

AirPath

Extended Mission Range. Same Drone.

Smart beamforming ground unit that extends your UAV's operational reach without modifying the airframe.



Extended Operational Range Matters!

When a drone loses a reliable link at a distance, the mission ends. Drone ground stations relying on omnidirectional antennas are the limiting factor: they waste energy across 360°, lose throughput with distance, and degrade further under RF congestion. In DFR and mission-critical operations, that's not a technical inconvenience; it's an operational failure.

AirPath upgrades the ground station's RF system. A smart 360° beamforming array that automatically tracks the drone in real time, concentrating RF energy on the target and delivering stable command & control with high-quality video at extended range.

AirPath Solution

Engineered for drone missions that demand range and reliability, AirPath technology delivers focused, high-capacity connectivity even in extreme flight conditions

Up to 4× Extended Range

Focused beamforming extends mission range vs. omni, no added drone hardware.

>20 dB Interference Rejection

Narrow-beam tracking reduces susceptibility to surrounding RF interference.

Real-Time HD Video at Distance

Sustained throughput helps preserve clear live video across the mission path.

360° Automatic Beam Tracking

Electronic steering follows the drone continuously with no manual pointing.

Platform Applications

- DFR & Drone-in-a-Box: More coverage per site, fewer sites overall. Lower infrastructure cost, better video. Deployed in active U.S. operations.
- Industrial Inspection: Energy, mining, infrastructure; reach the full inspection zone from a single ground point
- Security & Surveillance: Persistent monitoring at operational distances with reliable video backhaul
- Government & Defense: Mission-critical C2 and ISR data links in contested RF environments

Key Specifications

- Frequency: 4.9 – 6.0 GHz
- Beam steering: 360° / 15° beam
- Gain: 19 dBi
- Sidelobe suppression: 22 dB
- Max EIRP: 48 dBm (subject to regulation)
- Data interface: 1 GbE PoE + SFP
- RF interface: 2 x N-Type (V & H polarization)
- Power: 40 W via 802.3BT PoE
- Enclosure: IP67 / NEMA 4
- Operating temperature: -40°C to +60°C
- Form Factor: 370 × 240 × 370 mm | 11 Kg | Pole mount



Omni Antenna



AirPath Smart Beamforming Antenna



Integration Options

OEM & Drone Vendor Integration

Embed AirPath as a native RF upgrade in your ground station. Full API access for platform-level integration and management.

DJI & Aftermarket Deployment

Drop-in replacement for the omni antenna on existing DJI and compatible ground stations. No airframe modification. No added complexity.

Tested and deployed in active U.S. DFR operations.

Built on RADWIN technology, 1.6M+ radios have been deployed in 180+ countries since 1997, serving public safety, critical infrastructure, and defense globally.

Contact us to learn how AirPath can support your operations: sales@radbeam.com

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