DYNATECH INNOVATIONS

DJI

DRONE SOLUTIONS FOR THE **SMARTEST ENTERPRISES**

Who we are

A leading provider of drone services and solutions for numerous industries, **DYNATECH INNOVATIONS** is based in the United Arab Emirates. Our business is committed to utilizing cutting-edge drone technology to assist our clients in more effectively and efficiently achieving their objectives.

We firmly believe that drones are a cutting-edge, potent tool that has the potential to revolutionize the way businesses run. We provide a variety of services including aerial photogrammetry, surveying and mapping, inspection, monitoring, and more by utilizing the special abilities of drones.

Experienced professionals with expertise in drone technology and the particular industries we serve make to up our team. We collaborate closely with our clients to create specialized solutions because we are aware of the particular requirements and difficulties that each industry faces.

Mission

Our mission is to be the leading provider of drone technology solutions in the market. We strive to create value for our customers by offering them advanced drone technology products that cater to their unique needs and requirements.

Conclusion

DYNATECH INNOVATIONS is committed to providing our customers with the best drone technology solutions. We aim to create long-lasting relationships with our customers, offering them the best products, services, and support.

Vision

Customer satisfaction

Innovation

Reliability

Expertise

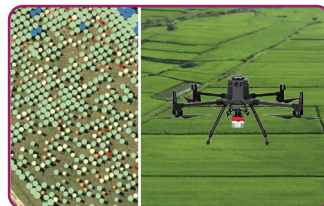# Drone Solutions for different Industries

Agriculture

Covering large areas of crops quickly, efficiently, and accurately, while reducing the need for manual labour and minimizing the risks associated with traditional ground-based spraying and surveying techniques to gather data for detailed analysis.

DJI Agras T40

DJI Agras T10

DJI Matrice 350 RTK with Micasense RedEdge-P Multispectral Kit with DJI Skyport

DJI Mavic 3 Multispectral

Surveying & Mapping

Drones are equipped with advanced technology that allows them to capture data in a variety of ways. They are able to take aerial images with high resolution cameras and quickly generate 3D maps using photogrammetry. This data can be used to analyze terrain, plan land development, and survey construction sites.

Advantages

· High-Resolution Imaging

· Time-Saving

· Safety

· Cost-Effective

· Data Accuracy

· Flexibility

Our Solution

· Land Surveying

· Stockpile Volumetric Measurements

· Urban Planning

· Land Management & Development

· Slope Monitoring

· Road & Infrastructure

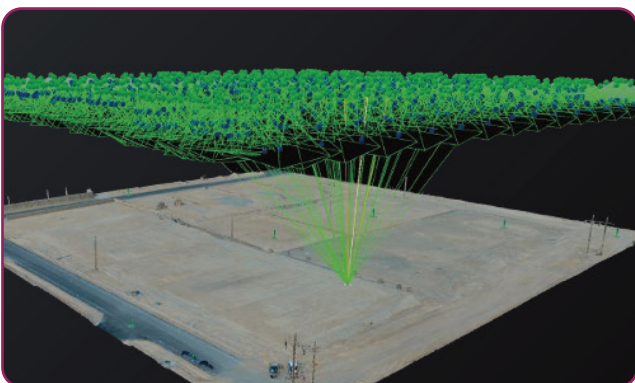## DJI Mavic 3 Enterprise

Electronic Rolling Shutter   Mechanical Global Shutter

DJI Matrice 350 RTK with Zenmuse P1/Zenmuse L2

Autel Evo II Pro Enterprise V3

Public Safety

DJI Dock 2 (Mini Drone In A Box)

Designed to be deployed in difficult-to reach locations, each dock can house a new DJI Matrice 3TD/3D drones (M3D or M3DT) dock edition aircraft that lands, recharges, takes off, and completes the mission as programmed without the need for human intervention.

