cartronicgroup

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 transcriver
- Graund 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

Member of CISQ Federation
RINA
ISO 9001:2008
Sistema Qualità Certificato

lombardia aerospace cluster

Technical Features

Electrical

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

Embedded AES @ 256 bit encryption System

Gyro stabilized antenna (optional)

Embedded INS System (optional)

Ground Antenna Options

Standard:
Tactical Easy Deployable version (including tripode) 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

Storage Conditions:
-55° / +85°

Operating Conditions:
-40° / +70°

ADT:
RTCA DO-160G

GDT:
RTCA DO-810G