

DRT DRONE

DRT_NEXA1

Product Proposal



Features

GPS
RTK system

MAXIMUM WIND RESISTANCE
12m/s

DIMENSIONS
Folded : 430 x 650 x 380
Unfolded : 1220 x 1160 x 380

MAXIMUM FLIGHT WEIGHT
25kg

CLEANING AREA PER HOUR
Up to 725m²/h

OBSTACLE SENSORS
Vision & Radar Sensor, Forward Cam

FLIGHT TIME
Approximately 30 minutes



DRT_NEXA1

The all-in-one cleaning drone by DRT. Powered by our exclusive technology, make the impossible cleanable—from exterior walls and windows to solar panels

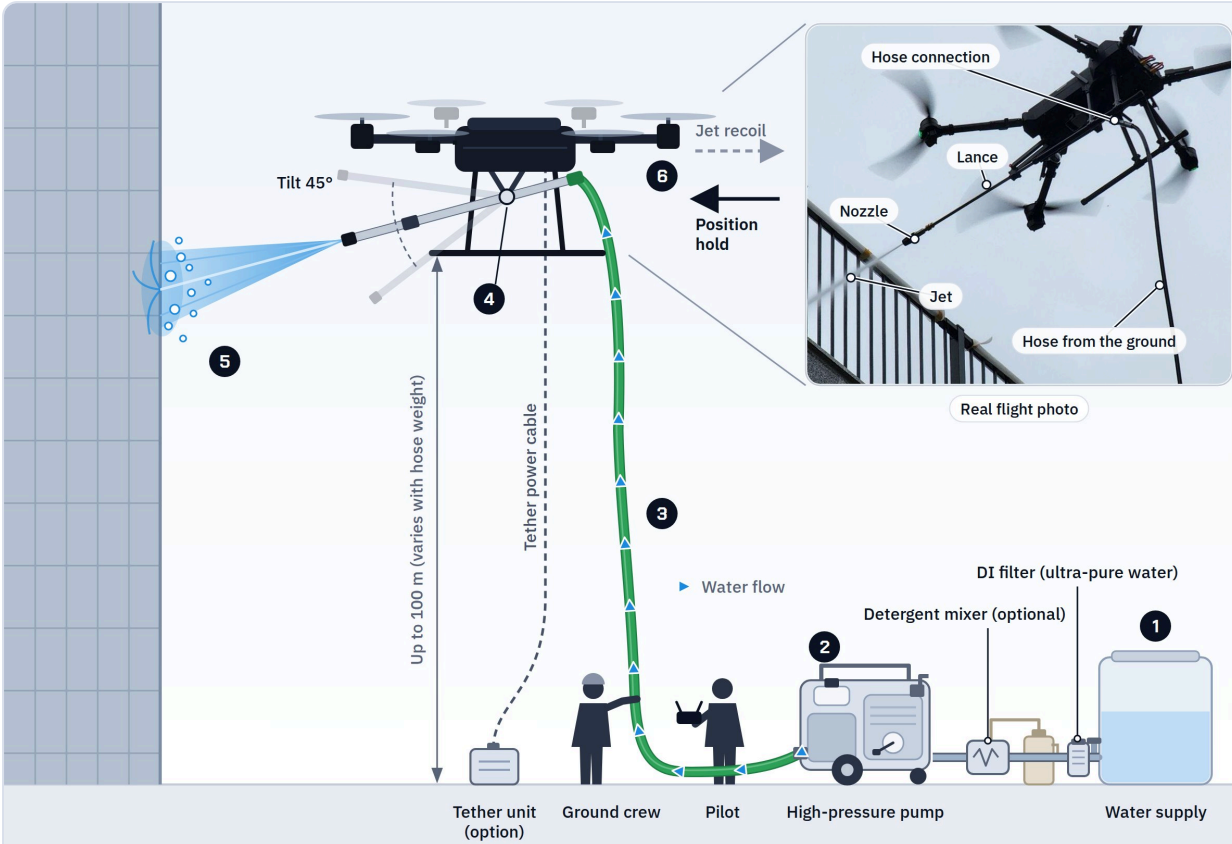
Product Point

- 01 Equipped with Lance Auto Sweep function
- 02 5-layer sensor architecture with LiDAR and radar
- 03 High-precision RTK GNSS system
- 04 Sensor-based position hold in GPS shadow zones and indoors
- 05 IPX5-rated water-jet resistant design
- 06 Equipped with a parachute system for fall prevention (optional)
- 07 obstacle warning system with TTS/Beep
- 08 Check useful visual information through a dedicated application



How NEXA1 cleans a facade

Water is pumped up from the ground through a high-pressure hose — the drone carries no water tank.



