



Drones for Disaster Planning and Emergency Management



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Introduction

Drones for Disaster Planning and Emergency Management is a guide to small uncrewed aircraft systems (sUAS) for disaster agencies, emergency management organizations, and first responders.

While this guide does not include all aircraft relevant to these fields, it does provide a concise overview of state-of-the-art small uncrewed aerial vehicles appropriate for disaster and emergency applications. Aircraft information was obtained by various resources in 2024. Specifications, prices, and other technical details are subject to change.

The guide was compiled by South Dakota State University researchers in the [Geography and Geospatial Sciences Uncrewed Aircraft Systems Certificate Program](#). This program is part of the Federal Aviation Administration (FAA) [Unmanned Aircraft Systems Collegiate Training Initiative](#) (UAS-CTI).

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EM UAS Features Checklist

- ☐ **AI & Programmable:** Supports automated functionalities and machine learning algorithms.
- ☐ **Aquatic/Waterproof:** Operable in aquatic environments.
- ☐ **BVLOS:** Beyond Visual Line of Sight capabilities for extended operations.
- ☐ **Camera Resolution:** High-resolution imaging.
- ☐ **Communication Encryption:** Secure data transmission during operations.
- ☐ **Costs:** Economic UAS and operating costs.
- ☐ **Durable:** Robust design for challenging environments.
- ☐ **Economic:** Cost-effective solutions for various budgets.
- ☐ **Equipment:** Ability to carry specialized equipment (thermal cameras, LiDAR, etc.).
- ☐ **Flight Time:** Sufficient duration for mission requirements.
- ☐ **Hover/Stability:** Stability in adverse conditions.
- ☐ **Maintenance:** Ease of upkeep and repair.
- ☐ **Maneuverable:** Agile flight for confined or dynamic spaces.
- ☐ **Multifunctional:** Versatility for diverse missions.
- ☐ **NDAA Compliant:** Non-Chinese manufactured UAV.
- ☐ **Obstacle Avoidance:** Sensors to prevent collisions.
- ☐ **Payload:** Capacity to carry mission-critical items.
- ☐ **Portable:** Lightweight and compact for quick deployment.
- ☐ **Safety/Failsafe Features:** Redundant systems for reliability.
- ☐ **Speed:** Adequate performance for time-sensitive missions.
- ☐ **Thermal:** Equipped with thermal imaging sensors.
- ☐ **Weather-Proof:** Designed for operation in harsh conditions.

3D Robotics IRIS+

Weblink

[3D Robotics](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$1,500

Country

USA



The 3D Robotics IRIS+ is a valuable tool for search and rescue operations. Equipped with autonomous flight capabilities and GPS integration, it can cover large areas efficiently. Its “Follow Me” mode allows it to track rescuers, providing real-time aerial views. The drone’s payload capacity supports various cameras and sensors, enhancing its ability to locate missing persons and assess disaster zones. With a flight time of up to 22 minutes, the IRIS+ offers reliable performance in critical situations, making it an essential asset for emergency responders.

Acecore Zoe

Weblink

[Acecore Technologies](#)

Primary Purpose

Photo/Video

UAV Type

Quadcopter

Price (2024 USD)

~\$18,000

Country

Netherlands



Developed by Acecore Technologies, the Zoe is ideal for emergency response and management agencies due to its performance and modularity. Its built-in carrying handle and foldable arms and landing gear enable the Zoe to be deployed quickly in emergencies, where it can provide situational awareness—even in wind and rain—by collecting data from a wide selection of compatible cameras and mapping equipment. The Zoe also provides a long maximum flight time of 47 minutes, and a Zoe drone could stay in the air all day if tethered to an Elistair Safe-T 2 battery station.

ACSL PF2-AE

Weblink

[Autonomous Control
Systems Laboratory](#)

Primary Purpose

Multipurpose

UAV Type

Hexacopter

Price (2024 USD)

~\$20,000-30,000

Country

Japan



The PF2-AE drone is a high-performance unmanned aerial system (UAS) designed for industrial and commercial applications such as surveying, mapping, and inspections. With advanced flight capabilities, the PF2-AE offers precise data collection with exceptional stability, even in challenging environments. It features a robust airframe, long endurance, and the ability to carry a variety of payloads, including high-resolution cameras, LiDAR systems, and thermal sensors. Ideal for applications in construction, agriculture, and infrastructure monitoring, the PF2-AE ensures reliable and efficient operation, providing users with detailed, accurate aerial data for informed decision-making and enhanced operational productivity.

ACSL SOTEN

Weblink

[Autonomous Control
Systems Laboratory](#)

Primary Purpose

Photo/Video

UAV Type

Quadcopter

Price (2024 USD)

~\$9,000

Country

Japan



The SOTEN by ACSL is a quality, weather-resistant choice for emergency response and management agencies. Designed for airborne photography and videography, the SOTEN can record from easily swappable standard, EO/IR, multispectral, and optical zoom cameras, making it suitable for a variety of missions – and, all photos and videos are automatically encrypted, perfect for when sensitive data is involved. Indoor flying during emergencies is possible for the SOTEN if the optional propellor guards are purchased. The SOTEN is also compact due to its foldable wings, and the manufacturers offer two types of carrying cases for easy and safe transport.

