TRACE

MILITARY-GRADE NANO UAV

Trace provides field operators with a trusted and affordable American-made nano UAV. Trace delivers exceptional sensor capabilities and unmatched stealth and flight endurance. This pocket sized drone meets the complex demands of aerial surveillance, overwatch and data dissemination.

CAPABLE
Stabilized 48MP EO & 320P IR
Up to 40 minute flight time
6 km LOS / 500m NLOS range[3]

SAFE
163 g / 5.8 oz AUW

INDOOR/OUTDOOR
Indoor collision prevention
Propeller guards available
GPS denied visual position control with scene illumination
Withstands 25 knot winds

COVERT
Unseen & inaudible at 30 ft
Remote ID optional

TRUSTED & SECURE
AES-256 encryption
Made in the USA
Blue UAS Cleared/ NDAA compliant

VANTAGE ROBOTICS

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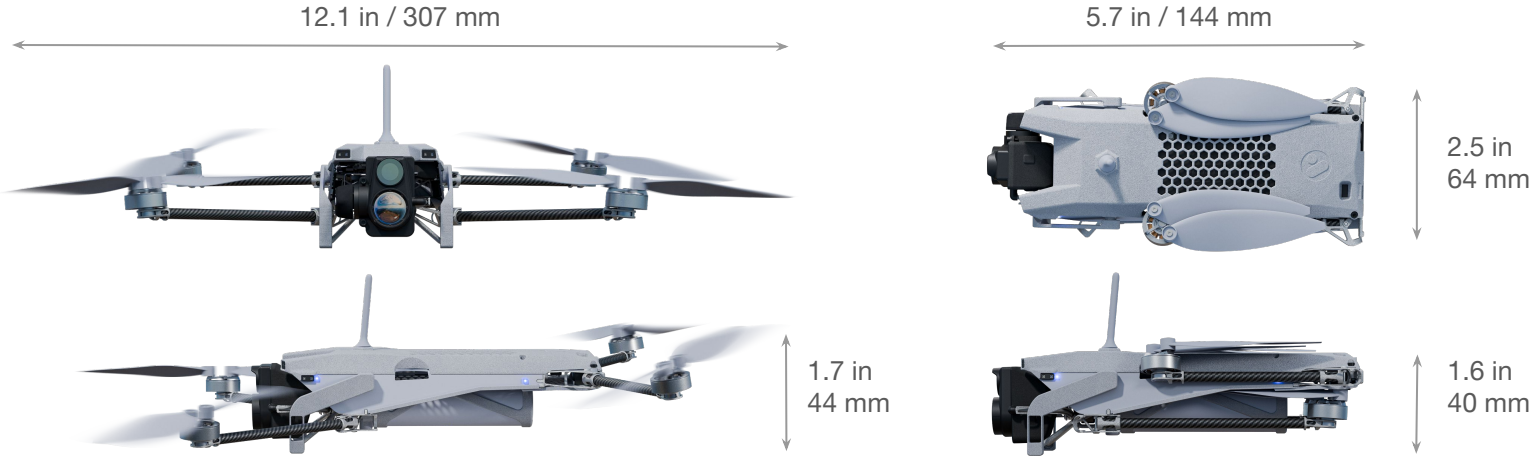
TRACE

SPECIFICATIONS



AIRCRAFT

- Up to 40 minutes flight time
- Indoor collision prevention, visual position control, and scene illumination for robust GPS denied operation
- 161 - 178 g takeoff weight
- 52 kph / 32 mph top speed
- <34 dBA at 30 m / 90ft range
- Not visible at 10 m / 30ft against terrain
- Operational in 25 kts wind
- -20° to 45 C° temp range
- IP53 ingress protection
- Multi-constellation GPS for autonomous missions
- Hand or ground launch
- Perch and stare capable

PORTABILITY

- Folding arms for stowage
- Deployable in 30 sec
- IP68 field case w/ 90 kg crush and 1m drop robustness
- 1700 g & 1000 cm^3 in tactical config with Vision2 controller

