

Control Station:

GROUND CONTROL STATION FUNCTIONAL DESCRIPTION

The GCS serves as the System operator interface. It is the central point from which the AVO and MPO coordinate all mission and communication functions. The GCS provides real-time control, real-time mission progress and video display, and system function monitoring. The GCS provides operator interface through graphical on-screen displays (including point and click buttons and sliders), footswitches, knobs, and joysticks. AV control modes optimize Payload control while the AV maintains a loiter point of interest (stare point). Video is displayed with the ability to mark and record position and target characteristics of interest. Video can be displayed in real time, stopped for analysis, or recorded for detailed analysis later.

GROUND CONTROL STATION CAPABILITIES AND FEATURES

The GCS is based on Commercial-Off-The-Shelf (COTS) components. It features a modular design with redundant hardware, a UNIX-based operating system, and mature software. The GCS communicating through a Ground Data Terminal (GDT) controls and monitors the AV during AV preflight, launch, mission accomplishment and recovery. The GCS has the ability to train air vehicle operators (AVO) and mission payload operators (MPO) in their operator positions using Multi-User Simulation Environment (MUSE) hardware and software housed in the GCS shelter. The GCS provides interoperability with the Army C4I structure. The GCS provides interfaces for the following: Flight Local Area Network (FLTLAN), Simulator Local Area Network (SIMLAN), (Two) Tactical Local Area Networks (TACLAN1) (TACLAN2), (P)GDT Telemetry, Multiple UAV Simulation Environment (MUSE) telemetry, Tactical Communication Interface (TCIM), TALS, (P)GDT video, MPO user video, External Personnel Communications, and AVO user video.