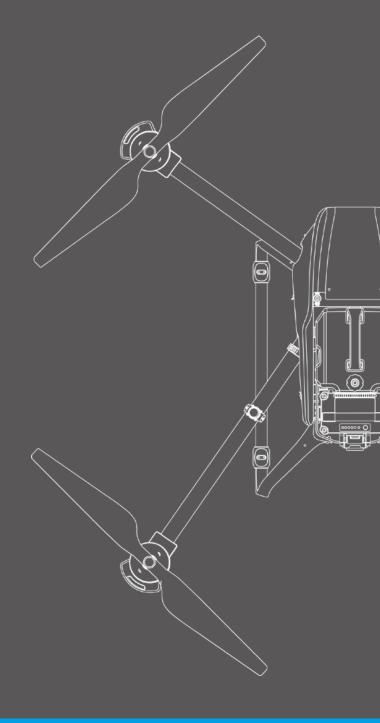
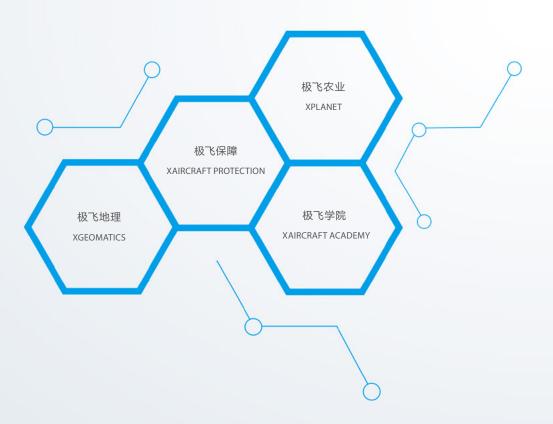
XAIRCRAFT // Fly The Best. 极飞科技

创造技术价值 服务生产生活





ABOUT XAIRCRAFT 关于极飞科技



发展历程 HISTORY



极飞优势
COMPETITIVE ADVANTAGE



核心产品 CORE PRODUCTS



极飞保障
XAIRCRAFT PROTECTION



极飞学院 XAIRCRAFT ACADEMY



极飞农业



极飞地理 XGEOMATICS

极飞科技成立于 2007 年, 是国内最早研发和制造民用无人机的企业之一。极飞一直秉承着"用技术改善生活、生产方式"的理念, 探索在无人机应用的前沿阵地, 在农业、地理信息和物流等领域, 拥有卓越的品牌影响力和口碑。

创造技术价值,服务生产生活,是极飞科技的使命。为行业用户提供安全、可靠的无人机产品和为大众提供专业无人机服务是极飞科技的战略目标。极飞科技研发中心位于广州,拥有 200 多名核心研发人员。

极飞农业与极飞地理是极飞科技的全资子公司。极飞农业于 2013 年正式成立,为政府、农场、农户提供规模化的专业无人机植保服务,推动中国农业航空和农业机械化发展,为行业培养更多优秀人才,进而让人们的餐桌更安全。极飞地理于 2016 年 10 月正式成立,致力于成为国内专业的地理信息服务提供商,让高精度的地理信息在农村创造更多价值。

Founded in 2007, XAIRCRAFT is one of the world's leading companies for Unmanned Aerial System (UAS) design, development and manufacturing, mostly focusing on the applications of agriculture, geomatics and low altitude aerial logistics. Connecting Life with Technology is XAIRCRAFT's ongoing mission. With over 200 developers in Guangzhou R&D center, and more than 800 service staffs across the country, XAIRCRAFT aims to provide professional UAS management and operation services, ultimately improves the efficiency and productivity of crop protection, geographic survey and related applications.

HISTORY 发展历程

2007

极飞科技成立,专注于机器人控制系统研发

Founded and started developing Robotic Control System



2010

极飞第一代里程碑产品 X650 四轴飞行器问 世,四旋翼飞行器行业占有率高达 70%

Launched the first iconic Quadcopter - X650

2012

开始无人机行业应用的探索

Started to explore UAV industrial applications

2013

开始农业方面的探索,在新疆做棉花的药物 喷洒实验

Began to implement UAV crop-dusting experiment in Xinjiang







HISTORY 发展历程

2015 04

第一代 P20 植保无人机系统发布, 正式布局农业

Launched 1st Gen. P20 Crop Protection UAS, and marked XAIRCRAFT formally marching into agricultural UAV applications