GIMBAL & CAMERA

- 2-axis stabilized EO/IR gimbal
- Controllable pitch -90° to +70°
- 48 MP EO camera
- f/1.8 lens
- 25× digital zoom (67° - 2.7° HFOV)
- 1080p or 4K MPEG-4 video recording format
- 8000x6000 px still images
- 320x240 IR uncooled VOx sensor 24° FOV
- 640x480 thermal alternative available on request

SECURITY

- DoD Blue UAS Cleared & NDAA compliant
- Designed, sourced, and built in the USA
- AES-256 encryption on all communications and data storage
- No remote data connect

CONTROL & COMMS

- Up to 6 km max LOS range[3]
- 500 m NLOS range[3] (30 dBi attenuation)
- 1.6 - 2.5 GHz frequency alternatives
- Automatic channel hopping ensures robust link
- MAVLink and RAS-A compliant
- QGC, ATAK, WMI, DroneSense, and RAC2 compatible
- Compatible with Vantage Vision2, Kutta KTAC, S20 TE, & Tomahawk Mimic or Grip GCS

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CONFIGURATIONS

Bundles

Name	AV	Controller	Battery	Packaging
Trace	Trace	Vision2	2x Smart Battery	IP-68 field and transport case
Trace Light	Trace FR	BYO tablet + Poplar radio dongle	2x Smart Battery	IP-68 transport case
Trace First Responder	Trace FR	Vision2	2x Smart Battery	IP-68 transport case
Trace Federal	Trace Advanced	Vision2	2x Endurance Smart Battery	IP-68 field and transport case + soft sided carrier

Air Vehicles

Name	Payload	Radio	Airframe	GPS Denied Capabilities
Trace	Wisp	Poplar 2.4, 128-bit AES	Foldable	Daytime - Up to 30 m with EO VIO Night - Up 3 m with EO VIO + illum
Trace FR	Night Owl	Poplar 2.4, 128-bit AES	Rigid	Daytime - Up to 30 m with EO VIO Night - Up 3 m with EO VIO + illum
Trace Advanced	Wisp Advanced	Poplar 2.36, 2.4, or hexaband, 256-bit AES	Foldable	Day, Night - Up to 30 m with EO + IR VIO

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OPTIONS

Batteries

Name	Cell	Flight Time	Standby Time
Endurance Battery	1-cell 18650, 4.2V	27 minutes[1]	1.5 hours[2]
Endurance Plus Battery	2-cell 18650, 8.4V	40 minutes[1]	2 hours[2]

[1] Flight times are based on optimal conditions
[2] Standby time is with the AV powered up and streaming video to the GCS

Payloads

Name	EO	Thermal	Illumination	Stabilization
Wisp	48MP, f/1.8, 67° FOV	320x240 24° FOV	none	2-axis
Wisp Wide IR	48MP, f/1.8, 67° FOV	320x240 57° FOV	none	2-axis
Wisp Advanced	48MP, f/1.8, 67° FOV	640x480 48° FOV	none	2-axis
Wisp EO	48MP, f/1.8, 67° FOV	none	LED	2-axis

Radio Options

Name	Description	Range[4]
Poplar-i 2.4 GHz	2.4 GHz radio module, 1 W max power output, AES-256 or AES-128 bit encryption, automatic channel hopping	2 km
Poplar-f 2.36 GHz	2.36 GHz radio module, 1 W max power output, AES-256 or AES-128 bit encryption, automatic channel hopping	2 km
Hexaband	Hexa-Band Operation with 1625 - 1725, 1780 - 1850, 2020 - 2110, and 2200 - 2500 MHz frequency options[3], 1 W max power output, AES-256 bit encryption, automatic channel hopping, superior data rates and streamed video quality, reduces flight time by approximately 2 minutes, and increased deploy time to 60 seconds	6 km

[3] Control ranges are based on radio configuration, line of sight, proper antenna pointing, 150 ft altitude, and uncongested RF environments
[4] Full frequency range is not possible with single antenna

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