Aerialtronics Zenith ATX8

Webink

[Aerialtronics](#)

Primary Purpose

SAR/Surveillance

UAV Type

Octocopter

Price (2024 USD)

~\$10,000-\$20,000

Country

Netherlands



The Altura Zenith ATX8 is a robust octocopter designed for emergency management operations. With up to 40 minutes of flight time in all weather conditions (IPX5 rated), it excels in thermal search and rescue, real-time video situational awareness, and emergency deliveries. It is compatible with over 35 different sensors and payloads, including thermal cameras and LiDAR, making it versatile for various emergency tasks. The drone features an automatic fail-safe system for signal loss, ensuring reliable navigation, along with AI-based object detection and tracking. Additionally, its assisted flight controls with auto-takeoff, landing, and return-to-home features provide enhanced operational safety.

Aeromao Aeromapper Talon

Weblink

[Aeromao](#)

Primary Purpose

Mapping

UAV Type

Fixed-Wing

Price (2024 USD)

~\$12,000-\$15,000

Country

Canada



The Aeromapper Talon Mapping Drone supports emergency management with its long-range and high-resolution capabilities. It provides rapid damage assessment after disasters by covering large areas and capturing detailed imagery. For search and rescue, its thermal and RGB sensors help locate individuals in remote regions. The Talon's real-time video feed offers situational awareness for dynamic events like wildfires. Additionally, it monitors environmental hazards and inspects infrastructure (e.g., bridges, power lines) post-emergency, helping responders assess safety and prioritize repairs without risking personnel.

Aeromao VT-Naut

Weblink

[Aeromao](#)

Primary Purpose

Imagery/Surveillance

UAV Type

Fixed-Wing

Price (2024 USD)

~\$11,000

Country

Canada



The Aeromao VT-Naut is ideal for emergency management due to its amphibious design, allowing it to operate on both land and water. This versatility enables it to assist in disaster response across diverse terrains, including flooded or coastal areas. Its vertical takeoff and landing (VTOL) capability ensures quick deployment in confined spaces. Equipped with high-resolution cameras, thermal sensors, and LiDAR, it provides real-time data for search and rescue, damage assessment, and mapping. The drone's long endurance and rugged build make it reliable for prolonged missions in challenging environments.

AeroVironment Quantix Recon

Weblink

[AeroVironment](#)

Primary Purpose

Reconnaissance

UAV Type

Hybrid VTOL

Price (2024 USD)

~\$16,000

Country

USA



The AeroVironment Quantix Recon combines vertical takeoff and landing (VTOL) with efficient horizontal flight, enabling rapid deployment and high-resolution aerial imagery. Its intuitive operation, durable design, and automated flight paths make it ideal for disaster planning and emergency management. It provides actionable intelligence in real time, helping responders assess damage, identify hazards, and optimize resource allocation. Lightweight and portable, the Quantix Recon excels in challenging environments, ensuring reliable situational awareness for critical decision-making.

AgEagle eBee X

Webink

[AgEagle](#)

Primary Purpose

Mapping

UAV Type

Flying Wing

Price (2024 USD)

~\$12,000-\$20,000

Country

USA



The eBee X Mapping Drone aids emergency management by providing rapid, high-resolution mapping for disaster assessment and situational awareness. After events like floods, wildfires, or earthquakes, it captures aerial imagery that helps responders assess damage, locate critical infrastructure, and plan relief efforts. Equipped with RGB and thermal sensors, the eBee X also supports search and rescue by identifying heat signatures in remote areas. Additionally, it assists in monitoring environmental hazards and evaluating post-disaster infrastructure, helping decision-makers update response strategies and prioritize repairs efficiently.

Aibotix Aibot X6

Weblink

[Aibotix](#)

Primary Purpose

Inspection

UAV Type

Hexacopter

Price (2024 USD)

~\$15,000-\$30,000

Country

Germany



The Aibotix Aibot X6 is a versatile hexacopter ideal for disaster planning and emergency management. Its advanced AI enables rapid deployment and autonomous high-resolution imaging for detailed damage assessment. Equipped with thermal and multispectral sensors, it enhances resource allocation and situational awareness. The drone minimizes human risk by accessing hazardous areas and provides accurate, real-time data for informed decision-making, making it an essential tool for efficient and safe disaster response operations.

Anzu Raptor

Weblink

[Anzu Robotics](#)

Primary Purpose

Mapping/Imagery

UAV Type

Quadcopter

Price (2024 USD)

~\$5,000

Country

USA



The Anzu Robotics Raptor is a highly capable commercial drone designed for a variety of critical missions. With ANZU's partnership with DJI, this is a fully Americanized Mavic 3 Pro. Its features include a 45-minute flight time, a 4/3-inch 20-megapixel camera with 56x hybrid zoom, and RTK technology for centimeter-level precision, making it ideal for tasks like mapping, surveying, and inspections. The drone's lightweight and portable design ensures ease of deployment, while its advanced obstacle avoidance system enhances operational safety. Additionally, its integration with platforms like DroneDeploy streamlines mission planning and execution, further increasing efficiency and accuracy.

Anzu Raptor T

Weblink

[Anzu Robotics](#)

Primary Purpose

Thermal Imagery

UAV Type

Quadcopter

Price (2024 USD)

~\$8,000

Country

USA



The Anzu Robotics Raptor T is a state-of-the-art thermal imaging drone designed for critical applications like search and rescue, inspections, and public safety operations. It features a 640 x 512 thermal camera, a 56x hybrid zoom, and RTK capabilities for centimeter-level accuracy. With a 45-minute flight time, real-time video streaming, and advanced obstacle avoidance, it excels in challenging environments. Its lightweight and portable design ensures rapid deployment, while integration with Aloft software enhances situational awareness and mission coordination. The Raptor T redefines efficiency and reliability in thermal imaging and precision mapping.

