GDU

Professional UAV Pioneer

S400E

FLAGSHIP WORKPIECE, BORN FOR HIGH INDUSTRIAL EFFICIENCY



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Millimeter-wave Sensing for Enhanced Obstacle Avoidance, Both Day and Night

Safe RTH with Superior Anti-Interference Capacities

Cross-obstacle Communication via Multi-UAV Relay Networking

Professional-grade Performance in a Compact and Backpack-Friendly Design

Tailored to Your Needs with Powerful Payload Capabilities

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Flagship Model Engineered for Maximum Industrial Efficiency



S400E

The S400E is a lightweight industrial-grade flagship UAV from GDU, designed with groundbreaking advancements in stability, autonomy, and intelligence. Equipped with industry-leading BVLOS (Beyond Visual Line of Sight) networking technology, it enables seamless, intelligent interconnection between multiple UAVs and control devices, significantly enhancing operational efficiency.

With a frame crafted from high-strength magnesium alloy, its foldable body ensures exceptional safety, stability, and portability. Advanced millimeter-wave radar combined with an integrated binocular sensing system provides comprehensive, omnidirectional obstacle avoidance. The onboard AI edge computing module delivers unparalleled precision, automation, and visualization capabilities for inspection operations.

Millimeter-Wave Sensing for Enhanced Obstacle Avoidance, Day and Night

The pioneering “Visual + Millimeter-Wave Radar” dual-fusion obstacle avoidance system offers an impressive detection range of up to 80 m. It accurately detects small obstacles, such as high-voltage lines, overcoming the challenges of nighttime obstacle detection. This breakthrough enables 24-hour omnidirectional environmental awareness, ensuring safe operations even in the most complex scenarios.

80 m
Sensitive Obstacle Avoidance

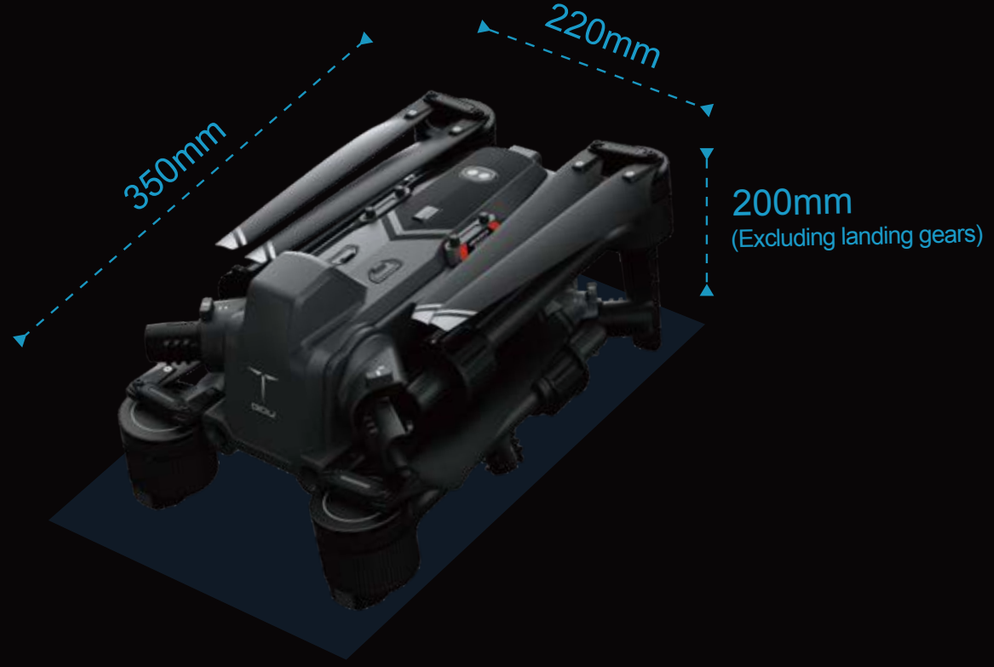
15 km
HD Image Transmission

Professional Performance, Effortless Portability

With a super-large 3 kg payload capacity, the S400 meets the demands of diverse professional industries, supporting tasks such as power-line inspection and public safety through versatile payload configurations. When folded, it easily fits into a backpack, striking the perfect balance between professional-grade performance and field mobility.

