

## **Ground Control Station (GCS)**

### **GCS Hardware**

L-3 Geneva Aerospace's missionTEK® control station delivers UAS mission control and management through an easy to use systems interface. The missionTEK® architecture supports network-centric communications with multiple heterogeneous UAV's. The missionTEK® CPU is the interface computer providing the interface between the AVO and the UAV. Falcon View is also in the GCS and provides an interface for mission planning and in-flight situational awareness. This interface allows input from the AVO through keyboard, touchpad pointing device and joystick entry. It provides a visual representation of vehicle location and surrounding terrain as well as vehicle state parameters.

Air Vehicle Operator Console hosts the hardware and software utilized by the AVO to provide mission-planning, aircraft control and systems monitoring.

AVO Computer provides interface computer providing the interface between the AVO and the UAV and processes outgoing telemetry data as directed by the AVO for vehicle commands. This interface allows input from the AVO through keyboard, touchpad pointing device and joysticks entry and provides a visual representation of vehicle location and surrounding terrain as well as vehicle state parameters.

The AVO (also referred to as the missionTEK®) computer is the primary pilot computer hosting the missionTEK® application, Falconview application, Enerdyne Enerlinks application and directional antenna control application. The missionTEK® computer has 3 hard disk drives, each with 1TB capacity. RAID1-D0 is the primary operating drive hosting the Operating System (Windows XP SP3) and the missionTEK®, Falconview, Enerdyne and directional antenna control applications. RAID1-D1 is a RAID-1 backup of the primary operating drive to be installed and used in the event of RAID1-D0 drive failure. DATA is the data storage drive to be used to store all mission data.

The AVO Computer runs the following software:

- MissionTEK®
- Enerview
- Falconview
- ROS antenna pointing software

Manual Pilot Interface is a manual pilot interface provide un-augmented flight stability control and ground taxi control interface to the UAV.



Manual Pilot Interface

Remote Directional Response (RDR) Joystick provides the AVO quick access into flight mode and gives vehicle directional control in semi-autonomous modes allowing UAV heading, altitude changes.



Remote Directional Response Joystick