UAV A2R

CBRN PROTECTION TCT

Aerial and radiological reconnaissance

Ground control station

UAV A2R

Solution

Aerial and radiological reconnaissance
Fully automatic flight in search mode
Optional thermal imager for night flights

Cryptographic encryption of control channel
No registration for the flight
No software locks; No GSM

Advantages

Search, localization and identification of radioactive sources
Contaminated area mapping
Weather monitoring and contamination spread prediction (wind direction and speed)
Monitoring of nuclear power plants territories
Monitoring of emergency situation

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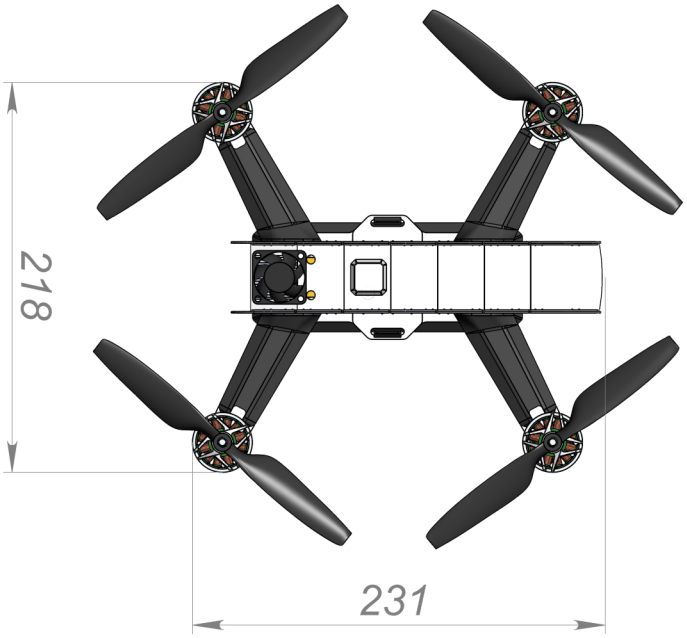
UAV A2R specifications



UAV A2R

Maximum altitude	3000 m
Tactical range	3 km
Maximum range	5 km
Maximum flight time	55 min
Maximum wind speed near the ground	15 m/s
Maximum payload weight	400 gr
Operating temperature	- 15 / + 60 ^{0}C
Props	7 inch
Frame	Carbon / Plastic

Camera

Operating system	Integrated OS Linux
Video	720p (1280x720) 30 fps
Maximum resolution	3 Mpix
Stabilization	gyro-stabilized single axis
Matrix	1/2.9" Progressive CMOS F23

Ground control station (TIS Operator)

Display	5 inch
Protection	IP 64
Military standard	MIL STD 810G
Working time	12 h
Operating temperature	- 35 / + 60 ^{0}C

Radiological detectors

Detector	CsI(TI)
Sensitivity, gamma radiation:	^{137}Cs 100 s^{-1}/(µSv/h) ^{241}Am 100 s^{-1}/(µSv/h)
Energy range	0.06 – 3.0 MeV
Dose equivalent rate (DER) measurement range	0.1 µSv/h – 100 µSv/h
DER measurement accuracy	±(20+0.002/Ḣ)%, where Ḣ = DER, µSv/h
Response time:	0.25 s
Operating temperature	- 30 / + 50 ^{0}C

Detector	G-M
Energy range	0.06 – 3.0 MeV
Dose equivalent rate (DER) measurement range	0.1 µSv/h – 10 Sv/h
DER measurement accuracy	±(20+0.002/Ḣ)%, where Ḣ = DER, µSv/h
Operating temperature	- 30 / + 60 ^{0}C

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