- 1 Water supply**
Mains water or a tank feeds the pump through a DI filter that produces ultra-pure water. Detergent can also be added with a mixer.
 - 2 High-pressure pump (on the ground)**
Pressurizes the water: up to 220 bar at 20 L/min, or 120 bar at 50 L/min. Spraying starts and stops with the pump.
 - 3 High-pressure hose**
Carries the water up to the drone. Working height up to 100 m; the actual limit depends on the weight of the hose. A ground crew member guides the hose.
 - 4 Tilting lance**
The lance tilts up and down over 45°. Auto Sweep moves it automatically, so each pass covers more wall with less drone movement, and pointing it down makes solar panels below the drone easy to clean.
 - 5 Nozzle and jet**
The nozzle sprays a high-pressure jet onto the surface: facades, windows, solar panels.
 - 6 Holds position against the recoil**
The jet pushes the drone backwards. NEXA1 measures its position and compensates automatically to stay in place.
- Option: Tether**
A light power cable converts ground power to DC and feeds the drone in flight: unlimited flight time, no battery swaps.

No water tank on board Continuous water from the ground	220 bar max. pressure (20 L/min pump)	725 m²/h cleaning rate (up to)	~30 min per battery · unlimited with the Tether option	Pump, hose, mixer and water supply: standard ground equipment chosen for each site. drtdrone.com
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Waterproof camera system

Waterproof

The IPX5-rated (water-jet resistant) design and water-repellent cover keep the view clear and the 1-axis gimbal stable while spraying water during cleaning



1080p IP camera

Experience ultra-low latency video streaming and recording in any situation with our optimized RTSP H.264 system. The 1080p camera, featuring a 160° ultra-wide-angle lens and a 1/2.7-inch CMOS sensor, delivers a crystal-clear view



Auto Sweep

Increase cleaning efficiency by up to 40% with DRT NEXA1's revolutionary Lance Control.

Its 45-degree tilting lance cleans where others can't—from high-rise facades to flat solar panels.

With the 'Auto-Sweep' function, you can clean vast surfaces in one smooth pass, eliminating needless drone movement

Holds position even where GPS can't reach

NEXA1 uses its sensors to recognize the buildings and structures around it in real time and fixes its own position. Where drones that rely on GPS alone become unstable, NEXA1 holds its place, avoids obstacles in every direction and keeps flying steadily.

GPS shadow zones

Next to buildings, between high-rises, under bridges

Indoor flight

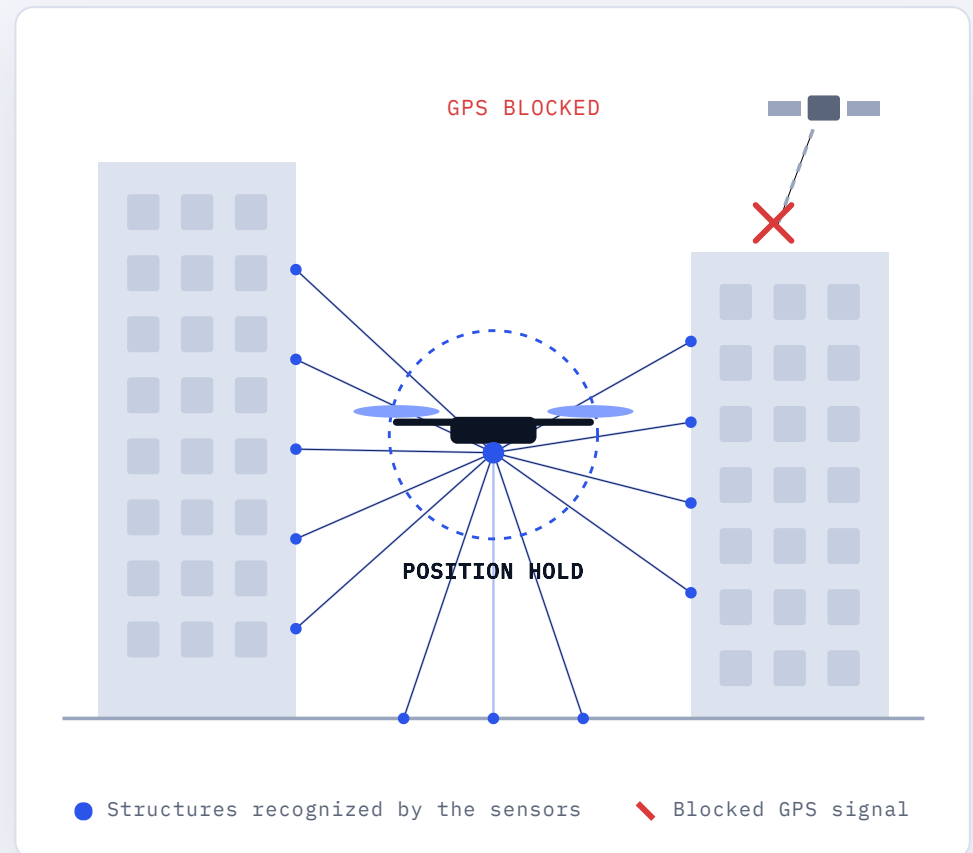
Flies indoors, with no GPS signal at all

