L3’s Compact Lens Antenna provides 19 dBi of Ku-band gain using a two-axis pedestal in a small, lightweight package that allows its use in small UAVs or manned applications without the drag penalties usually associated with horn or dish antennas.

**Key Features**
- High gain, low-cost, two-axis
- Hemispherical constant index lens

**Benefits**
- Long range and high availability relative to omni antennas
- Minimizes losses at any attitude and range
- Low drag for minimum effect on flight efficiency
Compact Lens Antenna

Product Description

L3’s Compact Lens Antenna is a low-profile, low-drag solution to implementing CDL and STANAG 7085 system requirements where long-range and high-availability requirements necessitate the use of airborne directional antennas. The Compact Lens Antenna offers 19 dBi of gain and is right-hand circularly polarized.

Product Customization

The Compact Lens Antenna is a member of the L3 data link product family, but can be used for any application requiring a Ku-band, high-gain, two-axis antenna. The antenna interfaces with 28 VDC standard power, a standard RF coaxial connector and an RS-485 antenna control port. The antenna consists of the following major components:

- A directional radiating RF element
- RF interconnecting components
- A two-degrees-of-freedom antenna pedestal for pointing
- Motors and angular position feedback sensors
- An electronic module for motor drive, position-sensing interface, data interfaces and power conversion

The Compact Lens pointing antenna, receiving its pointing commands over the RS-485 bus at up to 20 times-per-second, ensures proper pointing even during dynamic airborne maneuvers. The two-degrees-of-freedom pedestal ensures proper pointing at long and short ranges and during aircraft maneuvers.

The antenna assembly uses non-volatile memory to store user-defined boresight offsets as necessary. The antenna assembly contains built-in test capability to detect 95 percent of possible faults and report the results of the test on the RS-485 status bus.