



# Airborne Technologies

## KU Wide Band Tactical Data Link

### D-ATKS System

#### Communications for payloads and C2

The role of Tactical Data Links have become more and more important in a way that makes it critical that real time videos and payload data reach command and control infrastructure so to localize and alert relevant countermeasures, maintaining tactical advantages and getting situation awareness in ISR or OOTW missions and more

IPR D-ATKS KU band terminal, is specifically designed to swift broadband capabilities in long range, secure, extremely low latency, in Line of Sight (LoS) conditions up to 200NM (according to the modulation scheme and atmospheric conditions)

The reliable BPSK/OQPSK modulations supported by ethernet interface, enable the streaming of Command and Control data, Audio/Video over IP, telemetries, GPS positioning and more

The system is capable of a bi-directional asymmetrical communication with a Downlink data speed up to 45 Mbit/s and an Uplink data speed up to 2 Mbit/s (according to the modulation scheme and regardless the FEC)

Data trasmission is protected with AES@256 bit encryption model

### Main Sub-Assemblies:

- Onboard compact size transceiver
- Ground data terminal (IF/RF/ATKS units)
- 120 cm parabolic autotracking antenna

### Optionals:

Embedded Inertial Navigation System (INS) configured in a redundant manner to the GPS one to calculate position, orientation and velocity (direction and speed of movement) Optional onboard multi-axis gyrostabilized antenna is also available as a perfect combination to improve signal level and increase connecting distance



### Reliable personalized solutions

All critical technologies' parts are developed produced and integrated by IPR providing an outmost degree of customization: systems can be tailored to end users' specific layout and weight requirements

**IPR systems have no ITAR restrictions**

# Technical Features

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## Electrical

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**Interface:**

1 Ethernet network (+1 config interface)

**Frequency Band:**

Ku Band

**TX/RX Modulation:**

BPSK/OQPSK

Bi-directional

Asymmetric

**Data Speed:**

Downlink: Up to 45 Mbps

Uplink: Up to 2 Mbps

Downlink bitrate: From 6 to 45 Mbps

**Sensitivity:**

@10 Mbps: up to -83 dBm

@20 Mbps: up to -80 dBm

**RF Output Power:**

40 W

**RF Bandwidth:**

Up to 40 MHz

**Supply Voltage:**

28 VDC (customizable)

**Encryption:**

AES @ 256 bit

**Antenna Frequency Band:**

Ku Band

**Antenna Gain:**

21,5 dBi

**Polarization:**

Linear or Circular

**RF Input:**

Max: 50 W

## Other Performances

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Embedded AES @ 256 bit encryption System

Gyro stabilized antenna (optional)

Embedded INS System (optional)

## Ground Antenna Options

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**Standard:**

Tactical Easy Deployable version (including tripod) 120cm Ø Parabolic Antenna featuring Autotracking capabilities

**Optional:**

fix version including fiberglass protection radome for rough environment

**Optional:**

Up-scaled 180cm Ø Parabolic Antenna featuring Autotracking capabilities (either tactical or fix version)

**Optional:**

dual-band (C-KU) feeder to optimize multi band applications

## Environmental

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**Storage Conditions:**

-55° / +85°

**Operating Conditions:**

-40° / +70°

**ADT:**

RTCA DO-160G

**GDT:**

RTCA DO-810G