2016 01

SUPERX2 农业无人机飞行控制系统发布

Launched SUPERX2 Agricultural UAV Flight Control System

2016 04

发布 P20 V2 植保无人机系统, GNSS RTK 高精度飞行与变量喷洒技术刷新行业

Launched P20 V2, first in the industry utilizing GNSS RTK and variable-rate spraying technology

2016 10

发布全新 P20 2017 款植保无人机系统

成立极飞地理、极飞学院

发布 SUPERX2 RTK 农业无人机飞行控制系统

Launched P20 2017

Founded XGEOMATICS and XAIRCRAFT ACADEMY

Launched SUPERX2 RTK Agricultural UAV Flight Control System





OUR COMPETITIVE ADVANTAGE 我们的优势



技术优势

LEADING TECHNOLOGY

极飞自 2007 年开始研发机器人控制系统和多旋翼飞行器技术,积累了大量飞控系统的研发经验。目前,极飞的核心研发人员达到 200 多名,拥有行业内最高效、最智能的飞行控制系统以及核心部件的研发能力。

XAIRCRAFT has been focusing on the R&D of Robotic Control System and Multirotor for more than 9 years, gave us the ability to design and develop the most intelligent and precise UAS for industrial applications.



制造优势

ADVANCED MANUFACTURING

极飞的制造中心位于东莞松山湖科技产业园区,负责极飞所有无人机产品的生产、组装和维修。极飞用民用航空器的标准来规范无人机的生产制造,对所有产品和部件实行追溯管理、跟踪维养。

Manufacturing Plant of XAIRCRAFT is responsible for UAV manufacturing, assembling, repairing and maintenance. It provides high level traceability management for all products and components, aligning UAV manufacturing standards with those for civil aircrafts.



OUR COMPETITIVE ADVANTAGE 我们的优势



生态优势

STRATEGIC DEVELOPMENT

极飞建立极飞保障服务体系和极飞学院,促进无人机植保行业的健康发展。极飞保障是为保障植保无人机高效作业,解决用户在植保无人机操作过程中遇到的各类问题而推出的服务体系,包括设备保养、硬件维修、一站式技术支持、保险和无忧计划。极飞学院提供互联网线上学习和线下实操的培训和考试,服务于广大社会公众、合作伙伴及极飞员工,为行业培养优秀无人机操作人员。

AIRCRAFT has its own educational organization and insurance entity

XAIRCRAFT ACADEMY is a non-profit training organization established to train professional UAS operators for th industry, including online and offline training. XAIRCRAFT Protection Plan provides user with equipment repairing & maintenance, battery charging, one-stop expert technical support, liability insurance and additional hardwar coverage.



XPLANET™ P20 2017 CROP PROTECTION UAS 极飞农业 P20 2017 款植保无人机系统



P20 2017 款植保无人机 P20 2017 Crop Protection UAV GNSS RTK Handheld Mapper

GNSS RTK 手持测绘器



GNSS RTK 移动基站 **GNSS RTK Portable** Base Station



GNSS RTK 固定基站 **GNSS RTK Fixed Base** Station



A2 智能手持终端 A2 Pilot Phone



智能电池 Smart Battery



药箱 **Chemical Container**



智能灌药机 Automatic Chemical Refiller



运营管理系统 XFIS Operation Management System



监控管理系统 XFIS Monitoring System

引领精准农业

CUTTING-EDGE PRECISION FARMING

P20 2017 款植保无人机系统是极飞发布的全新无人机植保解决方案。该系统采用了新一代 SUPERX2 RTK 飞行控制系统, 搭载更精准的 GNSS RTK 定位模块和喷洒系统, 以及高度优化的 机身结构和全新动力, 让无人机植保更精准、更智能、更高效。

P20 2017, a revolutionary crop protection UAS, integrating brand new agricultural flight controller SUPERX2 RTK, GNSS RTK positioning module, intelligent spraying system, highly optimized airframe structure and redesigned propulsion system, aims to provide preciser, smarter and more efficient crop protection operations.





