



# Epsilon Lambda Electronics

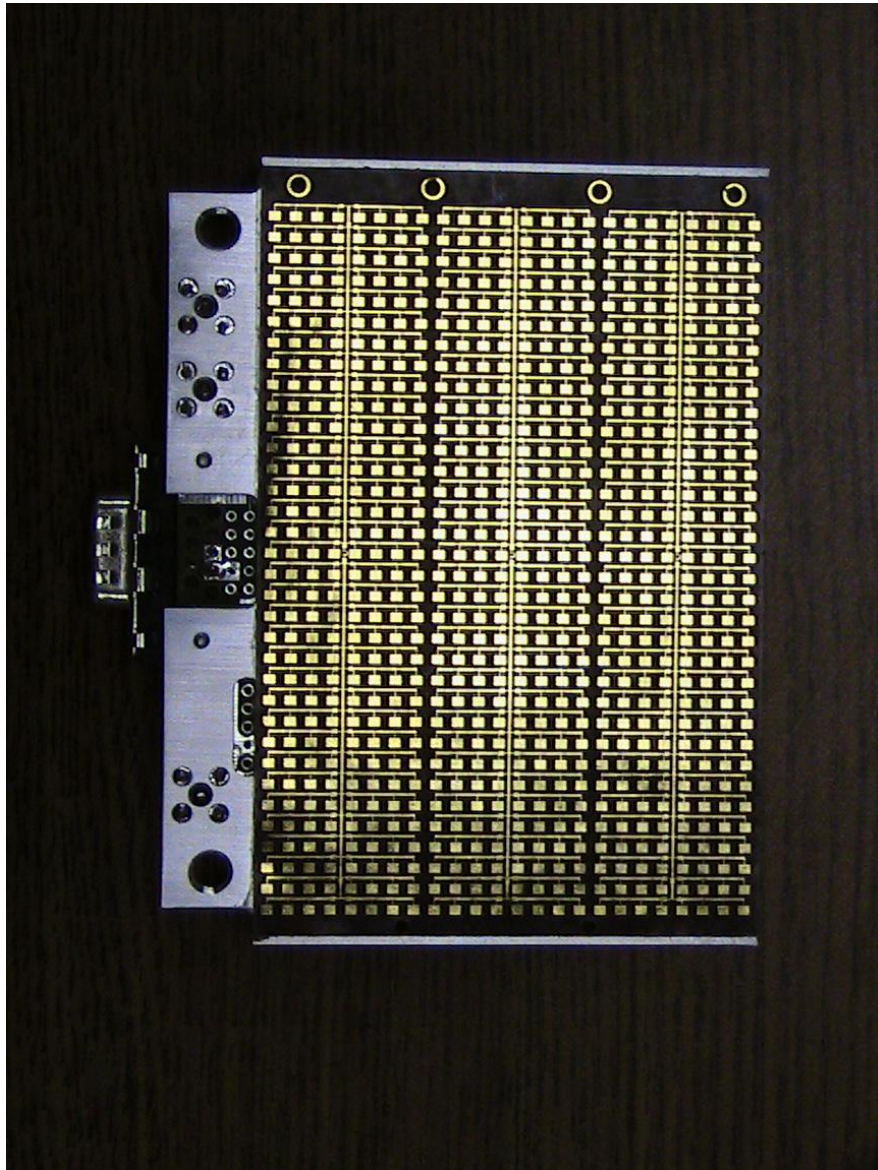
Since 1974

**Celebrating 36 Years as the Millimeter Wave Industry  
Technology Leader**

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## OBSTACLE SENSOR FOR VEHICLES

On Board Two Dimensional Object or Obstacle Detection  
Radar Sensor Operating at 77 GHz



Epsilon Lambda Electronics

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## FEATURES

- FM-CW Ranging Radar – Millimeter Wavelength (High Resolution)
- High Gain Antenna with range up to 150 meter (10 dB RCS)
- Azimuth Object Angle Determination without mechanical scan
- Low Phase Noise Transceiver
- Operable from Battery Supply Voltages
- Compact Size, Rugged Construction
- Code embedded to DSP Circuit Card
- F.O.V. Image maps displayed on Laptop

This high resolution 2D radar object detection sensor is suitable as an obstacle sensor when mounted upon vehicles, such as highway vehicles, off road vehicles, helicopters, etc. This sensor could also be used as infrastructure for area surveillance of vehicles or humans. Object data reported includes range, azimuth angle, relative velocity, and signal return amplitude.

## Model ELSO72-2A Specifications

Transmitter Power	+10 dBm
Center Frequency	76.5 ± 0.1 GHz
Number of Obstacles in Image Map	16 in beam width
Temperature Range	-20 to +85 degree C
Antenna Gain	>27 dB
Azimuth FOV	Fixed by antenna beam angle
Azimuth Beam Angle	7 degree
Azimuth Angle Accuracy	1.0 degree by monopulse processor
Elevation Beam Angle (and FOV)	2.0 degree
Elevation Angle Resolution	1.8 degree
Polarization	Linear
Maximum Operating Range (Rmax*)	150 meters (10 dB RCS)
Obstacle List Update Rate (Ts*)	0.2 s
Typical Range Resolution (dR*)	0.25 meter
DC Power (Electronics)	9-16 V / max 1.5 A
Weight	3.5 Kg
DSP Board	Supplied
I/O Connection	USB to Laptop computer for map display

- Please contact Epsilon Lambda Electronics sales department for further information regarding this innovative radar sensor product.

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