

Aircraft System COMMUNICATION

The GCS communicates with the UAV using redundant uplink channels. The primary channel functions in the C-Band and the secondary channel functions in the UHF frequency ranges. The primary uplink (C-Band) channel is transmitted to the UAV via a directional dish (GDT) or an omni-directional antenna. The secondary uplink (UHF) channel is transmitted via an omni-directional antenna. Both channels are identical and independent. The system only has one downlink (C-Band) channel from the UAV to the GCS and provides both video and telemetry feeds. Both uplink and the downlink channels have a high/low transmission power capability. The GDT is a directional dish antenna and provides 360° rotation and -5° to +45° elevation to maintain direct communications with the UAV. The GDT is controlled by the IP in the GCS (or RPS) via GMS software. The GDT has six modes of operation: Manual, Position, GPS, Search, and Scan. These modes enable the IP to maintain contact with the UAV throughout normal and emergency modes of flight.

