

Civil developments of Gyrolab LLC for

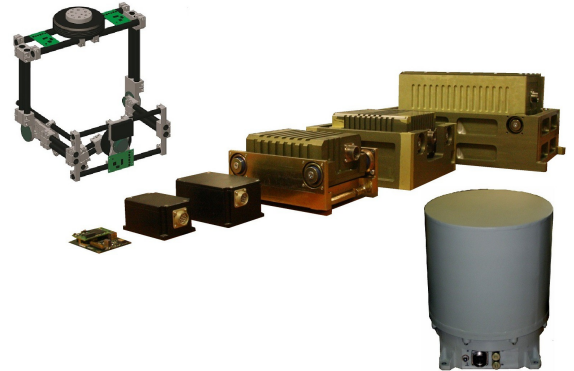
• Navigation • Stabilization • Orientation



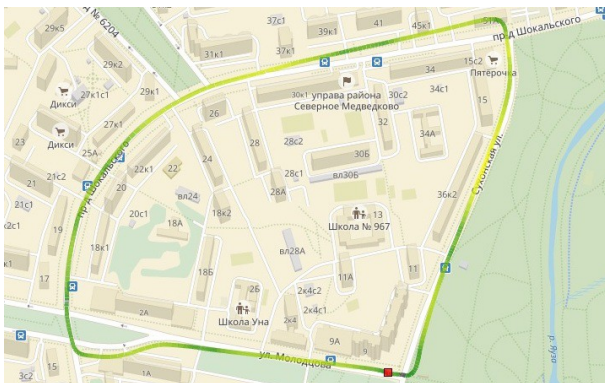
Gyrolab LLC is the Russian private development laboratory which develops and produces a wide range of equipment for high-accuracy autonomous navigation (even without Global Navigation Satellite Systems (GNSS)), for stabilization, orientation (and many other derivant functions) for land, naval, aerospace applications.

We can suggest different variants of cooperation:

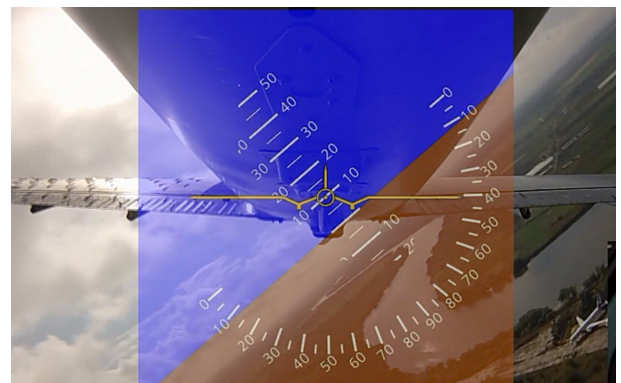
- Finished products / systems supply (possible with third-party brand name)
- Partnership according to license agreement when we help you to put into production our developments and then we receive payments for every sold unit. In this case we can continue our development of this product and support with new options
- Sale of know how



Strapdown Inertial Navigation Systems (SINS) on MEMS and fiber-optic gyroscopes. This is our main competence. Target audience are developers and integrators who work with navigation / stabilization / orientation tasks. Different options of execution, accuracy characteristics and reasonable prices let the customers choose optimal equipment according to their tasks: from 10-50 °/hour up to gyro compasses 0,04°/hour.



Car track with only SINS MEMS "GL-VG109"
(without GNSS)



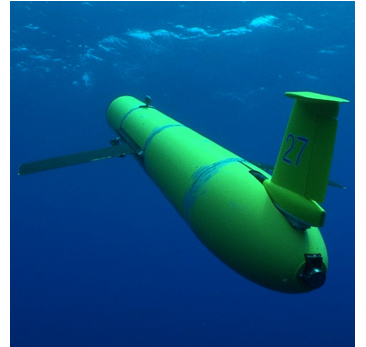
SINS MEMS "GL-VG109" as a gyrovertical on the plane (video is here: <http://www.gyrolab.ru/en/>)

Applications:

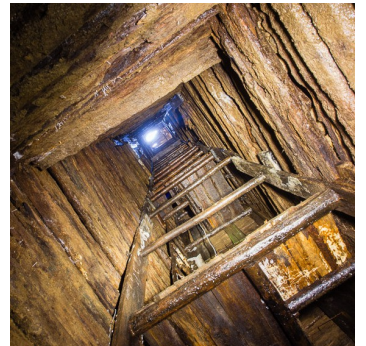
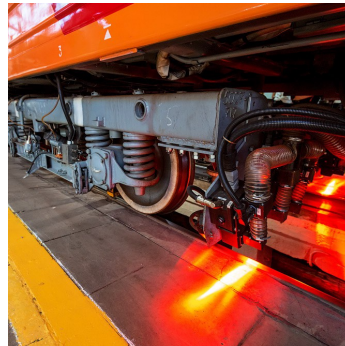
- integration SINS with already installed GNSS equipment for increased continuous autonomous navigation accuracy, roll / pitch / shock / flip / accident control. For transportation of expensive (including encashment) and dangerous goods and passengers; for special (for example, career) and rescue vehicles (for fire trucks navigation even without GNSS in a burning forest); for permanent binding to the railway line and so on:



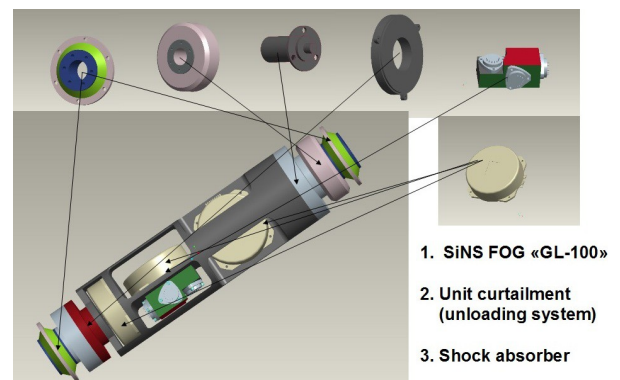
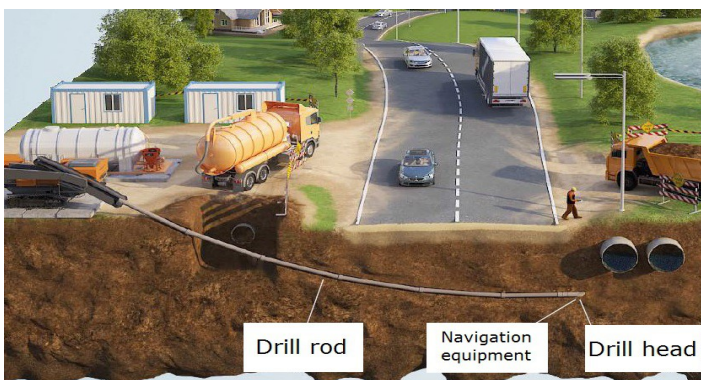
- SINS is one of the most important parts in unmanned vehicle systems and complexes:



- SINS for developers of diagnostic systems for road and railway / shaft diagnostics. Besides, for railway and shafts we can propose complete solution with our Russian partner



- SINS for high-precision directional horizontal and inclined drilling – for developers of drilling complexes:



- SINS as Gyrocompass for ships;
- SINS as Gyrovertical for planes;
- SINS for developers of robotics (medicine, service, industrial...);
- SINS for communication equipment (stabilization and orientation of satellite antennas and radar stations),
- SINS for medicine (complexes for remote surgical operations; horizontalizing and stabilization of medical trolley to avoid blood-strokes of patients)
- SINS for many other applications for navigation, stabilization, orientation

Drivers / Brushless direct drive motors

Developing gyrostabilized platforms we didn't find motors with suitable price / quality ratio. So, we developed our own brushless direct drive motors which are up to 1,5 times cheaper than any others with the same characteristics.

We are ready to put into production customized motors according to clients' requests. Besides, we develop drivers only or drivers&motors with the following characteristics:



Rated speed of rotation, turnover per minute:	Up to 3000
Rating moment:	Up to 10000
Ampere rating, A, not much	70
Rated watts, watt:	20000
Efficiency, not less than:	0,75
Operating temperature, °C:	-50 ... +55
Positioning accuracy, angle:	Not more than 0.04

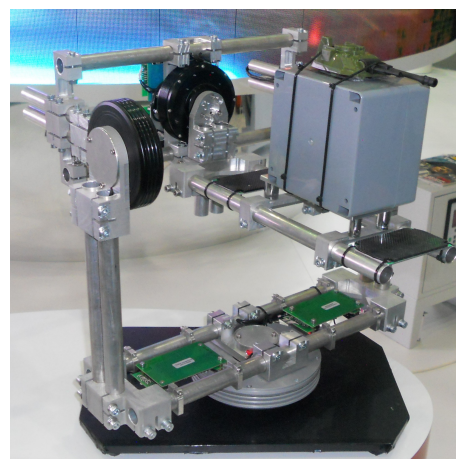
Applications: from small robotics to big radar stations.

Gyrostabilized platforms with remote control

Using all the elements of our development we can produce various Gyrostabilized platforms with remote control functions according to client's requests: different accuracy, different loads (up to 200 kg), different quantity of axis...

Applications:

- stabilization of filming and TV shooting (including small for drones);
- horizontalizing and stabilization of medical trolley to avoid blood-strokes of patients;
- robotics;
- stabilization and orientation of satellite antennas and radar stations;
- diagnostics;
- many others



<http://www.gyrolab.ru/en/> - here is more detailed information in English, including characteristics, prices, videos, documentation



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