Ascent Aerosystems Spirit

Webink

[Ascent Aerosystems](#)

Primary Purpose

Multipurpose

UAV Type

Coaxial

Price (2024 USD)

~\$14,000

Country

USA



Spirit performs exceptionally due to its compact, modular design, enabling easy swaps of payloads and upgrades for seamless adaptability. Its rugged, all-weather airframe excels in extreme conditions like heavy rain, snow, or sand, ensuring mission reliability. With a streamlined structure and capacity for nearly 10 pounds of payloads or batteries, Spirit achieves top speeds over 60 mph and operates in winds that ground competitors. Designed for enterprise-level operations, it delivers unmatched versatility, efficiency, and cutting-edge capabilities to meet today's and tomorrow's mission demands.

Autel Robotics Evo II Dual 640T

Weblink

[Autel Robotics](#)

Primary Purpose

SAR

UAV Type

Quadcopter

Price (2024 USD)

~\$9,000

Country

USA



The Autel Robotics EVO II Dual 640T is a professional-grade drone designed for inspection, search and rescue, and surveillance. It features a 48MP RGB camera and a 640x512 thermal camera, providing high-resolution imaging and real-time thermal data. With 360° obstacle avoidance, a 9 km range, and up to 38 minutes of flight time, it excels in complex environments. This rugged drone is particularly useful for firefighting, law enforcement, and asset inspections, offering both visual and thermal capabilities to tackle challenging tasks.

Autel Robotics Evo Max 4T

Weblink

[Autel Robotics](#)

Primary Purpose

Thermal/SAR

UAV Type

Quadcopter

Price (2024 USD)

~\$8,000

Country

USA



The Autel Robotics EVO Max 4T is a cutting-edge drone tailored for emergency management. It features a 640x512 thermal camera and a 48 MP 1/2" CMOS RGB sensor, enabling precise thermal search and rescue and real-time video situational awareness, even in smoke, darkness, or dense foliage. With 12x optical zoom and advanced obstacle avoidance powered by LiDAR, it navigates complex environments with ease. The drone's IP43 weather resistance ensures reliability in adverse conditions, while its payload delivery capabilities allow it to transport essential supplies during emergencies, including flood or aquatic operations.

Autel Robotics Evo II Pro

Weblink

[Autel Robotics](#)

Primary Purpose

Surveillance/SAR

UAV Type

Quadcopter

Price (2024 USD)

~\$2,000

Country

USA



The Autel Robotics EVO II Pro is a versatile drone ideal for emergency management, providing essential services like search and rescue, real-time situational awareness, and aerial surveys. It features a 50 MP camera for high-resolution imagery, perfect for detailed inspections and mapping. The drone's 40-minute flight time and 25 km maximum range allow for long-duration operations, even in challenging environments. With GNSS positioning and omnidirectional obstacle avoidance, the drone ensures safe navigation during critical missions. Additionally, its wind resistance (level 8) makes it effective for operations in adverse weather.

Axon Sky-Hero Loki MkII

Weblink

[Axon](#)

Primary Purpose

Surveillance

UAV Type

Quadcopter

Price (2024 USD)

<\$10,000

Country

Belgium



The Sky-Hero Loki MkII is a rugged, indoor tactical drone designed for close-quarter reconnaissance. It features an impact-resistant body and fully shielded rotors, allowing it to navigate tight spaces and withstand collisions. Equipped with an ultra-low light camera and day/night vision, it provides critical intelligence in dark environments. The drone's 3D position hold and intuitive flight controls ensure precise maneuvering without GPS. Additionally, it can deliver communication devices and locate hazards, enhancing the safety and efficiency of tactical operations.

Brinc Lemur 2

Weblink

[BrincDrones](#)

Primary Purpose

Emergency Response

UAV Type

Quadcopter

Price (2024 USD)

\$10,000-\$20,000

Country

USA



The Brinc Lemur 2 is a highly versatile, tactical drone designed for law enforcement, public safety, and military operations. Built for rapid deployment in complex environments, it features a rugged, lightweight design that allows it to navigate tight spaces with ease. The Lemur 2 is equipped with high-definition cameras, including thermal imaging, and offers real-time video streaming for situational awareness. With a robust, weather-resistant build, the drone is ideal for search-and-rescue missions, SWAT operations, and surveillance in urban settings. Its compact size, intuitive controls, and advanced safety features make the Lemur 2 a trusted tool for high-stakes missions.

Brinc Responder Drone

Weblink

[BrincDrones](#)

Primary Purpose

Emergency Response

UAV Type

Quadcopter

Price (2024 USD)

~\$9,000

Country

USA



The Brinc Responder drone is a cutting-edge tool that enhances emergency management services. Here are some of the key services it provides. Rapid Response: The Responder drone can reach 911 calls in under 70 seconds. Life-Saving Deliveries: It can deliver essential medical supplies. Two-Way Communication: The drone has an integrated loudspeaker and microphone. Advanced Imaging: dual visual cameras and a thermal sensor. Night Operations: Equipped with powerful lights and an anti-collision beacon, complies with FAA regulations. Integration with Public Safety Systems: The drone integrates seamlessly with 911 and Computer-Aided Dispatch (CAD) systems.

CamFlite Aurora

Weblink

[CamFlite](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$17,000

Country

USA



Emergency response and management agencies searching for a multipurpose aerial platform with a high payload capacity should look no further than the Aurora by CamFlite. The Aurora can carry large payloads weighing up to 20lbs, so it can transport essential supplies or capture data from large cameras and LiDAR sensors, and the attachable Ark RTK mast allows missions to be carried out with extreme geospatial precision. The Aurora is compact and easy to transport due to its foldable arms and optional custom shipping case, and its integrated XT90 power connector makes battery connection on the scene fast and easy.

