



## *Aerial Perimeter Compromised*



Next Gen Anti Drone system with 3D Micro-Radar





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# OUR SOLUTION

ADVANCED RADAR TECHNOLOGIES

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# ARS400 Micro Radar

3D 360° micro radar is based on an issued patent of the Israel Technion.

- Best Cost-Effective Radar solution
- 600m range detection of Drones - Inspire (0.1m<sup>2</sup>)
- 400m range detection of Drones – Phantom (0.01m<sup>2</sup>)
- 600m range detection of Humans
- 900m range detection of Vehicles
- full 3D hemispheric coverage:
  - $\pm 90^\circ$  vertical scanning
  - $\pm 360^\circ$  horizontal scanning
- $\pm 1.5^\circ$  beam width
- $\pm 1.5^\circ$  beam width
- Lightweight
- Low power consumption
- Solid State – No moving parts
- Approved for Urban usage
  - Low radiated power - compliant with FCC human safety regulations
- Easily integrates to Command and Control systems



# Drone Solution

## Detect

### Micro Radar and Software

Detecting and tracking Suspected Targets  
- Drones

## Sense

### SIGINT RF

**Sensing** for Drone operators  
communication and Triggers Notifications

## Track

### Bi-Spectral Cameras

**Video and Thermal** cameras for tracking  
targets

## Disrupt

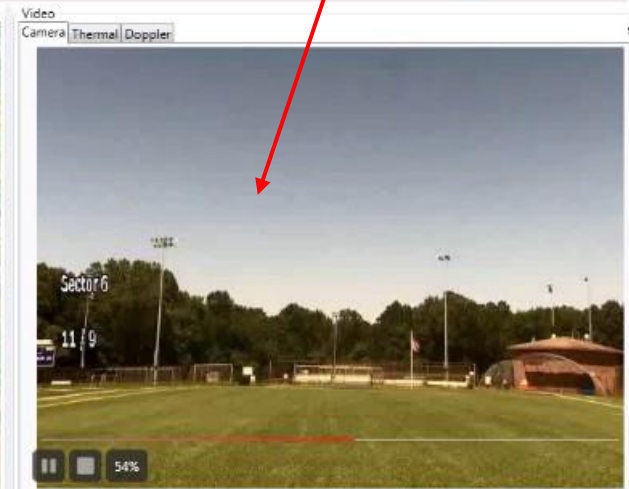
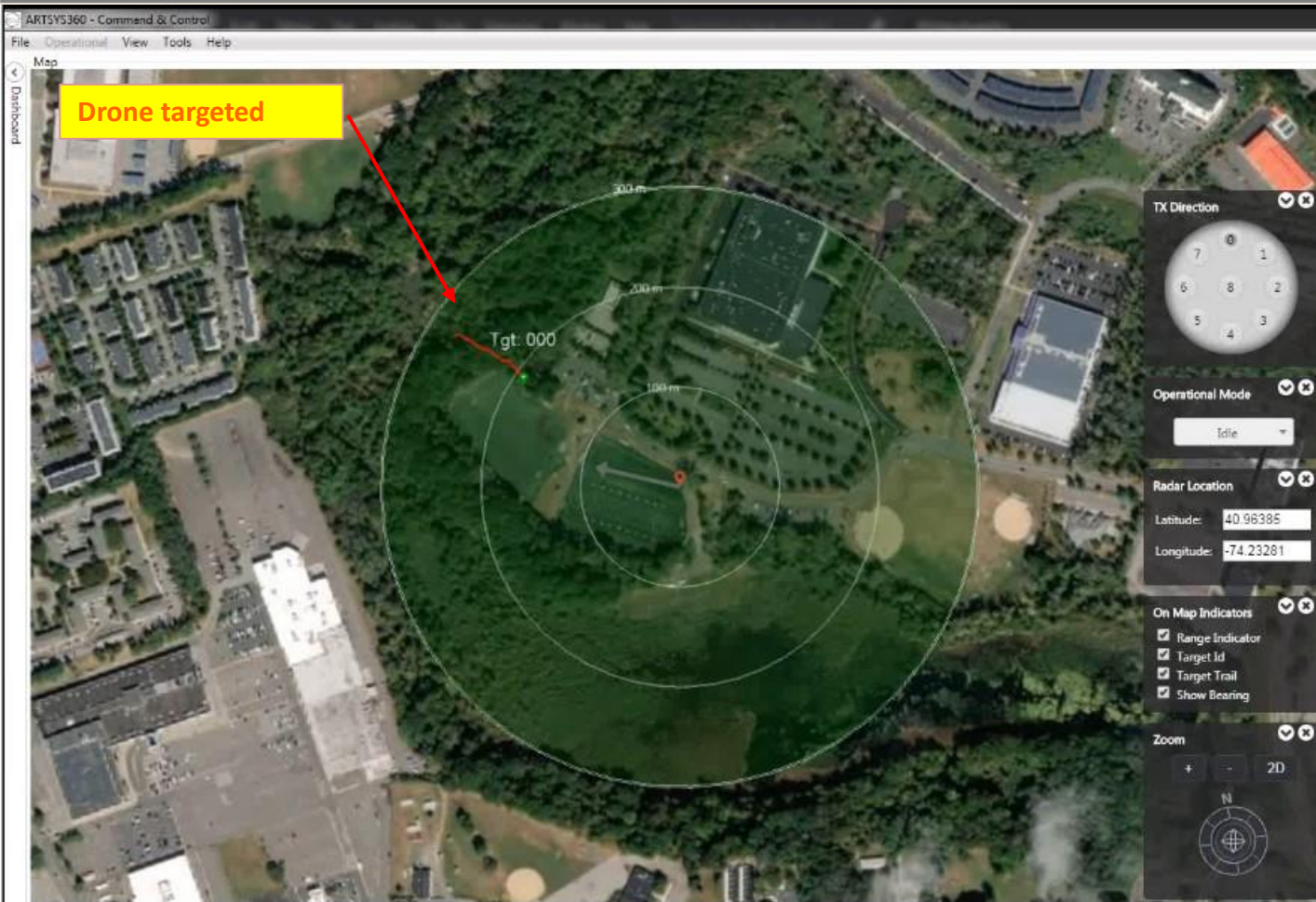
### Interception

