

Control Station

The ground command uplink and airborne control system consist of a high-quality off-the-shelf Pulse Code Modulation (PCM) transmitter and Direct Servo Control (DSC) receiver respectively as shown in Figure 2-2. The airborne control system operates on 10 KHz narrow band on 72 MHz or Digital Spectrum Modulation (DSM) on 2.4 GHz. Digital servos provide on board direct command to throttle and control surfaces including: ailerons, elevators, rudder, flaps, and spoilers. Digital servos also provide control commands to the pneumatic system distribution valves for the brakes and landing gear retract system.

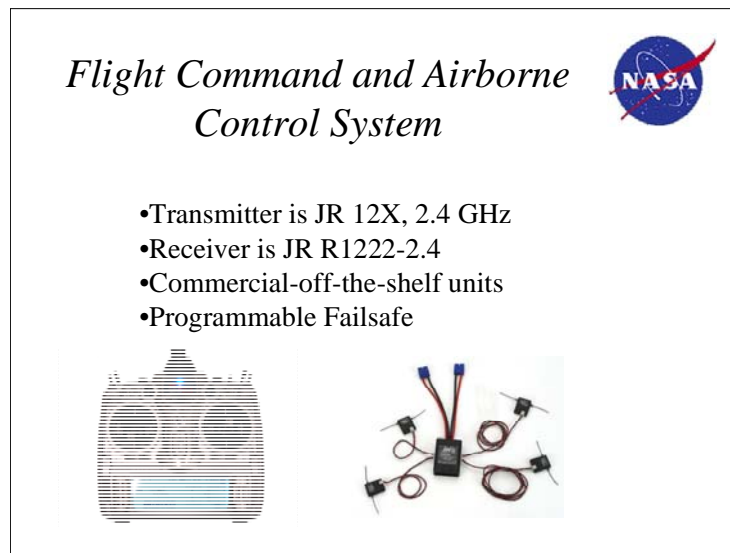


Figure 2-2: 2.4 GHz AirSTAR Project UAS Flight Command and Airborne Control System

The vehicle can also be controlled via an autopilot uplink 900 MHz command as shown below. The system utilizes a PC based laptop ground station with manual override capability for pilot in command monitoring and intervention. All flights are performed under line of sight, see and avoid conditions and will be contained in a designated operations area.