Cleo Dronut X1 Pro

Weblink

[Cleo Robotics](#)

Primary Purpose

SAR (Confined Space)

UAV Type

Coaxial

Price (2024 USD)

~\$10,000

Country

USA



The Cleo Dronut X1 (NDAA compliant) is a compact, innovative drone designed for emergency management in confined or hazardous environments. With a 7-inch diameter, ducted-fan design, and lightweight carbon fiber body, it's ideal for GPS-denied areas like collapsed buildings or disaster areas. Equipped with LiDAR for obstacle detection and high-definition video (1080p real-time streaming and 4K recording), it provides crucial situational awareness, making it ideal for reconnaissance and pre-deployment scouting. Powered by Qualcomm Snapdragon, it offers stability, ease of use, and a 17-minute flight time. Its collision-tolerant design ensures durability and safety in high-risk scenarios.

DJI Agras T20

Weblink

[DJI](#)

Primary Purpose

Multipurpose

UAV Type

Hexacopter

Price (2024 USD)

~\$15,000-\$18,000

Country

China



The DJI AGRAS T20 drone has several features that could make it valuable in emergency management roles, particularly in disaster response, search and rescue, and environmental monitoring. The DJI Agras T20, with its precision spraying system and payload capacity, can rapidly deliver emergency supplies, disinfectant, or fire retardant to inaccessible areas, making it a critical tool in disaster response and public safety scenarios.

DJI Avata 2 SAR

Weblink

[DJI](#)

Primary Purpose

Multipurpose

UAV Type

Hexacopter

Price (2024 USD)

~\$1,500

Country

China



The DJI Avata 2 is ideal for emergency management with its 4K/60fps HDR imaging for detailed assessments, agile design for confined spaces, and O4 video transmission for real-time situational awareness. Paired with intuitive controls like DJI Goggles 3, it enables rapid deployment even in challenging environments. This compact drone enhances decision-making and safety, making it a valuable asset for disaster response and recovery operations. This model shown here has the Tom Palmaers SAR Dome Premium Kit.

DJI Matrice 30T

Weblink

[DJI](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

+\$10,000

Country

China



The DJI Matrice 30T is a versatile commercial drone designed for diverse enterprise applications. It features a compact, foldable design and integrates a 48MP wide camera, a 12MP zoom camera, and a thermal sensor, offering high performance in a portable package. With a flight time of up to 41 minutes and advanced safety features like dual-vision and ToF sensors, the M30T is ideal for inspection, search and rescue, and other critical missions. Its robust build ensures reliable operation in various weather conditions.

DJI Matrice 300 RTK

Weblink

[DJI](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$14,000

Country

China



The DJI Matrice 300 RTK offers unmatched reliability and versatility for disaster planning and emergency management. With a 55-minute flight time, advanced sensors, and thermal imaging capabilities, it excels in search and rescue, damage assessment, and resource deployment. Its robust design ensures performance in harsh conditions, while AI-powered features enable efficient data collection and real-time analysis. Easy to operate and customizable with various payloads, the Matrice 300 RTK is a critical tool for effective crisis response.

DJI Mavic 3 Enterprise

Weblink

[DJI](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$3,500-\$7,500

Country

China



The DJI Mavic 3 Enterprise series, including the Mavic 3E and Mavic 3T, is designed for emergency management. The Mavic 3T features a 640x512 thermal camera, ideal for thermal search and rescue and firefighting, while the Mavic 3E is equipped with a 50 MP RGB camera for detailed visual inspections. Both drones offer real-time HD video streaming, real-communication via loudspeaker, GNSS positioning, and omniscient obstacle sensing + RTK for precise, safe operations. They are also suitable for emergency supply delivery and aquatic search missions due to their rugged, weather-resistant design. These drones are essential tools for first responders in complex environments.

Draganfly Commander2

Weblink

[Draganfly](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$22,000-\$40,000

Country

Canada



The Draganfly Commander2 is a high-performance, versatile drone designed for a range of commercial and industrial applications. Equipped with advanced sensors and a robust flight system, it offers exceptional stability and precision even in challenging environments. The drone features a long flight time, high payload capacity, and the ability to carry specialized equipment like high-resolution cameras and thermal sensors. The Commander2 excels in data collection, mapping, and surveillance tasks. Its rugged design ensures reliability in demanding conditions, making it a trusted tool for professionals across industries.

Draganfly Draganflyer X4-P

Weblink

[Draganfly](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$15,000-\$30,000

Country

Canada



The Draganflyer X4-P is a versatile, high-performance drone that is well-suited for emergency management. Its ability to carry advanced sensors like thermal and LiDAR, combined with its modular payload system and long flight times, makes it a valuable tool for search and rescue operations, disaster response, and infrastructure inspection.

Drone Volt Hercules H10

Weblink

[Drone Volt](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$15,000-\$30,000

Country

France



The Drone Volt Hercules H10 is highly suitable for emergency management due to its versatility, long endurance, and high payload capacity. It can carry multiple sensors, including thermal cameras, LIDAR, and high-resolution RGB cameras, providing critical situational awareness for search-and-rescue operations, disaster monitoring, and damage assessment. With up to 60 minutes of flight time, it offers extensive coverage in crisis zones. Its rugged design ensures reliability in harsh conditions, while the ability to operate in GPS-denied environments makes it ideal for challenging and rapidly changing emergency situations.