Easy Integration with Hunting Drones **Drone  
bullet**, Jammers or other interception  
measures

# Command and control software package

Camera monitoring

Drone targeted



Targets

Active Targets [Log](#)

Id	Type	Time	Range [m]	Azimuth [deg]	Elevation [deg]	Velocity [m/s]	RCS [dBsm]
Radar: RS400-ECSI-001							
000	Tgt	15:35:05:76	190.8	9	18.3	10.6	-30.6

XML records for integration



Connection System Log  
16:19:36.3700 Server disconnected!

Active Radars

Server




# Radar Detection and tracking

ARTSYS360 - Command & Control

File Operational View Tools Help

Map



On Map Indicators

- ☒ Range Indicator
- ☒ Target Id
- ☒ Target Trail
- ☒ Show Bearing

Zoom

Tx Direction

Operational Mode

Filter enabled: New Filter1

Radar DSPC-Tests-003

Map Location Lat 31.85859 Long 34.91800

Video

Camera Thermal Doppler

ADAP: 7.00 100.00 0.0150

Targets

Active Targets Log

Id	Type	Time	Range [m]	Azimuth [deg]	Elevation [deg]	Velocity [m/s]	RCS [dBsm]	Channel
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Connection

System Log

12:23:51.6718 The detect SNR is set to adaptive: RCS lower -30.000000, RCS upper 100.000000, SNR lower 7.000000, SNR upper 100.000000

12:23:51.8808 PosDopThrOffset changed: 0.

13:30:08.4042 PosDopThrOffset changed: 0.

ARTC<sup>2</sup> Command & Control

# ***Thermal Video Motion Detection***



# Competitive Advantage

## ADVANCED RADAR TECHNOLOGIES

**Radars are the leading solutions for detection of drones at various distances, multiple directions and operate in all weather conditions.**

### Basic Requirements:

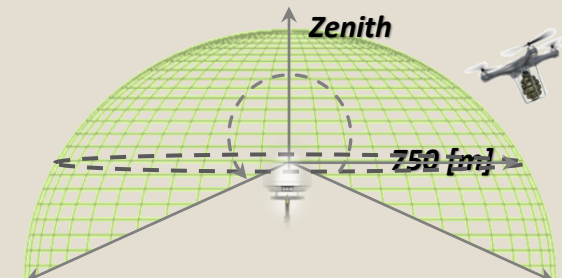
- Low Power consumption
- Wide Coverage in Urban/Rural Areas
- High resolution Detection
- At the right COST!





# Competitive advantage

Competition	ARS400
High Power	Low power – approved for Urban usage
90° horizontal coverage	360° coverage no moving parts
30° -60° elevation coverage	Full dome coverage
Heavy cumbersome	Light, fast deployment
Single type targets	Detects Drones, people, and Vehicles
	Grid Solution





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# OUR RECENT PORTFOLIO

ADVANCED RADAR TECHNOLOGIES

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# Rishon Le-Zion Ranch

ADVANCED RADAR TECHNOLOGIES

- *Complete system was installed on May 1<sup>st</sup> 2019.*
- *The system is remotely controlled and tracked from our office.*
- *The system serves for internal tests platform for carrying experiments and evaluations.*
- *Until now – no hardware issues were observed (over heating etc.) .*



# New-Jersey

## ADVANCED RADAR TECHNOLOGIES

- *System was sold to ECSI.*
- *Installed on February 2019.*
- *ECSI personnel were trained to conduct future demos.*
- *The system has been working for days outdoor under heavy snow and rain and during hot summer days.*
- *Again - no hardware related issues were observed!*





# 2019 Little League Baseball World Series

ADVANCED RADAR TECHNOLOGIES

- Live Events
  - System Deployed in Wayne N.J. Football Field.
  - The system was positioned on top of a cellular mast.

