

## **Zickel Engineering Company Profile**

It may be the time to make your dreams come to life

Have you ever wanted to realize your vision? Now you have the opportunity to enlist a technological entrepreneurial team to make your dreams come true. The team was established 14 years ago and it provides cutting edge solutions to its clients.

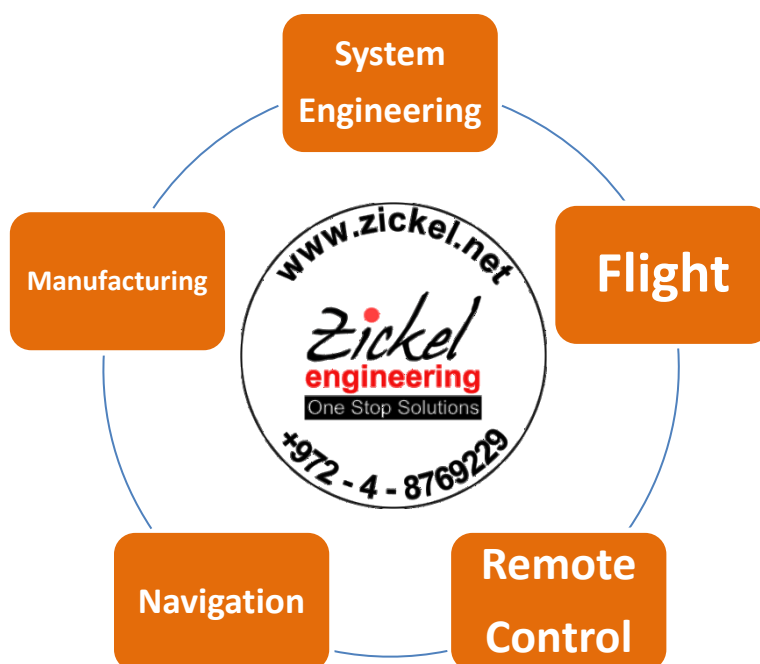
**Zickel Engineering** provides development and manufacturing services to the major industries, start-up companies and has ever been achieving significant accomplishments for its clients.

**Zickel Engineering** aims for excellence and is on top of cutting edge technology with consideration of its clients' needs.

**Zickel Engineering** contributes to fast developments and integration turnaround, while building and implementing various electronic parts, modules and matching existing technologies to the needs at hand.

**Zickel Engineering** caters to demonstrations and feasibility studies from the concept phase to prototypes / demonstrations / field tests / move to production and up to the manufacturing of small batches or even hundreds of units.

### **Zickel Engineering Main Abilities:**



We are hiring versatile, self motivated, talented problem solvers in various fields

**Zickel Engineering**

Technological entrepreneurship



**Zickel Engineering Ltd**  
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## Various Projects:

### Flight:

- [CLOS drone control](#)
- [User experience with Zickel Engineering's control algorithms \(For Powerup FPV\)](#)
- [Robustness of the paper airplane control \(For Powerup FPV\)](#)
- [One-click mission, including an accurate landing on the beacon](#)
- [Motion table with full flight simulation which has been designed, built and integrated with simulation for HIL](#)
- [Killer drone](#)
- [Drone detection and tracking](#)

### Navigation:

- [Zickel Engineering at the Urban Navigation Challenge, Zeelim 2018](#)
- [Personal navigation without GPS](#)

### Unmanned Programmed Vehicle:

- [Remote control pre-programmed vehicle conversion kit](#)
- [A decade of remote operated vehicles](#)

## System Engineering:

- Zickel Engineering has a multidisciplinary professional team, covering most of the engineering aspects of flying and remotely controlled systems. The company covers system engineering for large projects through Aerospace Engineering, Mechanical Engineering, Electrical Engineering and Computer Science Engineering – leading a variety of activities starting with concept design, hardware design and implementation, algorithm design and implementation, integration, field testing and manufacturing. All of which are conducted under analytical modeling, simulations and analyses support.
- Systems Integration – Zickel Engineering routinely conducts multidisciplinary systems integrations for various high end products.

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### Flight:

- Special operations drones – Zickel Engineering masters drone technology and caters to drones that are designed for special operations; it even built its own Pixhawk based autopilot.
- GNC for various airframes – writing requirements and system simulation that combines an aerodynamic model and includes everything needed for Guidance, Navigation and Control of aircrafts, including the infrastructure for automatic implementation of the flight computer code and pre-flight HIL testing.
- Building autopilots from scratch, algorithm design, choosing and manufacturing hardware and software, algorithm implementation, integration and flying. Zickel Engineering's biggest achievement yet – designing a 3cm<sup>2</sup> autopilot for Powerup paper airplanes control, navigation and guidance.
- Missile control and navigation – Zickel Engineering has served as the leading contractor in developing a rolling shell navigation concept, writing a system simulation and monitoring and navigating algorithms for Rokar's Silver Bullet that has some of the world's best performances!
- Flight innovation – Zickel Engineering typically spearheads large projects to accelerate their full scale development, according to Lockheed Martin's Kelly Johnson's SkunkWorks® rules.

### Remotely controlled vehicles:

Zickel Engineering has built remote control kits for a variety of vehicles, from small amateur vehicles, through ATVs, RVs, urban 8 ton trucks and up to Heavy 20 ton trucks that are remotely controlled from as far as 35km. In addition, a PWC has been modified for remote control and a small marine research vessel has been built.

### Navigation:

In addition to standard GPS IMU based navigation, Zickel Engineering specializes in DR based navigation, which it has implemented in projects, emphasizing personal navigation in areas with GNSS denial. This navigation incorporates a machine learning element which allows for determining the gate size of each step according to movement patterns.

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### Batch manufacturing:

Zickel Engineering has developed and manufactured hundreds of air quality sensor units for Perkin-Elmer. These units routinely report to the cloud the air quality in the sensor's area and allow for real time mapping of the air quality in the areas where they are stationed.

### Clients and qualifications:

Zickel Engineering is a well-known supplier of Israel's various industries and handles a variety of projects, from underground to space projects.

Zickel Engineering is ISO 9001:2015 certified.

### We specialize in:

- **Pre-FSD risk mitigation**
- **FSD participation**
- **POC demonstration**
- **System modeling, analyses and performance evaluations**
- **Providing results under tight schedules**
- **Modeling and simulation (various Earth models), control and navigation design, hardware selection and implementation, software implementation, integration, testing and interpreting field tests results**

Zickel Engineering best shines in short to medium term projects in the aforementioned fields with the integration of MEMS, GNSS, optical sensors, remote control, digital communications, point-to-point, networks etc.

Zickel engineering is privately owned by Mr. Robert Zickel.

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