DJI Matrice 350 RTK with DJI Zenmuse H20T Thermal Camera

The DJI Matrice 350 RTK is the company's latest commercial drone platform, and it takes design features from modern aviation systems. The Matrice 350 RTK sets new standards in intelligence, high performance, and unmatched reliability with its 55-minute flight time, advanced AI capabilities, and six directional sensing and positioning.
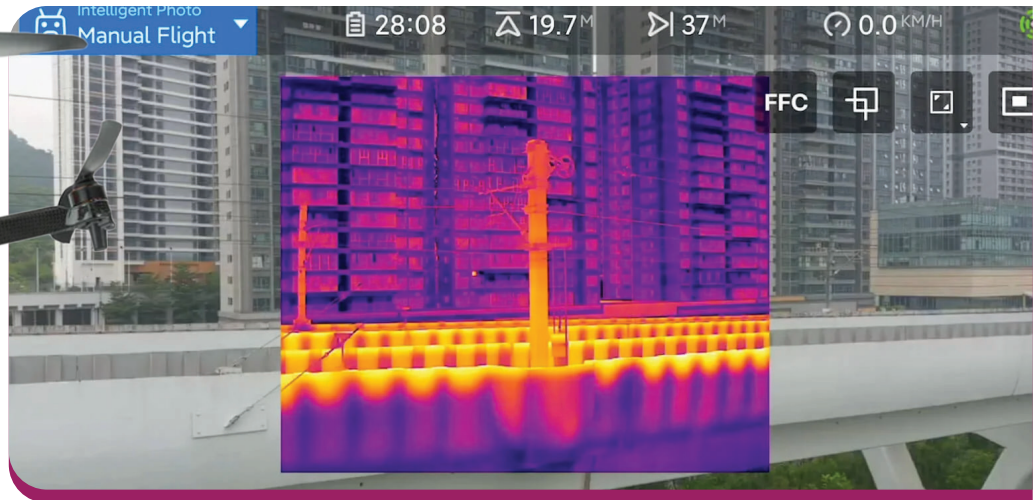
Inspections

Our drone inspection service & solutions deliver complete, fast and accurate automated measurement, inspection, damage detection and assessment, inventory management, budgeting and risk mitigation. Our inspection platform has broad applications across many different commercial industries.

ORE VIDEOS

Intelligent Photo
Manual Flight
28:08 19.7 M 37 M 0.0 KM/H
FFC

Advantages

· Accessible
· Time-Saving
· Safety
· Cost-Effective
· Data Accuracy
· Flexibility

Our Solution

· Oil & Gas Assets
· Detecting Leaks
· Powerline & Civil Infrastructure
· Wind Turbines
· Cell Tower Inspection
· Solar Panels and Solar Farms
· Road, Infrastructure and inspections
· Buildings

Multi–gas detection

Particularly useful in industrial applications, where gas leaks can be hazardous or difficult to detect by other means. By using DJI Matrice 350 RTK and Sniffer, operators can safely and efficiently survey large areas or inspect hard-to-reach equipment for gas leaks, reducing the risk of harm to workers and damage to equipment.

**DJI Matrice 350 RTK
with Sniffer 4D Mapper**

Typical Applications
- Hyper-local environment monitoring
- HAZMAT Response
- Leak detection
- Ship emission & FSC monitoring

Sniffer 4D is able to obtain up to 9 gas concentration distribution at one time. Users can flexibly choose or alter their sensor configurations that suit their applications and budgets.

Examples:
PM2.5, PM10, O3, NO2, CO, SO2, VOCs, Odor(OU) for ambient air monitoring

VOCs, CH4, CO, Cl2, O2, NO2, H2S, CO2 for HAZMAT response

VOCs, CH4, H2S, SO2 for oil & gas plant leak detection

Software

DJI Terra | a 3D model reconstruction software that has photogrammetry as its core technology. It supports a range of accurate and efficient 2D and 3D reconstruction of visible light, and data processing through DJI LiDAR. It caters land surveying and mapping, power transmission, emergency services, construction, transportation, and agriculture.

DJI FlightHub 2 | an all-in-one cloud-based drone operations management platform that helps you achieve comprehensive, real-time situational awareness. Access all the information you need to plan drone missions, supervise fleet, and manage the data you create from a secure cloud-based environment.

Pix4Dmapper | photogrammetry algorithms transform ground or aerial images in digital maps and 3D models captured by any camera, with RGB, thermal, or multispectral images. It measures distances, areas, and volumes accurately which can be shared selectively and securely with clients, suppliers, team members using standard file formats.

Agisoft Metashape | a stand-alone software product that performs photogrammetric processing of digital images and generates 3D spatial data to be used in GIS applications, cultural heritage documentation, and visual effects production as well as for indirect measurements of objects of various scales.

Trendspek | developed Precision Asset Intelligence software that enables to draw on vast volumes of asset data, distilled into a user-friendly interface, to finally deliver trust and certainty asset management. It takes the data points recorded during capture to produce Precision Reality Twins and provides a suite of intuitive tools, that enable engineers and asset managers to make confident decisions about risk, maintenance, and other crucial actions.