精准喷洒

RTK 技术让航线飞行精度达到厘米级; 变量喷洒技术 确保亩用量恒定, 增加单位载药量的喷洒面积

PRECISION SPRAYING

Centimeter-level GNSS RTK Positioning and variable-rate





平台化管理

MANAGEMENT SYSTEM

强大的管理平台让植保更高效, 让飞行更安全

XFIS ensures efficient and safe operations



高效作业 EFFICIENCY 80 亩 / 小时, 每亩喷洒药量达 800 毫升 13.2 acre/hour 800 ml/min.



安全可靠 SAFETY & RELIABILITY 工业设计和制造工艺适应严苛的农田环境

Multiple redundant design and advanced manufactory

PRECISION SPRAYING

精准喷洒



更小载药量, 更大喷洒面积

Smaller in Size Larger Operation Area



变量喷洒保证亩用量恒定

Precision Variable-rate Spraying



高速离心喷头让农药雾滴均匀地喷洒在农作物表面

Ultralow Volume Spraying System Droplet Size ≤ 100 µm



GNSS RTK 定位模块使 飞行航线精度达到厘米级

Centimeter-level GNSS RTK Positioning



高精度仿地飞行, 误差低于 10 厘米

High Accuracy Terrain Tracing Variable ≤ 10 cm

- 采用 GNSS RTK (载波相位差分技术) 让航线飞行精度达厘米级, 为精准喷洒提供飞行条件, 并能精准避障:
- 通过变量喷洒技术, 精准控制喷头流量, 实现亩用药量恒定, 让药剂能均匀喷洒到农田;
- 自主研发的高速离心雾化喷头,可将高浓度的农药雾化为 100 微米以下的小颗粒。螺旋桨旋转产生的下压气流,让药粒均匀地附着到农作物叶片的正反面和茎部。超低容量喷雾方式提高农药利用效率,减少农药的使用;
- 新一代超声波为飞行提供误差低于 10 厘米的高度信息,实现高精度仿地飞行,防止药液漂移。

- Real-time Kinematic (RTK) Technology, commonly referred to as Carrier-Phase Enhancement or CPGPS, providing up to centimeter-level accuracy and obstacle avoidance function, ensures presicion spraying.
- Brand new Intelligent Spraying System enables preciser variable-rate spraying control, compensating chemical
 usage with crop's growing status, substantially increasing chemical deposition on target crops and reduce offtarget losses.
- Rotary Atomizing Nozzles made ultralow volume spraying possible, project droplets less than 100μm, further reduce the use of pesticides and fertilizers.
- Upgraded Ultrasonic Positioning module improves terrain tracing ability with vertical accuracy less than 10cm.

EFFICIENCY 高效作业

自主飞行



一控多机,夜间飞行 Swarm Operation & Night Operation 最大负荷 10 升



最大载荷 10 升 10 L Capacity 80亩/小时



每小时作业量可达 80 亩 13.2 acre/hour Spraying Efficiency 800毫升/亩



适合多种药剂混合喷洒 800 ml/min Flow Rate Supports Mixed Chemical 5 秒快速换装



竖向插拔,便于快速换装模块 Ouick Reload in 5 sec

- 全新的 SUPERX2 RTK 飞行控制系统,可根据预先测绘的航线与设置的飞行参数,实现全程自主飞行, 无需遥杆操作;
- 一控多机技术可以有效降低人员成本,提高作业效率;
- 夜间飞行功能,可以在农忙时节更有效利用时间,完成更大面积的作业;
- 可根据实际作业选配多种规格的药箱,每小时作业量可达80亩,作业效率是人工的60-80倍;
- 每亩最大喷洒药量达到 800 毫升, 适合多种药剂混合喷洒, 提升效率;
- 机体模块化设计, 药箱、电池竖向插拔, 便于快速换装。

- The New SUPERX2 RTK Flight Controller supports fully autonomous flight mode. Spraying routes will be automatically generated by pre-surveyed field.
- Swarm operation reduces labors, night operation doubles working hours.
- Chemical Container capacity options 6 L, 8 L and 10 L.
- Max Spraying Efficiency: 13.2 acre/hour (60-80 times more efficient than hand spraying)
- Max Spraying Flow Rate: 800 ml/min (mixed chemical supported)
- Modular designed airframe structure.
- Reload battery and chemical container in 5 seconds.