Easy Aerial Osprey

Weblink

[Easy Aerial](#)

Primary Purpose

Delivery

UAV Type

Hexacopter

Price (2024 USD)

~\$15,000-\$50,000

Country

USA



The Easy Aerial Osprey hexacopter is ideal for emergency management due to its rugged, autonomous capabilities and rapid deployment. Its hexacopter design offers increased stability and redundancy, essential for operations in unpredictable or hazardous environments. The Osprey can be equipped with modular payloads, including thermal imaging and high-definition cameras, making it suitable for search and rescue, damage assessment, and real-time situational awareness. Its extended flight endurance, along with the ability to operate in extreme weather conditions, allows for sustained operations, crucial during time-sensitive emergency scenarios.

Exo Drones Blackhawk

Weblink

[Exo Drones](#)

Primary Purpose

Recon/Photography

UAV Type

Quadcopter

Price (2024 USD)

~\$1,000

Country

USA



The EXO Blackhawk 3 Pro is well-suited for emergency management due to its extensive 53-minute flight time, enabling prolonged surveillance or search operations. Its 9-mile transmission range with high-definition live feed ensures effective monitoring over vast areas. The drone features advanced obstacle avoidance sensors for safe navigation and level-8 wind resistance, ensuring reliability in harsh conditions. Equipped with a 4K camera and night vision capabilities, it provides clear visuals in various lighting scenarios. Intelligent flight modes, including GPS routing and return-to-home functions, enhance operational efficiency and ease of use.

FlightWave Edge 180

Webink

[FlightWave](#)

Primary Purpose

Multipurpose

UAV Type

VTOL Hybrid

Price (2024 USD)

~\$12,000-\$30,000

Country

USA



The Flightwave Edge 130 hybrid drone is highly applicable for emergency management due to its extended flight time and ability to operate in challenging environments. Its hybrid electric power system allows for longer endurance, making it ideal for tasks like search and rescue, damage assessment, and surveillance during disasters. The Edge 130's VTOL capability enables it to take off and land in confined spaces, while its modular payload system supports thermal cameras, sensors, and other tools essential for real-time data gathering and situational awareness in critical scenarios.

Fotokite Sigma

Weblink

[Fotokite](#)

Primary Purpose

Thermal/Imagery

UAV Type

Tethered Hexacopter

Price (2024 USD)

~\$41,000

Country

USA



The Fotokite Sigma is a tethered drone system designed for public safety and emergency response. Although priced at \$41,000, it justifies the investment with unmatched capabilities. The Sigma offers continuous 24-hour aerial coverage and can stream live video feeds to up to 20 screens simultaneously, making it ideal for crowd monitoring, disaster response, and situational awareness. Its tethered design ensures operational reliability and unlimited power supply without needing GPS, enhancing deployment in complex environments. Compact and portable, it includes features like rapid transport cases for quick setup and integration.

Freefly Alta X

Weblink

[Freefly Systems](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$28,000

Country

USA



The Freefly Alta X is a robust heavy-lift drone ideal for disaster planning and emergency management. With a payload capacity of up to 35 lbs and long flight endurance, it can carry advanced sensors, cameras, and delivery packages. Its resilient design withstands harsh conditions, while precision flight controls ensure stability for detailed mapping and surveillance. Rapid deployment and adaptability make the Alta X a critical tool for real-time situational awareness and resource delivery in crises. A specific example is it has been used for PSD (plastic sphere dispenser) operations for prescribed and wildfire use.

Freefly Astro

Weblink

[Freefly Systems](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$15,000-\$20,000

Country

USA



The Freefly Astro drone enhances disaster planning and emergency management with its high-precision RTK/PPK navigation, LTE cloud connectivity, and modular payloads, including high-resolution cameras and thermal sensors. Its rapid deployment and real-time data transmission capabilities enable efficient situational awareness, aiding in effective decision-making during crises.

Harris Aerial H6

Weblink

[Harris Aerial](#)

Primary Purpose

Multipurpose

UAV Type

Hexacopter

Price (2024 USD)

~\$15,000-\$30,000

Country

USA



The Harris Aerial H6 is a high-performance drone tailored for disaster planning and emergency management. Its hybrid gas-electric power system provides extended flight times of up to 5 hours, making it ideal for long-duration operations. With a payload capacity of 15 kg, it supports thermal cameras, LiDAR, and supply delivery. Its rugged design ensures reliability in harsh environments, while its versatility and endurance enhance situational awareness, resource allocation, and rapid response in critical situations.

Inspired Flight IF750

Weblink

[Inspired Flight](#)

Primary Purpose

Surveying/ Mapping

UAV Type

Hexacopter

Price (2024 USD)

~\$10,000-\$25,000

Country

USA



The Inspired Flight IF750 drone supports emergency management by providing rapid damage assessments after disasters, capturing high-resolution imagery to help responders prioritize efforts. It aids in search and rescue operations using thermal imaging to locate individuals in distress. The drone also conducts infrastructure inspections to assess structural integrity following emergencies. With real-time situational awareness, it enhances decision-making during dynamic events. Additionally, the IF750 monitors environmental hazards and assists in responses to hazardous materials, ensuring public safety while providing critical data without putting personnel at risk.

Microdrones MD-1000

Weblink

[Microdrones](#)

Primary Purpose

Photo/Video

UAV Type

Quadcopter

Price (2024 USD)

~\$18,000

Country

Germany



The Microdrones MD-1000 is highly suitable for emergency management due to its versatile features. It is equipped with long-range LiDAR and high-resolution cameras, enabling precise mapping and imaging, even in challenging terrains. Its VTOL (vertical take-off and landing) capability makes it ideal for areas with limited flat space. Additionally, it is waterproof, supports BVLOS (beyond visual line-of-sight) operations, and has stable flight characteristics, ensuring reliability in adverse weather. Automated mission planning and real-time monitoring enhance its efficiency for rapid response in emergencies, such as mapping disaster zones or assessing flood impacts.