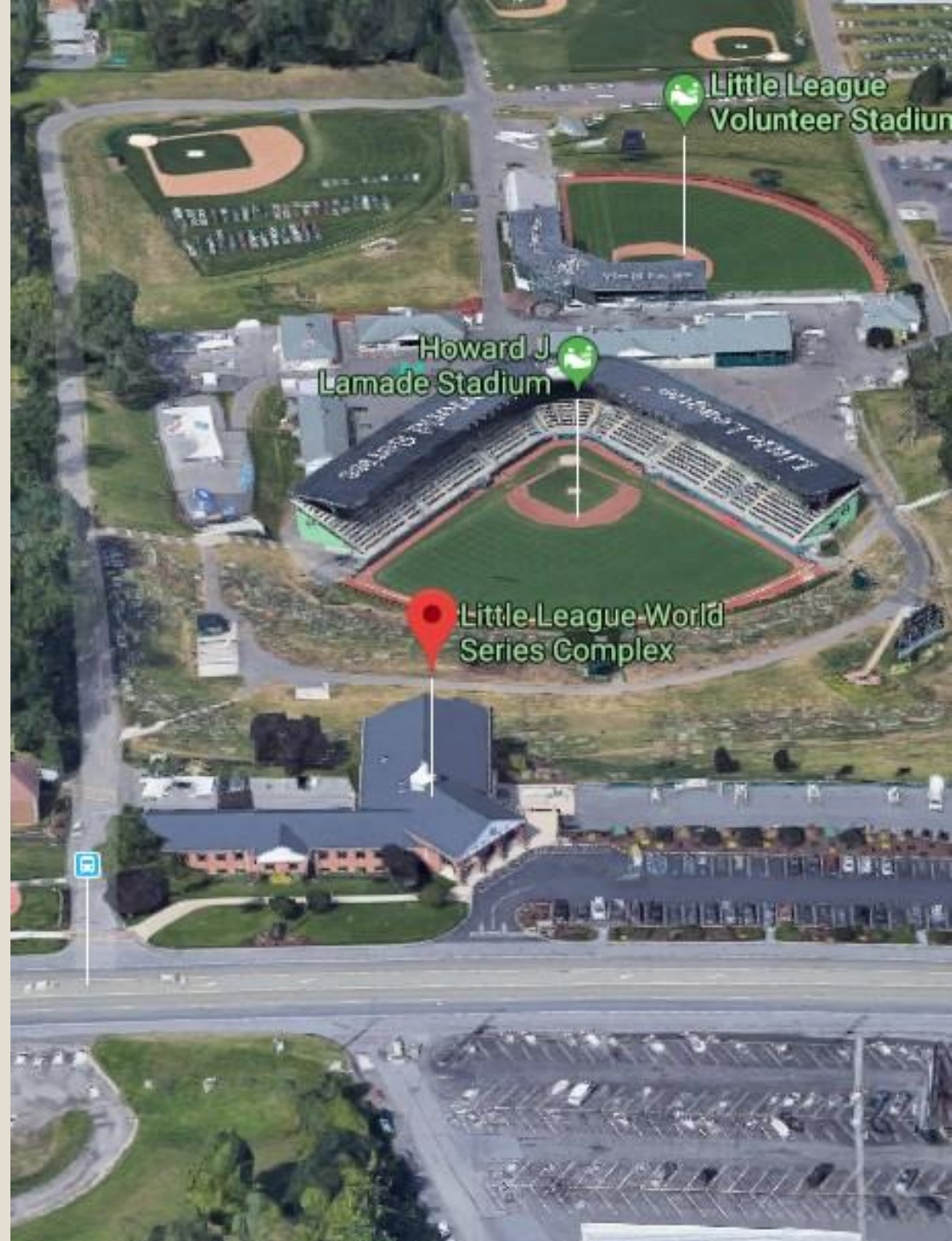
*Our system is part of the counter drones solution in the 2019 Little League Baseball World Series August 15-25!*



# 2019 Little League Baseball World Series

ADVANCED RADAR TECHNOLOGIES

- Deployed 100 [m] away from the Howard J. Lamade Stadium, Pennsylvania.
- 10 Days 24/7 operation!





# Summary

ADVANCED RADAR TECHNOLOGIES

- Best cost effective solution in market
- Leading development team of Algo & RF Experts
- Solid state Radar 3D patent protected (360°)
- Designed for both Urban & Rural Areas

