Hybrid system benefits: radar subsystem reliability and good range + visual subsystem high precision at the runway touch moment, mutual redundancy

Visual subsystem reduces radar guidance time

Laser Projector texture for reliable surface detection

35 GHz band avoids local reflections

Airplane and helicopter landing

Radar

Three-dimensions monopulse tracking radar	
Frequency band	34 - 36 GHz
Passive mode and Active mode with board transponder	
Max range:	
- passive mode, RCS 2m^2:	10 km
- active mode	15 km
Min range:	
- passive mode	100 m
- active mode	50 m
Angle range:	
- azimuth	270°
- elevation	-10/35°
Measurement rror:	
- range	10 m
- azimuth	10'
- elevation	10'
Interface with drone autopilot	
Antenna size, mm	1555x1510x1550
Control unit suze, mm	500x500x1000
Power consumption	2 kVA
Weight	380 — 450 kg

Radar antenna 35 GHz

Board transponder

Tx/Rx frequency	35.1 GHz/34,44 GHz
Modulation:	time - pulse
Antenna gain	6dB
Reply delay jitter	±25 ns
Power supply / Consumption	27 V / 13 W
Data rate	7,5 kbaud
Interface	RS-485; ARINC – 489
Size, mm	110 x172 x 160/(110)
Weight	1.5 kg

Board transponder

Board Visual Landing Subsystem

Board equipment only
Interface with landing autopilot
Spectral: visible light and infrared
Land markers detection in far zone and texture projection detection in near zone
3D video processing
Real time FPGA data processing

Data period:	
far / near zone	1s / 0.2s
Coordinate info:	
drone position relative to the runway	
Power supply / Consumption	27 V / 8 W
Interface	RS-485; ARINC – 489
Size, mm	140 x 80 x 30
Weight	0.8 kg

Camera and projection unit

Video processing unit