Task

Mapping and Damage Assessment of Disaster Areas

A Fixed-Wing Unmanned Aerial Vehicle (UAV) performs the task of creating detailed maps and conducting damage assessment in areas affected by natural disasters or ongoing emergencies. Tasks:

1- Rapid Surveillance and Mapping:

The UAV scans the post-disaster region using high-resolution cameras and sensors. As a result, aerial images provide quick and comprehensive data about the overall condition of the area.

2- Monitoring Infrastructure and Settlements:

The UAV identifies damaged buildings, bridges, roads, and other infrastructure elements to determine the extent of damage in the region. Additionally, it evaluates the condition of houses and buildings in settlements.

3- Detailed Analysis with High-Resolution Images:

The UAV obtains detailed images through high-resolution cameras. Analyses conducted with these images help determine the extent of damage, identify regions more severely affected, and pinpoint areas requiring urgent intervention.

4- Geographic Information Systems (GIS) Integration:

Data obtained by the UAV can be integrated with geographic information systems. This enables more effective use of maps and analyses. Rescue teams and aid organizations plan emergency interventions by utilizing this coordinated data.

5- Coordination and Improvement of Aid Distribution:

The created maps strengthen coordination among rescue teams and aid organizations. Data provided by the UAV assists in more efficiently distributing emergency aid.

6- Time Savings and Security:

UAVs operate much faster than manually conducting mapping and damage assessment processes. This facilitates rapid intervention by rescue teams and enhances security measures against potential risks.