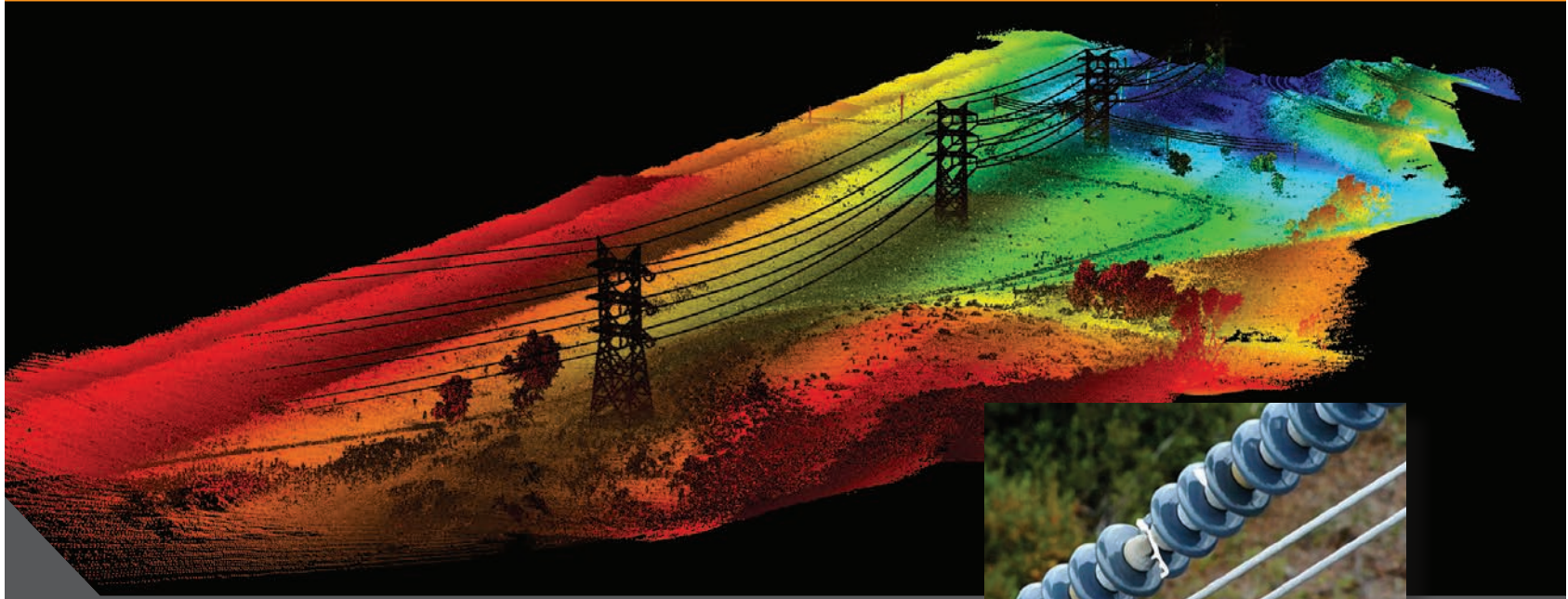


UTILITY SOLUTIONS



ARE YOU:

- Struggling to reduce corridor mapping and monitoring costs?
- Responsible for identifying problems related to power lines, pipelines or towers?
- Frequently inspecting or managing hard-to-reach physical assets?
- Required to report on environmental remediation progress?

Juniper Unmanned's Utility Solutions save you time and money and increase project safety. Contact Juniper today to discover how we can support your projects, efficiently and cost effectively.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Survey and asset modeling • Pre-construction and construction corridor mapping • Vegetation encroachment and analysis • 3D terrain and surface modeling | <ul style="list-style-type: none"> • Asset operational health and efficiency • Vertical and horizontal asset inspection and documentation • Damage assessment and emergency response |
|--|---|

Juniper Unmanned, Inc., provides premier unmanned system-based information solutions for commercial, federal, state, and military organizations. The company integrates best-in-class aircraft with the most advanced sensors. High-quality data is combined with Juniper's engineered processes, advanced software, and analytics to deliver actionable intelligence to our clients. Juniper's team of professionals has extensive experience in remote sensing, engineering, safety and compliance, data processing and analysis, and surveying and mapping. We start each project by listening to our clients' needs, then identifying the most appropriate sensors and equipment to meet their requirements.

WHAT MAKES JUNIPER UNMANNED UNIQUE?

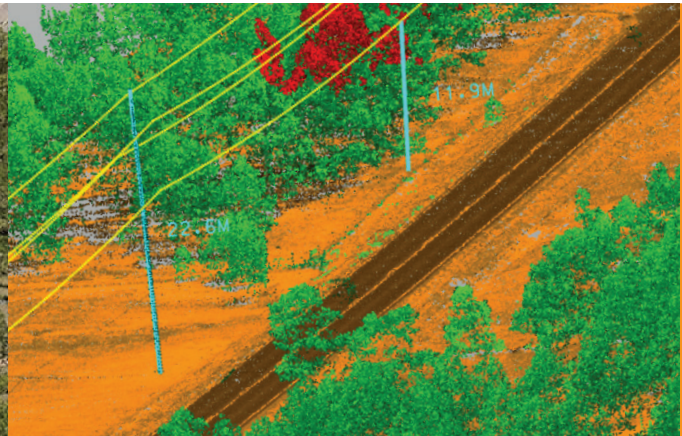
- Top-rated and continuously trained FAA Part 107 certified pilots
- Safety and compliance experts
- Remote sensing specialists
- In-house data processing and analysis
- Large selection of advanced sensors
- Extensive data acquisition experience in extreme operational environments
- AI-enabled products and services
- Expert mission management
- Projects completed on six continents
- Selected as a “2018 Colorado Company to Watch”

BENEFITS OF UAS IN UTILITIES

- Improved utility worker/worksites safety
- Reduced inspection costs
- Streamlined workflows
- Improved reliability of electrical networks
- Increased access to enhanced asset data
- Efficient identification of hazards
- Comprehensive asset inventory and documentation
- Oversight reduction and faster acquisition through automated flights
- Analytical tools to detect operational health issues



Colorized Point Cloud



Classified Point Cloud

PLATFORMS/EQUIPMENT

- Many platforms available: fixed-wing, multi-rotor, and single-rotor UAV from trusted manufacturers
- Onboard GNSS/IMU
- Survey-grade terrestrial GPS/GNSS base
- Agile flight planning for extreme terrain

SENSORS

- Multispectral, RGB, NIR
- LiDAR
- HD Video
- Thermal
- Magnetometer
- Bathymetric LiDAR

DATA PROCESSING/PRODUCT DEVELOPMENT CAPABILITIES

- Preliminary design surveys, planimetric maps, contour maps, calibrated point clouds, orthomosaics, bulk-material quantities and project takeoffs
- Files compatible with all major machine control manufacturers: Topcon, Trimble, Leica, others
- Solutions include XML, DTM, TIN data, cross sections, point files, contours
- Data products delivered in most CAD/GIS formats: AutoCAD, Civil 3D, MicroStation, PLS-CADD, GEOPAK, others