Lightweight

Portable



Safe RTH with Superior Anti-Interference Capacities

Even in environments with satellite and data link interference, the visual positioning fusion navigation algorithm, paired with frequency-hopping image transmission technology, ensures a safe RTH.



Multi-UAV Connectivity and Cross-Obstacle Communication

Leveraging the “one-for-two/two-for-one/star-networking” technology, the S400E enables seamless multi-UAV relay networking, effectively overcoming traditional control radius limitations. Capable of penetrating building obstructions and navigating mountainous terrain, it ensures stable communication even in areas without network coverage, greatly enhancing operational flexibility in complex environments.

PWG01
Penta Smart Camera Gimbal

All-Weather Integrated Flagship Gimbal

This solution integrates five advanced modules: a 1/0.98-inch wide camera, a 34x continuous optical zoom camera, a 1K infrared thermal imager, a laser rangefinder, and a near-infrared (NIR) auxiliary light. Powered by 10.4T of AI computing performance, it significantly enhances imaging and perception capabilities. This solution transcends spatial boundaries and overcomes the day-night vision limitations, making it well-suited for tasks in smart city management, public safety, energy inspection, water conservancy, and forestry operations.





Smart Penta Camera for Enhanced Clarity over Long Distances

Powered by advanced AI computing, the five modules (including a 1/0.98-inch wide-angle camera, a 34x continuous optical zoom camera, a 1K infrared thermal imager, a laser rangefinder, and a near-infrared (NIR) auxiliary light) significantly enhance imaging and perception capabilities beyond spatial boundaries.



4K Night Vision for Seamless Operations in Total Darkness

4K AI-enhanced full-color night vision supports three selectable modes with ISO sensitivity reaching up to 2400000. IR Cut mode enables grayscale night vision by capturing the full 400-1000 nm light spectrum, delivering bright, clear imagery in complete darkness. When paired with the NIR auxiliary light, the system can clearly illuminate subjects up to 120 meters away in no-light environments.



Three-Axis Mechanical Gimbal & EIS Technology

The three-axis mechanical gimbal and EIS technology ensures stable, sharp, and smooth video capture, even during telephoto shooting at magnification above 6x.



1K Infrared Imaging & 2K UHR Enhancement

The infrared thermal camera with a 25 mm focal length delivers native 1K resolution, which is enhanced to 2K through AI-powered UHR imaging. With up to 32x AI-powered UHR enhancement, every intricate detail is sharply revealed.



2000-meter Laser Pinpointing for Precise Measurement

With laser ranging capabilities of up to 2 km, target positioning is easily achieved through simple pinpointing operations. Instant sharing via the UVER Smart Control Platform further enhances collaboration efficiency.

Tailored to Your Needs with Powerful Payload Capabilities

The S400E features a standardized quick-release payload interface, allowing for professional-grade mounts in seconds. Supporting a wide range of specialized payloads, it seamlessly adapts to diverse applications such as public security, inspections, and smart city management, delivering high-precision, stable solutions tailored to vertical industries.





PWG01
Penta Smart Camera Gimbal



PQL02
Compact Quad-sensor Gimbal Camera



TQX-S02
Oblique Camera



TZS-S02
Ortho Aerial Survey Camera



PLI01
LiDAR



Speaker



Gimbal Spotlight



Range Lighting



Onboard AI Box



Four-Stage Thrower

Open Ecosystem, Seamless Compatibility

The S400E comes with the GDU's PSDK protocol interface, enabling seamless integration of third-party customized payloads (such as survey cameras, gas detectors, multispectral sensors, and more). With plug-and-play hardware and SDK secondary development capabilities, it applies to fields like mapping and environmental protection, fostering an open UAV ecosystem.

GDU Flight II

The GDU Flight II APP, included with the S400E, is a professional, user-friendly software solution offering a wide range of professional features. Its flight planning capabilities allow users to create mission routes and control autonomous flight operations, greatly streamlining workflows and enhancing work efficiency.



GDU UVER Smart Control Platform

The UVER Smart Control Platform consolidates data collection, processing, and synchronization. When used alongside the GDU Flight II app, it enables cloud-based data synchronization, real-time information sharing, and enhanced aircraft capabilities.

- Cloud Deployment for Access Anytime and Anywhere
- One-Click Live Streaming for Real-time Operational Data
- Open Registration for Organizational Connectivity and Team Information Sharing
- One-Stop O&M Monitoring for Live UAV Status Updates



K01 Docking Station

The S400E professional-grade quadrotor UAV integrates seamlessly with GDU's K01 autonomous docking station. Backed by a fully proprietary system IP, this innovative product solution revolutionizes unattended inspection modes, driving continuous productivity improvements through advanced technology.



Compatible Payloads



PWG01 Penta Smart Camera Gimbal

This solution integrates five advanced modules: a 1/0.98- inch wide camera, a 34x continuous optical zoom camera, a 1K infrared thermal imager, a laser rangefinder, and a near-infrared (NIR) auxiliary light. Powered by 10.4T of AI computing performance, it significantly enhances imaging and perception capabilities. This solution transcends spatial boundaries and overcomes the day-night vision limitations, making it well-suited for tasks in smart city management, public safety, energy inspection, water conservancy, and forestry operations.

Wide-Angle Camera	Effective Pixels: 50 MP
Tele Camera	Zoom: Zoom: 34x (optical); 544x (hybrid)
Infrared Camera	Photo Resolution: 1280×1024, Super Resolution: 2560×2048
NIR Auxiliary Light	Angle: 8°±0.5°, Spot diameter at 120 m: 16.8 m
Laser Rangefinder	Range: 3-2000 m
Weight	≤1150 g
Dimensions	166×163×184 mm



PQL02 Compact Quad-sensor Gimbal Camera

A groundbreaking multi-sensor fusion solution that integrates a wide-angle camera, optical-zoom camera, infrared camera, and high-precision laser rangefinder. This seamless integration delivers exceptional performance and efficiency, while the ultra-light 360 g design enhances the operational capability of industry UAVs.

Zoom camera	110x (optional), 160x (hybrid)
Infrared Camera	Resolution: 640×512
Temperature Measurement Methods	Spot Measurement, Area Measurement
Temperature Measurement Range	-20°C to 150 °C (High Gain)/0°C to 550 °C (Low Gain)
Wide-Angle Camera	Effective Pixels: 48 MP
Laser Rangefinder	Measurement range: 10 to 1500 m
Weight	≤380 g
Dimensions	92.4 x 114.5 x 129mm



A-AI01/A-AI02 AI Box

Powered by 100T+ computing capability, this high- performance module features domestically developed brain-inspired processors for higher concurrency and lower power consumption. Featuring self-developed UAV- specific algorithms and cross-industry validation, it enables seamless integration into a wide range of business scenarios. Compatible with mainstream AI frameworks, it also supports SDK access for custom development and third-party integration.

Weight	120 g
AI computing capacity	100T/48T
Peak power consumption	25W
IP Rating	IP55



PMP02 Speaker

The PMP02 speaker is designed to meet a variety of broadcasting needs, including real-time broadcasting, audio recording playback, and audio file playback, in diverse environments.

Weight	110 g
Dimensions	72 x 60 x 115 mm
Sound pressure level	114 dB@1m
Broadcasting distance	300 m
Operating Temperature	-10℃ ~ +50 ℃

Four-Stage Thrower



Oblique Camera



Ortho Aerial Survey Camera



Range Lighting



Gimbal Spotlight



Industry Scenarios



Power Grid Inspection



Environmental Protection



Event Security



Firefighting and Rescue



Smart City Operations



Specifications

Description	Specifications
Dimensions (Unfolded)	549 × 592 × 424 mm (Excluding propellers)
Dimensions (Folded)	347 × 367 × 424 mm (Including landing gear and propellers)
Maximum takeoff weight	7kg
Symmetric Motor Span	725mm
Max Payload	3 kg (In this case, the max. flight speed is 15 m/s)
Max Horizontal Flight Speed	23 m/s (in S-mode at windless conditions)
Max. Altitude	5000m
Max. Altitude	12m/s
Max. Flight Time	45 min (Measured during forward flight at approx 10 m/s until battery level reaches 0% in windless and no-payload conditions)
Hovering Accuracy (GNSS)	Horizontal: ±1.5 m (when GNSS works normally) Vertical: ±0.5 m (when GNSS works normally)
Hovering Accuracy Range (Vision System)	Horizontal: ±0.3 m (when the Vision System works normally) Vertical: ±0.3 m (when the Vision System works normally)
Hovering Accuracy (RTK)	Horizontal: ±0.1 m (when RTK works normally) Vertical: ±0.1 m (when RTK works normally)
Position Accuracy	Horizontal: 1 cm+1 ppm Vertical: 1.5 cm + 1 ppm
IP Rating	IP45
Image Transmission Distance	15 km (under line-of-sight conditions, at 200 m altitude, with no interference)
Omnidirectional Obstacle Avoidance	Obstacle sensing range (for buildings, trees, wire poles, and towers above 10 m tall) Forward: 0.7-40 m (max. detection range: 80 m for large metal objects) Left & Right: 0.6-30 m (max. detection range: 40 m for large metal objects) Up/Down/Rear: 0.6 m-25 m Operating environment: surfaces with distinguishable textures, adequate light conditions (>15 lux, standard indoor fluorescent lighting).
AI Functions	Object detection, tracing and identification
Flight Safety	ADS-B feature, capable of detecting and avoiding nearby civil aircraft (optional)

Company Profile

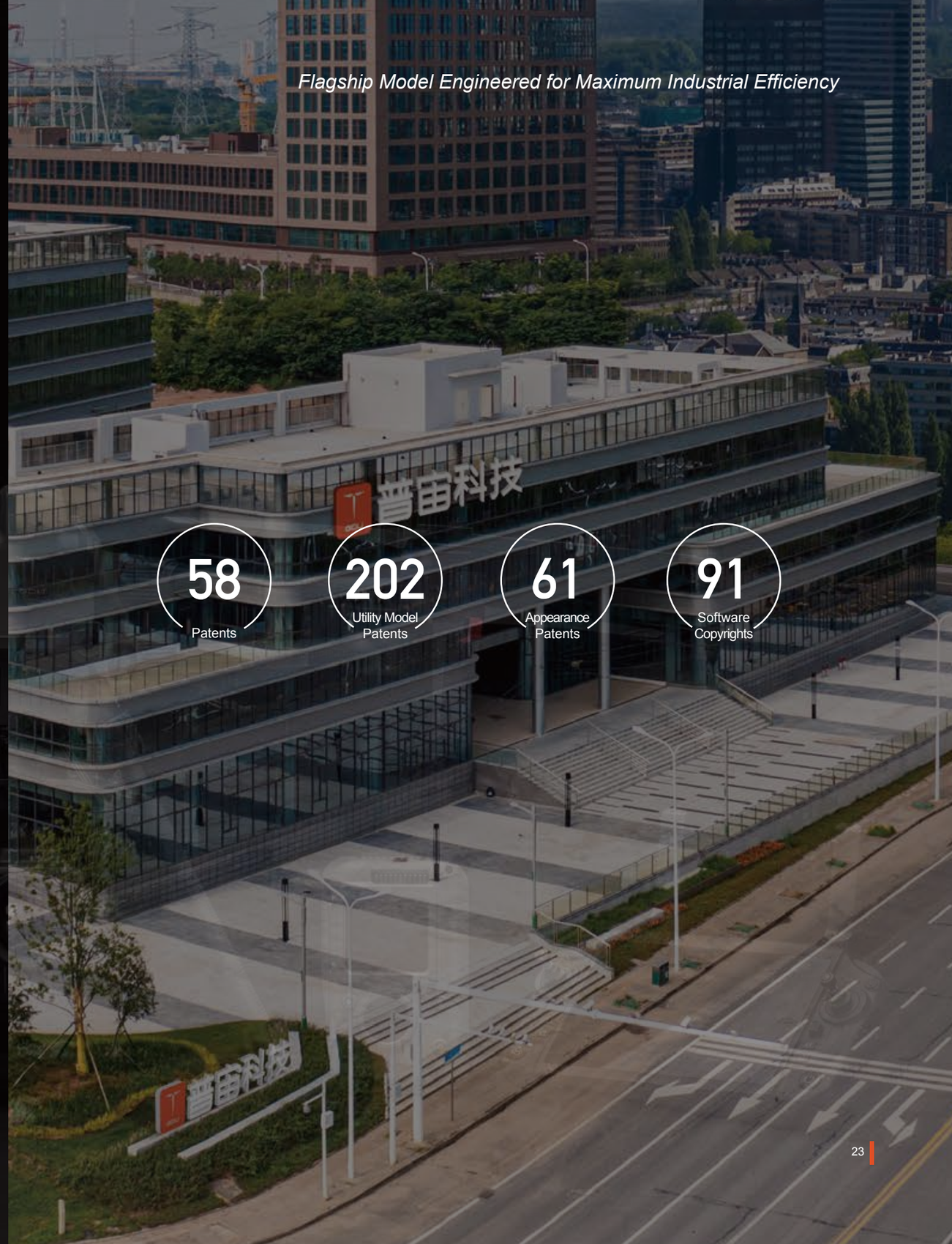
Founded in 2015, GDU is a leading high-tech enterprise specializing in professional UAV solutions. The company integrates R&D, manufacturing, sales, operations, and data services into a unified business model. Positioned at the forefront of technological advancement, GDU leverages cutting-edge UAV technology, 5G infrastructure, big data, and cloud platforms to drive the development of the low-altitude economy.

