The Flight Management Unit (FMU) (both the general-purpose and professional version) acts as a bridge between the UAV pilot and the control outputs. The FMU is also able to store commands and waypoints from the user and execute them for an automated flight. The FMU differs from others in the market because it has a high level communication system which helps in traffic management and collision avoidance. The professional version has better system redundancies and an ADS-B receiver (LEVEL 3 COMMUNICATION) to avoid traffic conflicts with commercial and general-aviation aircraft. This allows commercial UAVs to fly at higher altitudes and in controlled airspace. (Depending on future FAA regulations)

The FMU also supports a mesh-based protocol (LEVEL 2 COMMUNICATION) that manages traffic avoidance between UAVs connected to the network. In the future this system can also be used to co-ordinate UAVs during joint aircraft missions. The FMU will also be able to perform completely pre-programmed missions from take-off to landing.

LEVEL 3: ADS-B TRANSPONDER

Our Flight Management Unit (FMU) intercepts ADS-B broadcasts from commercial and general-aviation aircraft fitted with ADS-B transponders. The FMU then generates a new trajectory to avoid collision and traffic conflicts.

LEVEL 2: MESH NETWORK

Broadcasts position and velocity data to other UAVs on the network for (automated) collision avoidance and traffic management. Uses simple RF transceivers for bi-directional communication.

LEVEL 1 COMMUNICATION

Control and Telemetry communication between UAVs and ground control centers. Uses simple RF transceivers for bi-directional communication.