MANAGEMENT SYSTEM 平台化管理

运营管理系统 XFIS Operation Management System

调度人员协同作业,高效管理无人机及相关设备,实现团队、设备的高效运转,从而降低运营成本,提高植保效率。

XFIS Operation Management System allows operators to work together and efficiently manage UAVs and related equipment, thereby reducing operating costs and improving crop protection efficiency.

监控管理系统 XFIS Monitoring System

让用户实时查看作业进展、成果、团队与无人机设备的分布情况。支持电子围栏(如军事区、机场等禁飞区),让飞行更安全。

XFIS Monitoring System allows users to view real-time operation progress, results, and locations of crew members, UAVs and related equipment. It also supports electronic fencing (such as military zones, airports and other no-fly zones).



团队协同

Cooperative Operation



绩效管理

Performance Management



实时监控

Real-time Monitoring



保障飞行安全

Flight Safety Control

SAFETY & RELIABILITY 安全可靠

- 采用多种复合材料, 高强度机身, 结实耐用;
- 智能电池采用铝合金外壳,内嵌纤维面板,铝合金包裹电芯,可有效抵御各种冲击;防摔防尘,能适应各种恶劣作业环境;
- 智能电池管理系统能自主对电芯进行均衡管理和诊断分析, 大幅度提高循环寿命至 300 次以上;
- 药箱插拔式设计实现人药分离,保障工作人员作业安全,防止农药中毒;
- 自主设计的离心雾化喷头防堵塞, 适合多种农药剂型;
- 离心喷头电机的药液分离设计, 喷头寿命提高至 3000 亩。
- The use of multiple composite materials highly strengthens the airframe structure.
- Smart Battery adopts industrial grade aluminum alloy case and cell cover, embedded with carbon fiber plate, which are helpful when brace for impact. The battery offers IP33 dustproof and waterproof.
- Intelligent Battery Management System (BMS) arms the battery with automatic self-balancing and self-diagnosis functions, which significantly increases the battery cycles over 300.
- Chemical container designed to separate operator from toxic chemicals, preventing poisoning.
- Rotary atomization nozzle significantly reduces chances of chemical jamming, increases nozzle lifetime over 500 acres.



强化机身,结实耐用

Strengthened Airframe



智能电池耐热耐冷、防摔防尘

Temperature-adaptive, Shockproof and Dustproof Smart Battery



充放电管理, 电池循环使用寿命高达 300 次

300 Battery Cycles



离心喷头防堵塞,适合多种剂型的农药

Anti-Jam Rotary Atomization Nozzle



离心喷头寿命达到 3000 亩

500 acres Nozzle Lifetime

SUPERX2 RTK AGRICULTURAL UAV FLIGHT CONTROL SYSTEM SUPERX2 RTK 农业无人机飞行控制系统

全新 SUPERX2 RTK 飞控结合 GNSS RTK 定位技术和航线避障功能,实现厘米级高精度,稳定飞行,双链路传输技术满足远程实时监控需求,扫边功能确保不漏喷一寸农田,让农业无人机更精准、更智能、更高效。

The New SUPERX2 RTK Agricultural UAV Flight Control System builds upon the reliability of SUPERX2 and adds GNSS RTK positioning technology and automatic obstacle avoidance functions. Centimeter-level GNSS RTK positioning ensures flight stability. Dual-link communication technology provides remote monitoring. Full coverage function supports automatic field side sweeping.



SUPERX2 飞行控制器 SUPERX2 Flight Controller



GNSS RTK 模块 GNSS RTK Positioning Module



XLINK 数据链路模块 XLINK Data Link Module



A2 智能手持终端 A2 Pilot Phone



流量计 Flowmeter



喷洒控制器 Spray Controller



超声波模块 Ultrasonic Module



GNSS RTK 手持测绘器 GNSS RTK Handheld Mapper



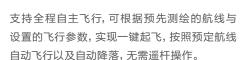
GNSS RTK 移动基站 GNSS RTK Portable Base Station



GNSS RTK 固定基站 GNSS RTK Fixed Base Station

白主飞行

Autonomous Flight



SUPERX2 RTK supports fully autonomous flight controlling, one-click takeoff and automatic landing.



精准喷洒

Precision Spraying

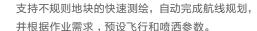
针对不同作物和作业环境,设定飞行速度和喷洒流量,确保精准喷洒,亩用量恒定,并支持避障停喷、断点续喷。

Spray control modules enable preciser variable-rate spraying control, smarter speed-flow compensation, obstacle pause and breakpoint resume functions.