Multirotor Cargo Robot

Weblink

[Multirotor](#)

Primary Purpose

Cargo Delivery

UAV Type

Hexacopter

Price (2024 USD)

~\$5,000

Country

Germany



The Cargo Robot by MULTIROTOR is an excellent option for emergency response and management agencies looking to invest in a safe, performance UAV that can deliver potentially life-saving cargo. Cargo Robots can deliver small packages such as medical supplies up to 12km away, remaining stable in windy conditions and utilizing MULTIROTOR's AirSense system to effectively locate and avoid other aircraft along the route. MULTIROTOR also offers officially recognized training for flight crews looking to operate the Cargo Robot.

NovaDEM NX70

Weblink

[NovaDEM](#)

Primary Purpose

Public Safety

UAV Type

Quadcopter

Price (2024 USD)

~\$22,000

Country

France



The Novadem NX70 is a lightweight, micro-unmanned aerial vehicle (UAV) designed for diverse emergency management applications. With its all-weather capability, it can withstand winds up to 40 mph and extreme temperatures. It offers real-time situational awareness via a secure 3G/4G connection, broadcasting thermal and high-definition visual data to command centers, enhancing decision-making during crises. Its 45-minute flight endurance and compact design enable rapid deployment in under a minute. Additionally, its 300-gram payload capacity allows it to deliver essential items, like medical kits, and support search and rescue missions in challenging terrains.

NovaDEM U130

Weblink

[NovaDEM](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$30,000-\$40,000

Country

France



The Novadem U130 is highly applicable for emergency management due to its versatility and advanced inspection capabilities. It can operate in challenging environments, including areas without GPS coverage, thanks to its local positioning system. The U130 is equipped with high-resolution imaging and real-time data transmission, enabling precise assessment of damage or hazards. Rotor protection and compact design enhance its safety and maneuverability in close inspections. Its integrated software facilitates efficient data analysis and reporting, streamlining decision-making during emergencies. These features make it ideal for search and rescue, infrastructure assessment, and disaster response.

Parrot Anafi Ai

Weblink

[Parrot](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$4,000

Country

France



The Parrot ANAFI Ai is a 4G-connected drone designed for disaster planning and emergency management. Its robust connectivity ensures stable communication even in challenging environments. The 48 MP camera captures detailed imagery, aiding in damage assessment. Autonomous photogrammetry and obstacle avoidance enhance operational efficiency and safety. Its open-source platform allows for customized applications, making it a versatile tool for emergency response.

Parrot Anafi USA GOV

Weblink

[Parrot](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$14,000

Country

France



The Parrot ANAFI USA GOV is designed for emergency management with features that enhance situational awareness and operational efficiency. It boasts a 32x zoom camera and a thermal imaging sensor, allowing for detailed inspections and effective search-and-rescue operations. With a flight time of up to 32 minutes and a range of 4 kilometers, it supports extensive area coverage. The drone's rugged design ensures durability in harsh conditions, while its intuitive controls facilitate rapid deployment in emergencies. Additionally, its secure data transmission ensures confidentiality, making it a trusted choice for public safety agencies.

ProDrone Scan

Weblink

[Prodrone](#)

Primary Purpose

Disaster Recovery

UAV Type

Quadcopter

Price (2024 USD)

~\$20,000-\$30,000

Country

Japan



The ProDrone Scan supports emergency management with its capabilities in low-light conditions. It is ideal for nighttime search and rescue missions, providing clear imagery to locate individuals in dark or remote areas. After disasters, it performs damage assessment to help responders prioritize their efforts. The drone is also useful for inspecting critical infrastructure in low light, identifying hazards, and enhancing situational awareness for emergency teams. Additionally, it can monitor fires and hazardous areas from a safe distance, supplying valuable data without risking personnel in dangerous conditions.

Quantum Systems Trinity Pro

Weblink

[Quantum Systems](#)

Primary Purpose

Mapping/Surveying

UAV Type

VTOL Hybrid

Price (2024 USD)

~\$10,000-\$15,000

Country

Germany



The Quantum Systems Trinity Pro Mapping Drone supports emergency management with its long endurance and high-resolution sensors, enabling rapid damage assessment after disasters by covering large areas and mapping affected zones. For search and rescue, its thermal and RGB sensors locate individuals in remote areas. The Trinity Pro provides real-time situational awareness for dynamic events like wildfires and monitors environmental hazards such as chemical spills. Additionally, it conducts infrastructure inspections post-disaster, assessing critical structures like bridges and power lines, helping prioritize repairs and ensure safety without risking personnel.

RMUS Heavy Duty Police Drone

Weblink

[RMUS](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

>\$35,000

Country

USA



RMUS and Realtime Robotics (RtR) have partnered to create a portable, high-performance drone package tailored for law enforcement. Built on RtR's HERA platform, the NDAA-compliant RMUS Heavy Duty Law Enforcement Package supports up to four payloads, delivering rapid deployment and robust capabilities. Designed for critical missions, it enables operators to locate missing persons, deliver supplies, or track targets simultaneously. Compact and efficient, the HERA drone deploys in under a minute, fits in a backpack, and lifts payloads up to 33 pounds, offering unmatched versatility and 360-degree payload visibility.

Sky-Drones X700

Weblink

[Sky-Drones](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$15,000

Country

Great Britain



The Sky-Drones X700 is designed for emergency management with its robust, long-range capabilities and real-time data transmission. Equipped with advanced sensors, including thermal and RGB cameras, it excels in search-and-rescue missions, damage assessment, and monitoring disaster zones. Its 70-minute flight time and 20 km transmission range allow extensive coverage, while the rugged design ensures durability in harsh environments. The X700's autonomous flight features and easy-to-use interface make it ideal for quickly deploying in critical situations, providing real-time situational awareness and aiding in effective decision-making during emergencies.