Virtual Surveyor | offers solution for Topographic Surveying- create lightweight CAD models, Mining and Quarrying- efficiently apply drone data in mining operations, Construction Earthworks - keep track of construction site and Stockpile Inventory- know the true value of stocks.

Training

Dynatech Innovations provide you with the right drone solution for your business and projects. We offer virtual or on-site equipment familiarization training programs. Our experts give step-by-step knowledge of the system and assist with any questions or concerns you may have. We can also assist in your programs startup as we have done for countless agencies in the past.

Our drone training courses are all taught by professional remote pilots who are licensed holder. Our Drone Training Course is targeted towards Companies, Government Entities and Individuals who want to learn to operate Drones for more advanced commercial purposes.

COURSES

1. Commercial Level Training

Learn the essentials of flight safety, regulations, and advanced maneuvers, equipping you with the skills needed to soar confidently in the dynamic drone industry. Elevate your expertise and unlock a world of exciting opportunities with our comprehensive, hands-on curriculum tailored for aspiring drone pilots. This program is designed for beginners in gaining the skills needed to pursue commercial opportunities.

2. Power Line Inspection Training Course

Many parts of the countries are covered by the Power Lines and other infrastructure and ad-hoc inspection of those locations are highly critical. Many Power Lines' altitude are around 15 Meter to 55 Meters. Drones are the highly recommended equipment to use with safe, reliable, and efficient features to fulfil this requirement of the modern world.

Common Failures Detection
- Broken Insulators
- Deformed Insulators
- Hot Spots of Transformers
- Hot Spots of Sealing End of Cables
- Joints and Clamps Hotspots
- Power Poles Failures
- Hot Spots of Cut out Fuses.
- Hot Spots of Sectionalizes.

Equipment and Software to be used
- DJI Matrice 30T or DJI Mavic 3 Thermal with DJI Pilot App

Data Processing & Exporting Software
- DJI Thermal Analysis Tool
- DJI Terra
- Pix4Dmapper

3. Solar Panel Inspection Training Course

Solar Energy is a rapidly growing source from the last 5 years as a renewable energy in many parts of the world. Some countries including UAE have introduced the solar farm concept to obtain large amounts of electrical power using this natural resource. Previously, the solar panel inspection was done by using thermal cameras. But with the technological revolution, Drones with Thermal capability is used for this solar panel inspection. The drones are used autonomously to take thermal images of the solar panels and with the support of processing software, the results can be obtained instantly.

Common Failures Detection
- Defective cells and substrings
- Panel non-functioning
- Delamination on two cells
- Rupture Cell
- Single Hot Spots
- Multi Cell Hot Spots
- Junction Box Hot Spots
- Operated Bypass Diodes
- Disconnected Strings
- Disconnected Inverters
- Soiling

Equipment and Software to be used
- DJI Matrice 350 RTK and Zenmuse H20T with DJI Pilot2 App

Requirements of IR-Inspection according to IEC Standard
- Application of Ground IR-Inspection in Solar Plants
  - Combiner Boxes
  - Transformers
  - Inverters

- Aerial IR-Inspection of PV- Panels
  - Flight Planning
  - Flight Altitude
  - Flight Speed
  - Camera Angle
  - Time Interval for taking images

Data Processing & Exporting Software
- DJI Thermal Analysis Tool
- DJI Terra
- Pix4Dmapper

4. Survey and Mapping Training Course

The survey and mapping are a process which came from traditional methodology, and it took long time duration and consisted with accuracy issues in the past decades. Since the invention of Drones, the initial aspect covered was the survey and mapping of lands. Nowadays, Drone technology has developed to its ultimate state and many of the construction, environmental, mining, city planning organizations immensely benefited by this survey and mapping technology. In fact, millimeter level accuracy can be obtained with the RTK technology, and it did not exist ever before.

- **Equipment & Software to be used**
  - DJI Matrice 350 RTK with Zenmuse P1

- **Survey & Mapping Industries:**
  - Land Survey and Mapping
  - Building Mapping
  - Mining Survey and Mapping
  - Construction Project Survey and Mapping

- **Survey & Mapping Image processing Software**
  - PIX4Dmapper
  - DJI Terra
  - Arc GIS Drone2Map

- **Survey & Mapping Image Display Software**
  - ArcGIS Pro
  - ArcGIS
  - ArcGIS Online
  - QGIS

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