IroNav
DATASHEET

The joint solution by Wonder Robotics and infiniDome combines the power of OptiPilot – a mission-critical autonomous guidance, navigation, and landing pod – with battle-proven GNSS anti-jamming protection.
 This synergy ensures uninterrupted autonomous operation in the most challenging environments, where GNSS interference, or denial would otherwise cripple mission continuity.

Alternative Navigation System for Autonomous Flight in GNSS–Denied Environments
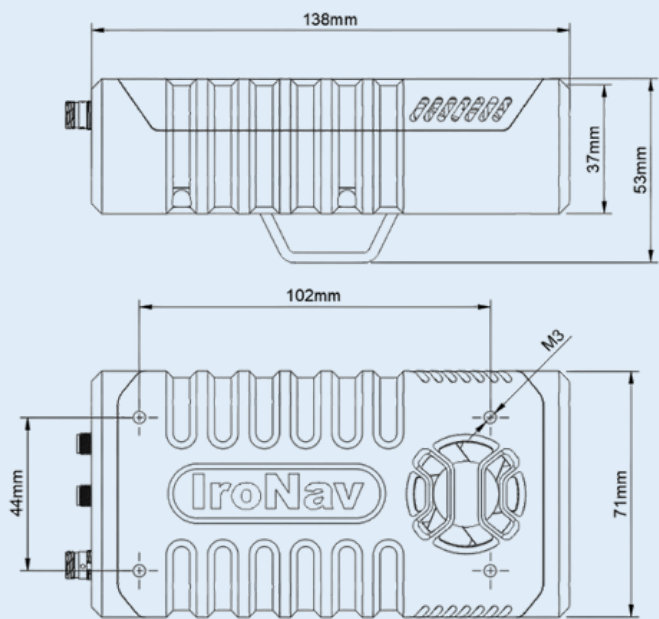
Combining visual navigation with anti-jamming GNSS protection, UAVs gain two independent layers of assured autonomous positioning—critical for defense, security, and commercial operations.

Key Features

- **Flies Any Drone**
  Seamless integration with rotary- or fixed-wing UAV, FPV , VTOL.

- **Anti-Jamming Layer (infiniDome)**
  Protects GPS signals in real time, ensuring resiliency when GNSS is available.

- **Mission-Critical Autonomy**
  End-to-end autonomous guidance, navigation & landing.

- **GNSS-Free Operation**
  Onboard pilot capable of navigation and landing without external signals or operators.

- **Optical Navigation – No Maps**
  Vision-based positioning and guidance, map-free.

- **Precision Takeoff & Landing**
  Safe, GNSS-Free landing, On the move, and Maritime

- **GPS Availability Voting**
  Smart assessment of GPS reliability, with seamless fallback to optical navigation.

Measurements	Weight	Interfaces		
138 x 102 x 53mm 5.4" × 4.0" × 2.1"	220g (0.49 lb)	**Power**		**RF Connectors**
		• Red wire: 7–32 vdc • Black wire: GND		• 2 x SMA Female 50Ω • 2.7–14VDC | Max 40mA per connector | 15dB –40dB gain
Protected Bands	**GNSS Protection**	**Communication**		
L1 and E1/L2/L5/G1	Advanced Null-Steering Anti–Jamming (infiniDome)	• Orange wire: UART RX • Yellow wire: UART TX		
Input Voltage	**Optical Sensor**	**Field of View**		**Performance**
7–32 VDC	Vis/Thermal	∠ 90–110° deg		• GNSS Deviation: ~2% • Operational for 0 alt
Combability				**Mounting interface**
Any MAVLink compatible flight controller	ARDUPILOT PX4 autopilot BETAFLIGHT INAV			4 x M3 bolts (Not Supplied)

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