

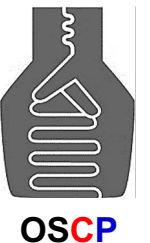


# One Silicon Chip Photonics (OSCP)

Kazem Zandi, Founder &CEO

June 2023

*Enabling the future of autonomous navigation*



# OSCP at a glance

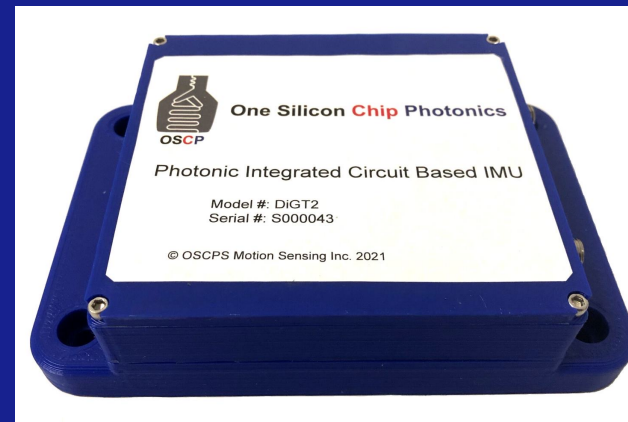
Fabless, Operational since 2019, based in Montreal Canada, 12 employees



\$14B Market Size (by 2025)  
> \$0.5T by 2035



10 Patents



Working fully  
functional prototype



\$8 M funding so far

# Management Team



**Kazem Zandi**  
*CEO*



**Drew Newsom**  
*Head of Bizz Dev.*



**Ziad Shukri**  
*Dir. of Eng.*



**Richard Williston**  
*Dir. of Oper.*



**Joseph Salhany**  
*Program Director*



**Brian Kronick**  
*CFO*

# OSCP is an OEM, Selling Inertial Measurement Units (IMUs) to Autonomous Vehicle Market



# IMUs use Accelerometers and Gyroscopes to positionally navigate a moving object



# Current high performance IMUs called FOGs are too bulky and expensive for autonomous vehicles navigation



**\$15,000**

**KVH**

↑  
**Competitor**



**<\$100**

**OSCP**

↑  
**Us**

- ✓ **Up to 300x Cheaper**
- ✓ **Up to 50x Smaller**
- ✓ **10x Less Power**
- ✓ **Same Accuracy**
- ✓ **Up to 3x Reliable**



# Competition



IMU Parameter	OSCP	MEMS	FOG
Small Size	✓	✓	✗
Lightweight	✓	✓	✗
Low Power	✓	✓	✗
Low Drift	✓	✗	✓
Low Drift Due to Vibration	✓	✗	✓
High Bandwidth	✓	✗	✓
Low Temperature Sensitivity	✓	✗	✓
CMOS Compatible	✓	✓	✗
Scalable	✓	✓	✗
Low Price	✓	✓	✗

# OSCP Gyro Solution

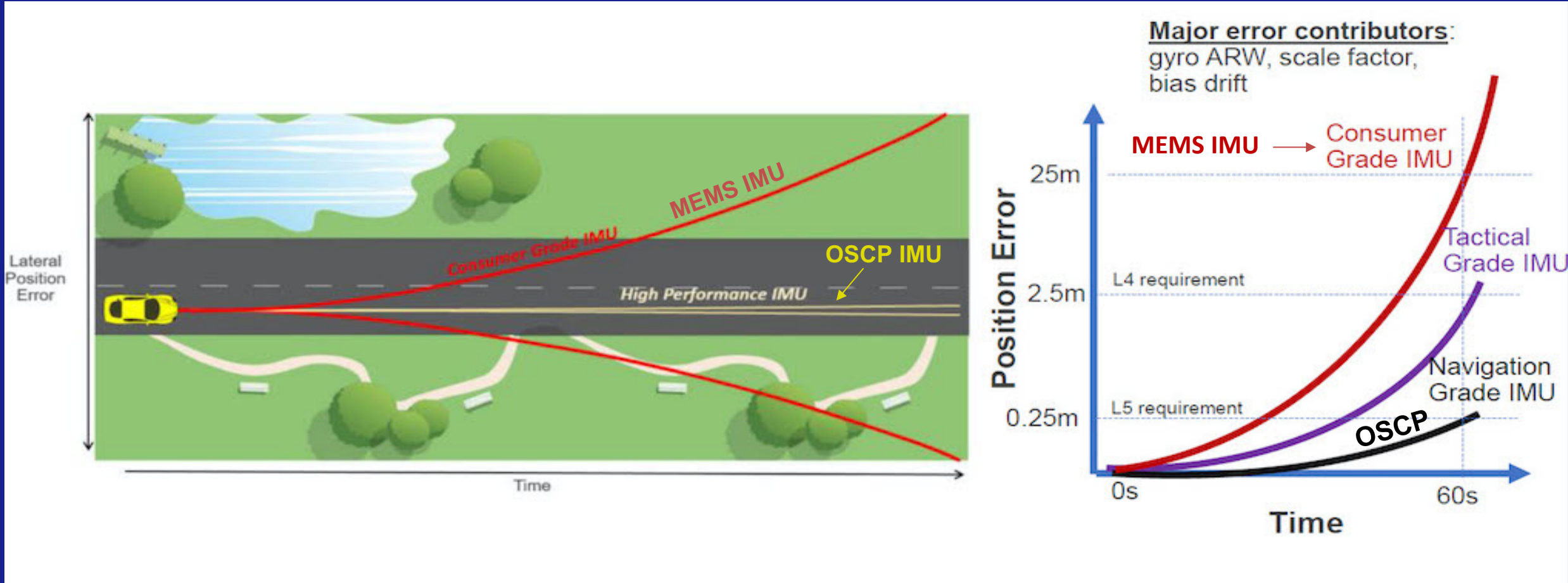
- Based on Integrated Photonics and Sagnac Effect
- Compared to MEMS IMUs: *No Moving Parts*
  - Less noise
  - More reliability
  - High performance (low bias drift)
  - No cross sensitivity to acceleration
  - No need for vacuum packaging
  - Immunity to harsh environment (EMI, ions, fire, humidity)





# AVs Heading Problem (Yaw axis)

IMU determines the ultimate performance of precise positioning solution



# Partners

Large Company

**THALES**

SMEs

**C2MI**  
Reinventing innovation

**FIXPOSITION**

**CMC**  
MICROSYSTEMS

**h-aero**<sup>TM</sup>

**fabrinet**

**Nexus**  
Robotics

**INO**

**SII**  
SII CANADA

**OPTTECH**

**FTEX**

Incubators/  
Accelerators

**Si**  
SILICON  
CATALYST

**FounderFuel**

**PLUGANDPLAY**

**ventureLAB**

**nextcorps**  
LUMINATE

**CEN  
TECH**

**Garage+**

Government

**SUSTAINABLE DEVELOPMENT  
TECHNOLOGY CANADA**  
TECHNOLOGIES DU DEVELOPPEMENT  
DURABLE CANADA

**Investissement  
Québec**

Universities

**McGill**

**UNIVERSITÉ  
Concordia  
UNIVERSITY**