Position hold

Recognizes nearby structures, so it does not drift

Obstacle avoidance

Sensors watch all around to avoid and warn



Real 3D maps recorded in test flights

NEXA1 scans its surroundings with a 3D LiDAR and stitches the measured points together to compute a map of the area and its own position at the same time (SLAM). Every image on this page is drawn only from LiDAR measurements recorded in NEXA1 test flights.

COLOR = HEIGHT ABOVE GROUND



Purple ground · Blue → green approx. 5–15 m · Yellow 20 m and above · Black gaps are areas the laser did not reach

01 **Scan** 360° distance measurement with a 3D LiDAR

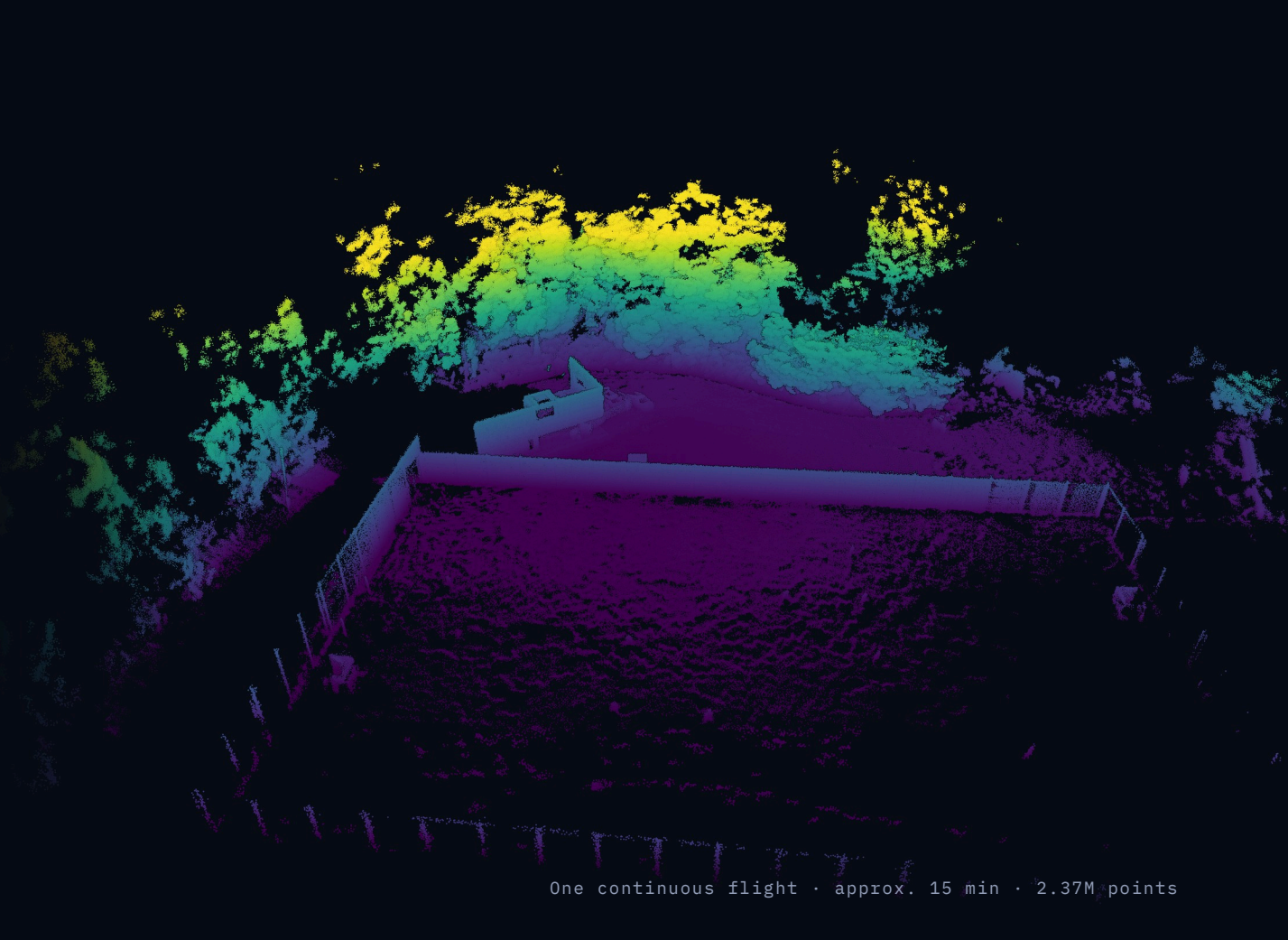
02 **Match** Each new scan aligned with the map to compute the aircraft position

