

# Radar Systems

## Zond Aero LF

## GPR system

Datasheet

The system is designed for airborne surveys.

ANTENNA / GPR	Single channel Ground Penetrating Radar system with unshielded dipole antenna
Center frequency	100, 150, 300 MHz depending on used antenna
Operating bandwidth	50 – 150, 75 – 300, 150 – 600 MHz (-12 dB)
Sampling	Real Time Sampling (RTS) with high hardware stacking
Samples per scan	256 / 512 / 1024 / 2048 / 4096 / 8192
Samples rate	up to 1,280,000 (depends on hardware stacking)
Scan rate	up to 2,500 scans/s (depends on hardware stacking)
Sample output	32 bit digital raw data
Time range per sample	18 ps / 36 ps / 71 ps / 89 ps / 125 ps / 143 ps / 179 ps / 250 ps / 357 ps / 500 ps / 625 ps / 714 ps / 1 ns / 1.25 ns / 2.5 ns
Depth	up to 12 meters in soil with relative dielectric permittivity equal to 5 and specific attenuation up to 5 dB/m.
Data format	Standard Geophysical SEG Y Data Format (.sgy) <b>with traces geotagging</b>
Vertical filters	Off, Digital
Horizontal filters	Hardware stacking, Background removal
Gain points	1-10 Linear gain
Gain levels	0 to +168 dB
Data storage	Raw data storage with memory for Gain used
Data file size	Limited only by available space on data logging computer

### ENVIRONMENTAL

Temperature	-20°C to 60°C internal temperature
Humidity	96% non-condensing
Ingress protection	IP68 in protective box (used for ground surveys) IP52 in airborne variant

### MECHANICAL

Weight	0.8 kg – GPR controller with mountings for the drone 0.1 kg – 300MHz antenna 0.2 kg – 150MHz antenna 0.4 kg – 100MHz antenna
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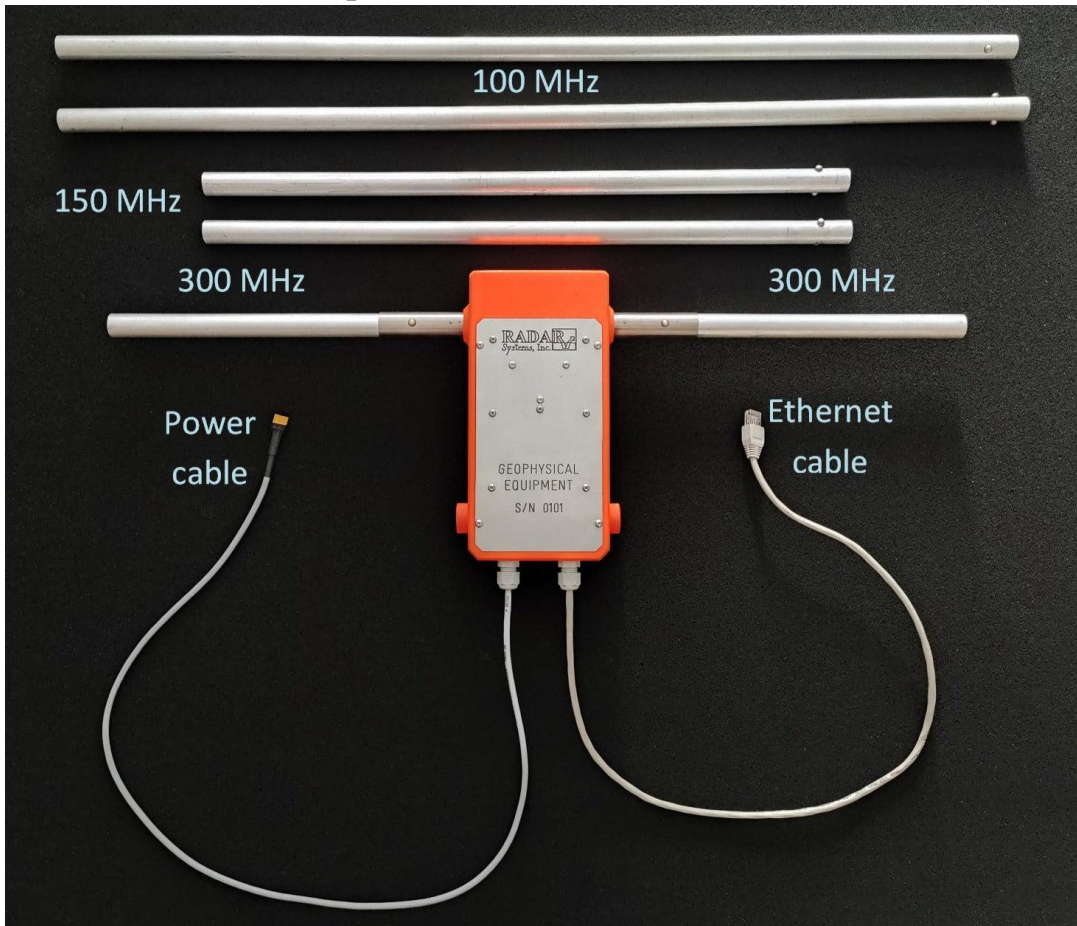
### BATTERY

Airborne variant	Drone main battery is used to provide power to the GPR
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### WHAT'S IN THE KIT

	Zond Aero LF GPR system with 100, 150, 300 MHz center frequency antennas
	Prism2 Data Acquisition/Processing software
	NANUK transport case for GPR controller
	Tube for antennas
	GPR mount kit for DJI M350/M300 RTK, mounts for M600/M600 Pro drone on request

Zond Aero LF with dipoles for 300MHz (attached), 150 and 100MHz:



Zond Aero LF GPR system mounted on DJI M300 RTK drone:

