PRODUCT ENGINEERING / TECHNICAL GUIDE

SV-S

Surveying drone



Product manual · Selection and application

Specifications / Structure and interfaces / Integration / Operation and care

Reorganized from available model documentation. The agreed specification defines the delivered configuration.

01 / PRODUCT & APPLICATION

Selection and application guide

SV-S lists a 1 kg rated payload, a 2.8 kg airframe and a folding structure for camera or inspection-payload integration. Survey deliverable quality also depends on the camera, positioning method, image overlap and ground-control plan; aircraft specifications alone do not establish mapping accuracy.

Design and application value

A mission platform combines the airframe, propulsion, flight control, communications and payload. Surveying emphasizes imaging and positioning; inspection emphasizes viewing geometry and coverage; transport emphasizes restraint and centre of gravity. Product specifications define initial limits, while mission results require complete-system validation.

Choosing the right configuration

Prepare payload mass, dimensions, power and interfaces, plus route length, duration, take-off space and wind conditions. Interpret nominal endurance with load, energy reserve and environment. Control range and ceiling are not operating permissions. Record acceptance criteria in the project configuration.

02 / SPECIFICATIONS 01

Specifications and configuration

Figures follow the available model documentation. The agreed specification defines the delivered configuration.

Parameter	Specification
Motor-to-motor diagonal	710 mm
Unfolded / working dimensions	570 × 620 × 220 mm
Folded / storage dimensions	510 × 270 × 130 mm
Product mass	2.8 kg
Number of motors	4
Maximum output per motor	430 W
Maximum thrust per motor	2.5 kg
Rated payload	1 kg
ESC rated voltage	24 V DC
ESC rated current	6 A
Propeller diameter × pitch	15 × 5.5 in
Propeller material	Carbon-fibre composite

05 / INTEGRATION & CARE

Installation, operation and care

Installation and integration

Remove propellers before parameter changes or firmware updates. Check airframe heading, controller and positioning-module orientation, propeller rotation and electrical connections. Use the fitted controller’s version-specific procedure for calibration, mode switching and failsafe verification. After loading, check balance and camera obstruction before controlled flight tests.

Operation and maintenance

Inspect propellers, fasteners, battery or fuel system and communications before and after flight. Log payload configuration, flight time and anomalies to track wear. Abnormal vibration, energy warnings, unstable positioning or severe weather call for aborting under the validated contingency procedure and inspecting the aircraft.

Commissioning record

01 Confirm model, configuration, software and document versions.

02 Record load, environment, supply and mission conditions.

03 Verify protective functions, stopping and abnormal-condition responses.

04 Retain key readings, photographs and inspection records; agree a maintenance plan.

06 / OPERATING BOUNDARIES

Operating boundaries and technical review

01 Operation requires trained personnel familiar with the fitted configuration. Isolate power and prevent unintended startup before servicing or connection changes.

02 This guide covers selection, structure and operating principles. Controller calibration, arming commands, LED codes and failsafe actions vary by version; use the confirmed procedure for the delivered controller. Do not infer actions from unclear symbols in a legacy scan.

03 Assess electrical, rotating-part, pinch-point and work-at-height risks for the actual site. Keep people clear of propellers, tracks, manipulators and loaded cables as applicable. Stop and inspect when abnormal conditions arise.

04 Reference range, duration, slope and productivity figures are not guarantees for every environment. Revalidate system performance and protective behavior after changing payload, power, controller or structure.

05 Product names and protection descriptions do not replace certificates. For explosive atmospheres, firefighting, aviation or special environments, confirm the applicable documentation and its match to the delivered configuration.

07 / DOCUMENT NOTES

Specification and configuration notes

Source and edition

Technical data have been reorganized from the available product attachment and project documentation. Originals are retained in the project archive. Layout edition: September 2026.

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Use the mutually confirmed delivery documents for purchasing, installation and acceptance. If drawings, nameplates or hardware differ from this guide, verify the applicable model and version before operation.

Business enquiries: see the next page.

Business enquiries

Product selection · Project enquiries · Technical support

SV-S

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