03 **Control** Computed position fed to flight control in real time to hold position without GPS

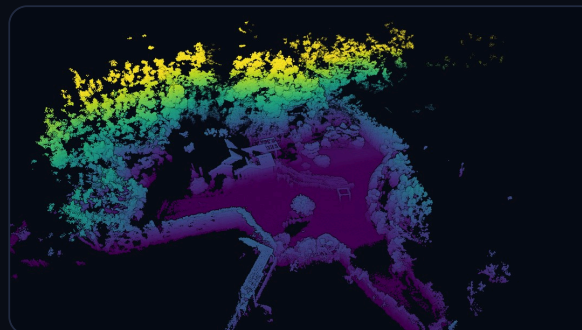


Rotate the 3D map yourself

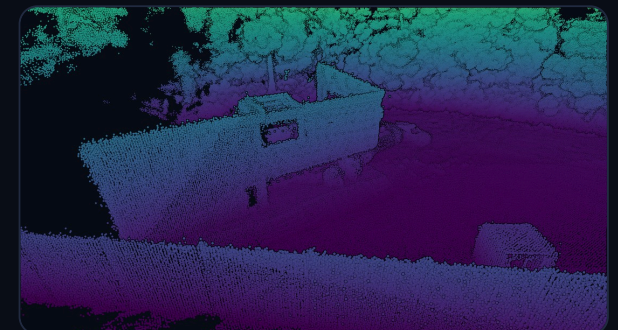
drtdrone.com/en/product/nexa1



One continuous flight · approx. 15 min · 2.37M points



Four flights merged · 1.30M points



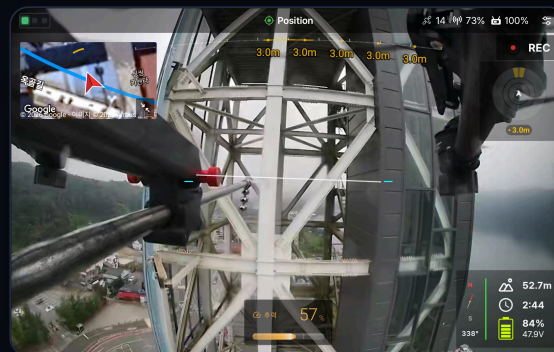
Close-up · points recorded at 5 cm spacing

Obstacle warning system

With DRT's 5-layer sensor system, you never have to worry about obstacles during cleaning.

The dual LiDAR and Radar sensors precisely detect windows, buildings, and structures without missing a thing.

They continuously provide both visual and auditory alerts to keep the operator informed at all times.





Foldable Structure

Engineered for efficiency, the DRT NEXA1 features a proprietary folding structure that sets a new standard for convenience.

It collapses to less than a third of its operational size, ensuring unparalleled ease of transport and storage without compromising on performance.

Go from mission-ready to carry-ready in seconds.

UNLIMITED FLIGHT

Tether System

OPTION

DRT's proprietary Tether System removes the limits on flight time. An ultra-light power cable converts 220V ground power to DC and delivers it to the drone in flight, without interruption.