Headquartered in Wuhan, GDU has a workforce of nearly 800 employees, with over 60% dedicated to R&D. The Company offers a comprehensive portfolio of UAV solutions, including multi-rotor UAVs, fixed-wing VTOL UAVs, autonomous UAV docking stations, a full suite of mission-specific payloads, and advanced software platforms. These include the UVER Smart Control Platform, multi-dimensional ground stations, a low-altitude operation management platform, and an AI-powered low-altitude command console. GDU's products are distinguished by their three core information security advantages: hardware security, link security, and data security. To date, GDU has delivered automated, unmanned, and customized solutions to thousands of clients in over 300 cities worldwide across various industries. GDU holds full proprietary intellectual property rights across its entire UAV system portfolio and possesses independent R&D capabilities that span the complete UAV industry chain. With a commitment to cutting-edge technology R&D, GDU currently holds 322 patents, including 202 utility model patents, 58 invention patents, and 91 software copyrights. As a drafting unit to national and industry UAV standards, GDU continuously advances its technologies, products, and solutions in areas such as UAVs, automated UAV docking stations, intelligent payloads, software platforms, and data operations. Through its innovative offering of "automated UAV products + digital multi-sector applications + intelligent data services", GDU aims to apply smart products and services safely.

GDU is dedicated to becoming an expert in professional UAV safety applications and services. Its hardware and software products and industrial solutions have been deployed in a variety of sectors, including smart cities, power grid inspections, smart law enforcement, emergency response and firefighting, event security, intelligent park management, ecological conservation, smart tourism, and vehicle-mounted UAVs. In the fields of low-altitude data operations and urban governance, GDU's full range of UAV products plays a pivotal role in driving the digital transformation of city management, contributing to empowering new quality productivity and achieving high-quality development, making it a leader in the low-altitude economy in China.

Embodying the values of stability, reliability and craftsmanship, GDU remains committed to advancing the global technological revolution in professional UAV safety, expanding into industrial segment application markets in line with the industrialized and scaled development routes. Furthermore, GDU will actively drive the commercialization of cutting-edge technologies, such as UAVs + docking stations + 5G / AI / IoT / cloud computing. By collaborating with global partners, GDU is shaping the future of the low-altitude economy, where technological breakthroughs consistently exceed expectations.

Flagship Model Engineered for Maximum Industrial Efficiency



58 Patents

202 Utility Model Patents

61 Appearance Patents

91 Software Copyrights