

Product: UAV
Subsystem: PAYLOAD/Unmanned Ground Vehicle (UGV)

Target Design Requirements		Importance	1	2	3	4	5	6	7	Market Responce
1	Complies with competition rules	5	●						●	Good
2	Capable of lowering the payload to the ground	5	●	●						Very Good
3	Lands UGV within landing zone	3					●	●		Neutral
5	Delivers UGV without damage	3		●			●		●	Good
6	Deployable from airframe	4			●	●				Very Good
7	Does not interfere with takeoff/landing	3	●			●				Very Good
8	Causes minimal aerodynamic interference	3				●				Good
9	Drop mechanism does not interfere with UGV movement	2					●	●		Very Good

Measured	Predicted	Upper Acceptable	Ideal	Lower Acceptable
0.016	0.018	0.6	0.1	0
3.43	3.36	-	1.3	0.6
4140	4500	5000	0	-
N/A*	0.1	1.5	0.3	0
3	4	5	1	0
N/A*	10	22	0	-
0	0	1	0	-

*To be measured during system refinement stage

Subsystem Performance Measures	Units
Drop mechanism mass	kg
Weight mechanism can support	N
Aircraft internal volume consumed*	cubic centimeters
Stowed drop mechanism drag	N
Maximum landing velocity	m/s
UGV landing distance from target	m
Rule violations	cnt