220V → DC	Real-time ground power conversion
Unlimited flight	Zero battery swaps, zero charging downtime
Non-stop operation	Complete large buildings in a single run

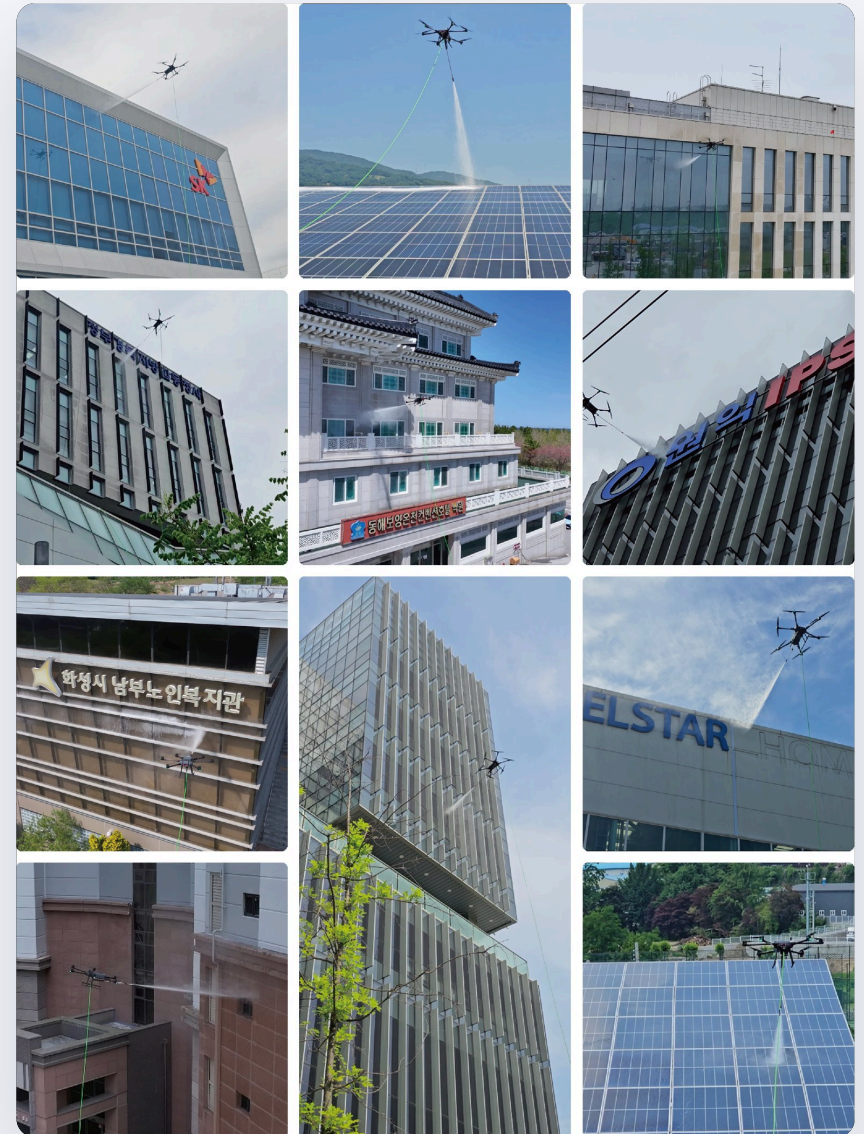


Beyond Risk, **Make a Better World**

The DRT NEXA1 is more than a promise. it's a proven solution, already transforming cleaning operations at diverse sites worldwide. We don't just test in a lab, we learn from the real world.

Every project, from commercial buildings to vast solar farms, provides crucial feedback that drives our innovation.

When you choose the NEXA1, you're not just investing in a drone. You're investing in a platform that has been tested, trusted, and continuously perfected by industry leaders on the ground.



Specification

MODEL	DRT NEXA 1
AIRCRAFT WEIGHT	13 kg
DIMENSIONS (L×W×H)	Folded: 430 mm × 650 mm × 380 mm Unfolded: 1220 mm × 1160 mm × 380 mm
MAXIMUM TAKEOFF WEIGHT	25 kg
WIND RESISTANCE	Up to 10 m/s
GNSS	ZED-F9P (GPS + Galileo + BeiDou + GLONASS) GPS-denied & indoor: sensor-based position hold, omnidirectional obstacle avoidance
CLEANING EFFICIENCY	725 m²/h
MAXIMUM WATER PRESSURE	220 bar with 20 L/min pump 120 bar with 50 L/min pump
VIDEO SYSTEM	RTSP H.264 1080p, 160° ultra-wide lens, 1-axis gimbal
WATERPROOF	IPX5 (water-jet resistant)
BATTERY CAPACITY	44.4 V / 30,000 mAh / 12S LiPo
MULTI-SENSOR MODULE SYSTEM	Detection Range: Radar ~10 m, LiDAR ~20 m Measurement Accuracy: ±2 cm @ < 2 m, ±2% @ ≥ 2 m
ADDITIONAL FEATURES	Integrated parachute system for fall prevention Lance with vertical movement and automatic sweep function Tether System for unlimited flight time (optional)

Thank you

WEB drt drone.com

MAIL drt@drt drone.com