智能规划

Intelligent Planning



By using GNSS RTK mapping tools, users are able to fast and accurately mark field boundaries. Then the spraying routes will be generated automatically.



Safe & Reliable



采用工业级元器件、传感器, 耐极端环境。支持 热插拔、宽电压输入, 内置 UPS 断电记忆。多 项冗余设计, 确保系统安全、稳定飞行。

SUPERX2 RTK adopts industrial grade components and sensors. Its multiple redundant design ensures system to be safe and reliable.

RTK 高精度定位

High-precision GNSS RTK Positioning

GNSS RTK 定位技术为农田测绘、无人机飞行 提供厘米级的高精度定位,同时具有强大的抗 磁干扰能力,保障无人机在高压线、矿区等强磁 干扰环境下也能稳定飞行。

High-precision GNSS RTK positioning technology provides centimeter-level positioning and stronger resistance to magnetic interference.

航线避障

Obstacle Avoidance

提供基于 GNSS RTK 精准定位的航线避障功能,可在测绘阶段标识出障碍物,并自动生成避障航线,保证飞行安全。

Based on GNSS RTK technology's centimeter-level accuracy, user pre-mark obstacles on the map, then the system will generate the optimized flight routes automatically.

双链路传输

Dual-link Communicating

无人机、A2智能手持终端与云端信息相互连通, 在为大片农田进行超视距作业时,A2能与云端 通讯,实时查看飞行器的飞行和喷洒参数,实现 远程监控。

A2 PilotPhone and XLINK module are allowed to communicate with cloud, synchronizing flight and spraying information, supporting agricultural UAV to be operated beyond the line of sight.

农田扫边

Full Coverage

无需人工补喷。

针对形状复杂的农田边界,提供基于 GNSS RTK 精准定位的自动扫边功能,保证作业效果,

Full Coverage function supports automatic field side sweeping in complex shaped field. User does not need to spray field sides manually.





极飞保障是极飞为保障植保无人机高效作业,解决用户在植保无人机操作过程中遇到的各类问题而推出的服务体系,包括设备保养、硬件维修、一站式技术支持、责任保险和无忧计划。

XAIRCRAFT Protection Plan provides equipment repairing & maintenance, battery charging, one-stop expert technical support, liability insurance and additional hardware coverage.





极飞保障中心 XAIRCRAFT Support Center



Repairing, maintenance and battery charging

2017年,极飞计划在全国建立50个保障中心,用户可通过运营管理系统查询距离最近的保障中心,获得保障服务。



极飞保障车 XAIRCRAFT Support Vehicle

故障排查、设备维修保养

Troubleshooting, repairing and maintenance

农忙时节,保障车分布在极飞植保无人机主要作业区域的 100公里范围内,提供 48小时及时响应服务。用户可拨打服务热线查询保障车位置,也可通过运营管理系统查询。

注: 主要作业区域指半径 100 公里范围内有超过 10 台极飞植保无人机的作业区域。



极飞技术专家 XAIRCRAFT Support Team

一站式技术支持

One-stop expert technical support

用户在无人机操作过程中,若遇到任何软硬件问题,或需要故障咨询,都可以拨打400-980-3131专家服务热线,获得及时的服务支持。



责任保险 Liability Insurance

极飞为购买、租赁植保无人机的用户提供责任保险和维修保障。每台极飞植保无人机都免费享有 1年的责任保险,在一定限额内保障被保险人使用或操控植保无人机过程中发生意外事故,致使 第三者遭受人身伤亡或财产损失,依照法律应由被保险人承担的赔偿责任。



硬件增值保障服务 Additional Hardware Coverage

极飞为用户提供有偿的硬件维修及更换服务。用户在使用或操控植保无人机设备的过程中,由于操作失误或其他意外原因而导致的硬件损失与毁坏(人为故意、自然灾害及其他不可抗力因素等情形除外),均可在保障期内享受不限次数的维修、更换服务,直至维修保障金用尽为止。

注,硬件保修范围是除奖、与农药直接接触部件(如管道、药箱、喷头、喷盘等)以外的硬件。



极飞学院是极飞科技为培养行业优秀无人机操作人员而设立的培训机构。服务于广大社会公众、合作伙伴及极飞员工。极飞学院提供互联网线上理论和线下操作两方面的培训和考试,学员通过线上学习和考核后获得线下操作培训资格,通过线下操作培训和考核后获得植保无人机操作许可证。

XAIRCRAFT Academy, also abbreviated as XAA, is a non-profit training organization established to train professional UAS operators for the industry. Curriculum from XAA consists of online theoretical study (Course A) and offline practical training (Course B). Student in XAA will be granted UAV Operator Certificate by passing both Courses A and B.



科目 A (理论,在线学习考试)

Course A (Online, Theoretical)



课程介绍

植保无人机基础、无人机操作入门、无人机运营管理、植保专业知识

通过要求

学员修满全部课程后方可参加考试,满分为 100 分,90 分合格。考试不合格的学员需重修相应课程后方可再次免费参加考试,直至考试合格后才可进入下一科目学习。







无人机操作入门



无人机运营管理



植保专业知识

科目B(实操,线下培训考试)

Course B (Offline, Practical)



课程介绍

RTK基站架设、农田测绘、植保无人机作业、智能电池使用与管理、配药操作、设备保养与维护

通过要求

植保无人机操作员:学员实操培训满 200 亩后即可参加考试,考试不通过的学员增加实操培训后可免费补考一次,每名学员最多有两次线下考试机会。学员线下考试合格后,极飞为其颁发《植保无人机操作许可证》,开放作业权限,成为极飞植保无人机操作员。

植保无人机教员:学员需在极飞直属培训中心实操培训满500亩后,方可参加考试,考试不通过的学员增加实操培训后可免费补考一次,每名学员最多有两次线下考试机会。学员线下考试合格后,极飞为其颁发《植保无人机教员证》,开放教学及作业权限,成为极飞植保无人机教员。



RTK 基站架设与农田测绘



植保无人机作业



智能电池使用与管理



配药操作



设备保养与维护



为政府、农场、农户提供规模化的专业无人机植保服务,推动中国农业航空和农业机械化发展,为行业培养更多优秀人才,进而让人们的餐桌更安全。

Established in 2013, XPLANET provides professional agricultural UAV services directly to farmers and to bring up more talents to the industry.



XPLANET™ CROP PROTECTION SERVICES 极飞农业植保服务

2016年,极飞农业服务人员超过800人,是国内最大的无人机植保服务商,具备在全国范围内跨区域调度作业能力。 完善的培训和服务体系,保障服务人员为农户提供优质、高效、经济的无人机植保服务。农户可通过服务电话、支付 宝App"极飞农业"服务窗或者农村淘宝,预约服务团队上门作业。

XAIRCRAFT recruits its own service team to provide farmers high-quality and cost-effective crop protection services. We have the ability to manage service teams across the country and have comprehensive training and service systems.

目前,极飞已在全国14个省份完成了超过20种作物的喷洒验证和植保作业,包括棉花、玉米、小麦、水稻、豆类、辣椒、西红柿、甜菜、打瓜、葫芦瓜、向日葵、油菜等。

XAIRCRAFT has proved the UAV crop protection feasibility for more than 20 species of crops, such as cotton, corn, wheat, rice, legumes (incl. soybean, black bean, rice bean, mung, pea, etc.), chili, tomato, beet, watermelon, gourd, sunflower, canola, etc.







■ 优质 HIGH-QUALITY ■ 高效 EFFICIENT ■ 经济 ECONOMICAL





集成无人机技术、地理信息技术和遥感技术,让高精度的地理信息为农业创造更多价值。

XGEOMATICS, combining unmanned aerial technologies with remote sensing and geographic information, aims to bring location-based services to a whole new level.



XGEOMATICS™ GEOGRAPHIC INFORMATION SERVICES 极飞地理信息服务

极飞地理于 2016 年 10 月正式成立, 致力于成为国内一流的地理信息服务提供商。通过无人机技术和标准化的测绘作业流程, 在全国范围内采集地理信息, 为农田勘测、农村导航和无人机精准飞行等提供高精度的定位支持。将无人机技术与遥感数据、气象数据相结合, 提供农田种植信息、预测农田病虫害情况、实时播报区域天气等方面的精准服务, 为农田管理提供辅助决策支持。



XAIRCRAFT®







品 服务热线: 400 980 3131

■ 官方网站: www.xaircraft.com

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