

Monopulse tracking GDT system for UAV applications



- Over 50 km range
- GDT solutions in unmanned or manned aerial vehicle tracking systems
- C-band monopulse tracking antenna
- Integrated with a high-performance monopulse RF components
- Deep null depths at the antenna boresight
- GPS tracking algorithm applied.
- Automatic switching commands between directional and omni antennas
- Integrated with a precise tracking algorithm
- Ethernet 10/100T and RS-422 protocols

Monopulse tracking GDT system for UAV applications

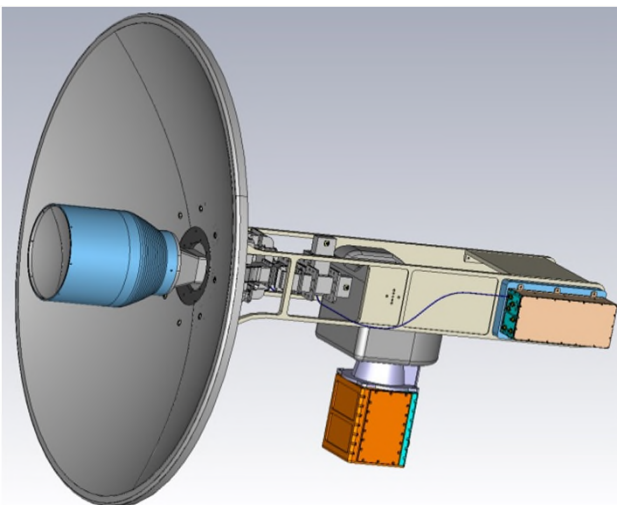
The monopulse tracking GDT system enables long range data transmission and is very suitable for UAV datalink applications. It consists of a 1.2-m Cassegrain reflector, mono-pulse tracking unit, a GPS module, C-band datalink unit, a pedestal and a control unit. The developed system works with a high power amplifier and a digital data link with an output power of 30 dBm and data throughput up to 12 Mbps. In short range, the GPS module is operated in order to find the location data of the unmanned or manned aircraft.

Tracking antenna is realized with the high-performance 4-horn and monopulse comparator for the deep null depths at its boresight. Precise tracking algorithm is employed in order to significantly reduce angle errors. Pedestal and its control unit are implemented with the interface based on the Ethernet and RS-422 protocols. The field test has been successfully carried out for tracking performances.

System specifications	
Frequency	5.20-5.90 GHz
Antenna Gain	over 33 dBi
Null depth	less than -30 dB
Link rate	Up to 12Mbps
Tracking accuracy	Less than 0.1°
Sensitivity	-82dBm @ 12 Mbps -92dBm @ 3 Mbps
Output power	30 dBm (up to 37 dBm, adjustable)
Serial Interface	RS 422
Ethernet	10/100 BaseT

Power Requirements	
Input voltage	24 VDC
Input current	15 A continuous

Mechanical specifications	
Azimuth rotation	360°
Elevation rotation	-5° to +60°
Pedestal angle velocity	over 60°/sec



Unmanned Vehicle System Data Link
Anti-Drone System
Special Antenna Design
Radar Sensor

Sales: duta@duta-rnd.com
(Phone: +82-42-716-0006)