Skydio X2

Weblink

[Skydio](#)

Primary Purpose

Surveillance/SAR

UAV Type

Quadcopter

Price (2024 USD)

~\$10,000-\$20,000

Country

USA



The Skydio X2 is a rugged, AI-powered drone designed for tactical operations and public safety applications. It features 360° obstacle avoidance, a dual camera system (4K HDR and thermal), and advanced autonomy for complex environments. The X2 is ideal for search and rescue, surveillance, and asset inspections. With a range of up to 10 km and a flight time of up to 35 minutes, it is highly regarded for military, government, and industrial use.

Skydio X2D

Weblink

[Skydio](#)

Primary Purpose

Photo/Video

UAV Type

Quadcopter

Price (2024 USD)

~\$11,000

Country

USA



The Skydio X2D is highly applicable for emergency management due to its advanced autonomy and obstacle avoidance capabilities. Equipped with a 4K HDR camera and thermal imaging, it provides detailed situational awareness for search and rescue missions. The drone offers a flight time of up to 35 minutes and a range of 6 kilometers, facilitating extensive coverage in emergency scenarios. Its ability to navigate complex environments without manual control enhances operational efficiency, while rugged construction ensures reliability in harsh conditions. Additionally, its secure data handling supports confidentiality during sensitive operations.

Skydio X10

Weblink

[Skydio](#)

Primary Purpose

Imagery/Surveillance

UAV Type

Quadcopter

Price (2024 USD)

>\$15,000

Country

USA



The Skydio X10 is well-suited for emergency management due to its advanced autonomous flight capabilities, enabling safe navigation in complex, dynamic environments. Its high-resolution thermal and visual sensors support search and rescue operations, fire monitoring, and damage assessment. The drone's obstacle avoidance technology ensures reliable performance in challenging terrains. With long flight times and the ability to carry critical payloads, the X10 offers both extended coverage and efficient deployment. Real-time video streaming and precise GPS provide essential situational awareness, making it an indispensable tool for first responders during emergencies.

Sony Airpeak S1

Weblink

[Sony](#)

Primary Purpose

Imagery/Surveillance

UAV Type

Quadcopter

Price (2024 USD)

~\$10,000

Country

Japan



The Sony Airpeak S1 is ideal for emergency management due to its advanced features like high stability, precision control, and payload capacity, which enable it to carry essential equipment such as thermal cameras or sensors. Its quick deployment, high-speed flight, and reliable GPS system make it suitable for surveying disaster areas, locating victims, or assessing damage in real-time. Additionally, its rugged design ensures resilience in challenging environments, while its integration with the Airpeak flight controller allows for seamless operation even in dynamic, high-pressure situations.

SwellPro Splash Drone 4 SAR

Weblink

[SwellPro](#)

Primary Purpose

Recon/Delivery

UAV Type

Quadcopter

Price (2024 USD)

~\$2,000

Country

Hong Kong



The Splash Drone 4 is designed for use near oceans and other water bodies. It boasts an IP67 waterproof rating, and its internal components are built to resist corrosion. This drone offers customizable options suitable for both leisure and emergency response purposes. Its payload release system can handle a 2-kilogram load, with a maximum flight duration of 30 minutes, enabling several drops within this time frame. Moreover, it can operate reliably in wind speeds of up to 38 mph.

Teal Drones Golden Eagle

Weblink

[Teal Drones](#)

Primary Purpose

Photo/Video

UAV Type

Quadcopter

Price (2024 USD)

~\$15,000

Country

USA



The Teal Drones Golden Eagle is well-suited for emergency management due to its robust design and advanced capabilities. It features a high-resolution 4K camera with thermal imaging for effective search and rescue operations. With a flight time of up to 40 minutes and a range of over 5 kilometers, it provides extensive coverage for real-time situational assessment. The drone is equipped with a modular payload system, allowing for customization based on mission needs. Its durability and weather resistance make it ideal for challenging environments, ensuring reliable performance during critical operations.

Teal Drones Teal 2

Weblink

[Teal Drones](#)

Primary Purpose

Imagery/Surveillance

UAV Type

Quadcopter

Price (2024 USD)

~\$16,000

Country

USA



The Teal 2 drone is highly effective for emergency management due to its advanced thermal and high-resolution optical sensors, enabling precise search and rescue operations, damage assessments, and fire monitoring. Its rugged, weather-resistant design ensures reliability in harsh conditions, while its long flight time and fast deployment support rapid response in disaster zones. The drone's autonomous flight capabilities, GPS accuracy, and real-time video streaming enhance situational awareness for first responders. With a payload capacity to carry additional equipment and its ability to operate in complex environments, the Teal 2 is a valuable tool in critical emergency scenarios.

Teledyne FLIR SIRAS

Weblink

[Teledyne](#)

Primary Purpose

Imagery/Surveillance

UAV Type

Quadcopter

Price (2024 USD)

~\$10,000

Country

USA



The FLIR SIRAS drone is highly effective for emergency management due to its thermal imaging capabilities, allowing for rapid search and rescue operations in low-visibility conditions. Its high-resolution camera can detect heat signatures, making it ideal for locating individuals or assessing fire hotspots. The drone's ease of deployment, automated flight features, and robust design ensure reliable performance in challenging environments. Additionally, its long flight time and real-time video feed enable efficient monitoring of disaster areas, supporting decision-making during emergencies. These features make the SIRAS drone a valuable tool for first responders.

