

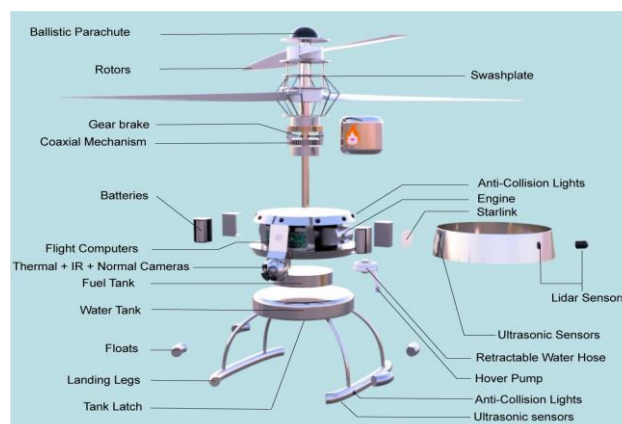


# FireGuard Drones – Your First Response Against Wildfires

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## Concept Overview

To combat the growing threat of wildfires and assist wildland firefighting departments, we have developed a unique drone concept. By incorporating NASA's **Unmanned Aerial System (UAS) Traffic Management (UTM) IP**, we envision a safe and efficient airspace operation of our revolutionary aerial firefighting UAS technology, enabling autonomous fire suppression capabilities for firefighters in the day and at night.



## Innovation

Our technology features a fleet of large autonomous firefighting drones equipped with proprietary mission planning software, **NASA's UTM IP** for seamless airspace integration, and **Safe2Ditch IP** for emergency safety. These systems combine to form a groundbreaking tool for combating wildfires.

### Capabilities:

- **Advanced Air Mobility (AAM)** - Use NASA **UAS Traffic Management (UTM)** to enable safe and efficient airspace traffic coordination.
- **Internet of Things (IoT)** - Use SpaceX Starlink to enable data link between UAS and the command center.
- **Remote piloting** - Enables safer control authority over the UAS in case of emergency.
- **Safe2Ditch** - Provides an assortment of emergency features e.g. ballistic parachutes, flotation devices, and a backup flight controller for controlled descent.

### Applications:

- **Wildland fire prevention** - A fleet of wildland firefighting UAS for effective fire suppression operations.
- **(24/7) Nighttime firefighting** - Navigate through thick smoke using sense & avoid technologies (e.g. Radar, ultrasound, IR).
- **Surveillance & Intelligence** - Provide live data feed using onboard EO, IR, and thermal imaging sensors.

## Commercial Viability & Feasibility

- The markets our product is targeting include the drone market and aerial firefighting market, all of which are growing markets with increased demand.
- The global commercial drone market size was estimated at **USD 19.89 billion** in 2022 and is expected to grow at a **compound annual growth rate (CAGR) of 13.9%** from 2023 to 2030 (Grand View Research).
- The global aerial firefighting market size in 2022 was **USD 4946.77 million** and is projected to be USD 7046.21 million by 2030 with a **compound annual growth rate (CAGR) of 4.01%** during the forecasted period ([www.businessresearchinsights.com](http://www.businessresearchinsights.com))
- Aerial firefighting product and service includes specialized aircraft and technologies.
- Growth in this market is attributed to the increases in wildfire frequency and severity.

Global Aerial Firefighting Market Size, 2021 (USD Million)

