能力 <b>6级</b>	工作环境温度 <b>-10~60 °C</b>	飞机尺寸 <b>3378*1500*500 mm</b>	包装尺寸 <b>1350*600*450 mm</b>



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