Teledyne FLIR Skyranger R70

Weblink

[FLIR](#)

Primary Purpose

Disaster Response

UAV Type

Quadcopter

Price (2024 USD)

~\$100,000

Country

USA



The Teledyne FLIR SkyRanger R70 is a versatile drone designed for disaster planning and emergency management. Its advanced autonomy and artificial intelligence enable object detection and classification, enhancing situational awareness. The R70's rugged design allows it to operate in challenging environments, withstanding sustained winds up to 65 kph and altitudes up to 15,000 feet. Its open architecture supports payloads up to 3.5 kg, accommodating various sensors for mission-specific needs.

TYI 30L Fire Fighting Drone

Weblink

[TYI](#)

Primary Purpose

Firefighting

UAV Type

Hexacopter

Price (2024 USD)

~\$7,000

Country

China



The TYI 30L Fire Fighting Drone offers adjustable payload capacity and customizable batch settings for efficient firefighting and multi-functional use. Designed for versatility, it supports additional systems like airdrop capabilities for tear gas or other payloads. Manufactured by Xianning TYI Model Technology Co., a trusted provider with over eight years of expertise, this drone combines innovation and reliability. With a production capacity exceeding 150 units per month and rapid delivery times, the TYI 30L is an ideal solution for high-demand aerial operations.

Vantage Robotics Trace

Webink

[Vantage Robotics](#)

Primary Purpose

Surveillance

UAV Type

Quadcopter

Price (2024 USD)

~\$11,000

Country

USA



Trace is a pocket-sized UAV designed for aerial surveillance and overwatch with exceptional sensor capabilities and stealth. Weighing just 154g, it offers 35 minutes of flight time, 48MP EO & 320P IR stabilized imaging, and operations in GPS-denied environments. Compact and rugged, it deploys in 30 seconds, withstands harsh conditions, and remains inaudible and invisible at 30 feet. NDAA-compliant and built in the USA, Trace features AES-256 encryption for secure data and is ideal for mission-critical indoor or outdoor operations.

Vayu G-1 MKII

Weblink

[Vayu Aerospace](#)

Primary Purpose

Imagery/Surveillance

UAV Type

VTOL Hybrid

Price (2024 USD)

~\$8,000-\$10,000

Country

USA



The Vayu Aerospace G1-MKII drone provides advanced emergency management solutions through its exceptional capabilities. With hybrid gas-electric propulsion, it achieves a range of up to 1,200 miles and over 20 hours of flight time. Its customizable payload bay supports medical supply delivery, search and rescue missions, and wildfire spotting. Triple-redundant GPS, advanced communication systems, and "Octo-Chute" ensure precise navigation and operational safety. Designed for high-stakes environments, the G1-MKII delivers reliable performance for emergency response, disaster relief, and tactical operations, establishing itself as a premier UAV for critical missions.

Vayu US1-MKII

Weblink

[Vayu Aerospace](#)

Primary Purpose

Imagery/Surveillance

UAV Type

Quadcopter

Price (2024 USD)

~\$3,000

Country

USA



The Vayu Aerospace US1-MKII drone is a versatile tool for emergency management, offering robust aerial surveillance and situational awareness capabilities. With a flight time of up to two hours and a range of 37 miles, it efficiently supports missions like search and rescue, medical supply delivery, and perimeter security. Its lightweight design, universal payload mounting system, and 256-bit encrypted data link ensure adaptability and secure operation. Fully autonomous and weather-resilient, the US1-MKII is ideal for real-world applications requiring precision and reliability.

WISPR Ranger Pro 1100

Webink

[WISPR Systems](#)

Primary Purpose

Multipurpose

UAV Type

Quadcopter

Price (2024 USD)

~\$14,000

Country

USA



The Ranger Pro 1100 by WISPR Systems is a great choice for emergency response and management agencies that need a platform capable of flying in hazardous conditions. The Ranger Pro 1100 is made from a lightweight yet extremely durable carbon fiber frame and contains built-in cooling systems, enabling it to operate in a variety of temperatures, and its integrated RTK-compatible GNSS receiver and LiDAR sensors provide it with 360-degree collision avoidance capability. Additionally, the Ranger Pro 1100 can fly in wind speeds up to 50mph, and its aircraft-grade electromagnetic shielding allows it to fly close to sources of electromagnetic interference.

Yuneec H520

Weblink

[Yuneec](#)

Primary Purpose

Emergency Management

UAV Type

Hexacopter

Price (2024 USD)

~\$2,000-\$4,000

Country

China



The Yuneec H520 is designed for emergency management applications with features like thermal imaging, long flight times, and precise GPS positioning. Its payload options, including the ET thermal camera and E90 high-resolution camera, enable effective night operations and detailed imaging in various scenarios. The drone's stability and predictable controls make it reliable for search-and-rescue, inspection, and surveillance missions. Additionally, it offers modular compatibility for specific tools like payload delivery systems and spotlight attachments, enhancing its versatility for emergency operations.

Yuneec H850

Weblink

[Yuneec](#)

Primary Purpose

SAR/Delivery

UAV Type

Hexacopter

Price (2024 USD)

~\$8,000-\$32,000

Country

China



The Yuneec H850 hexacopter is well-suited for emergency management due to its advanced features. It has a high payload capacity of up to 6 kg (13.2 lbs), allowing it to carry essential equipment like thermal cameras and searchlights for search and rescue missions. The RTK (Real-Time Kinematic) module ensures precise navigation in complex environments, while its extended flight time supports prolonged operations. The drone's weather-resistant design and stable hexacopter configuration make it reliable for operations in challenging conditions, including adverse weather and disaster zones.



Aviation Planning: Advanced Air Mobility
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