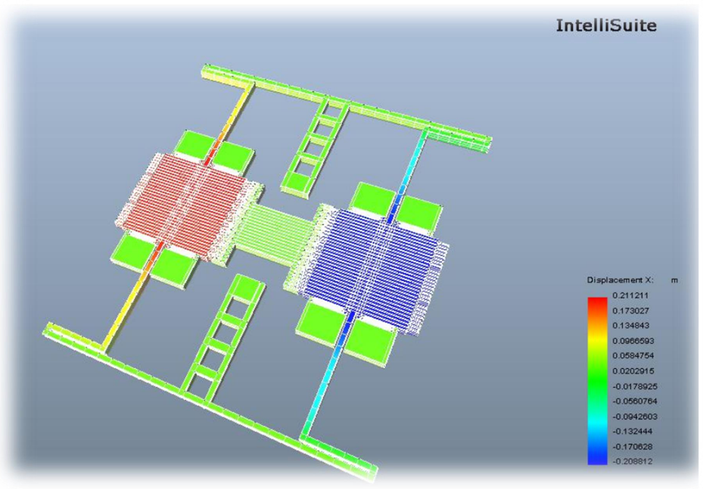
Fast Multiphysics tools

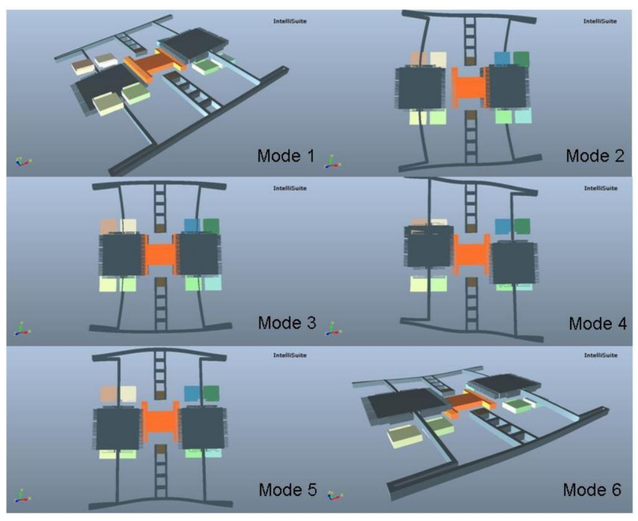
IntelliSense

Modeling Tools : Thermomechanical and High frequency package modeling; Incorporate package effects into system models

Electro-Thermo-Mechanical Analysis Module

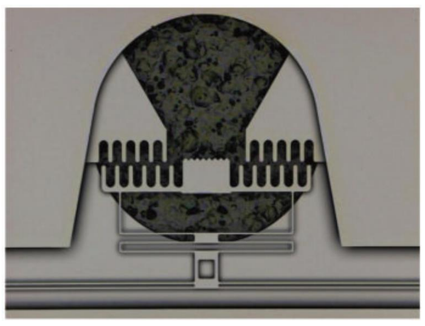
Inertial MEMS: Gyroscope

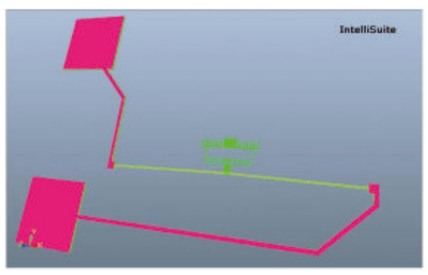




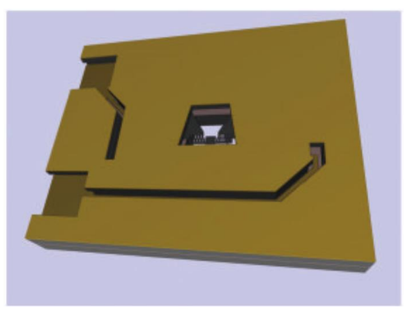
FEM analysis and respective mode shape of gyro

Sensors & Actuators: Variable optical Attenuator (VOA)

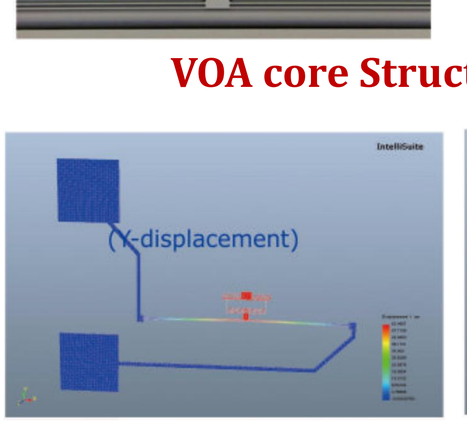


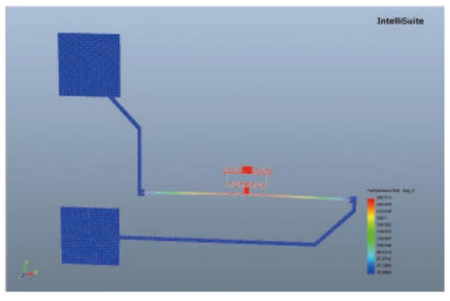


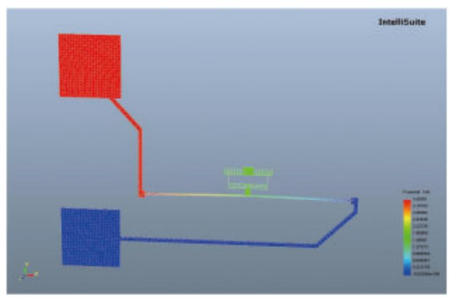
VOA core Structure Layout



VOA Process Simulation

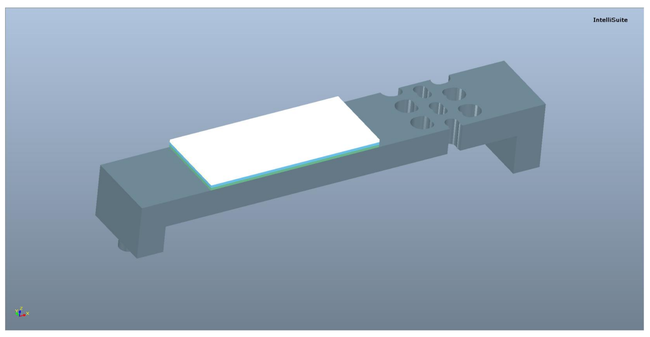




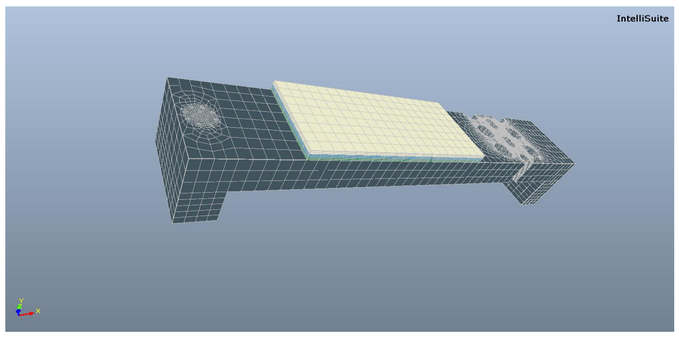


VOA Core Structure Simulation Results

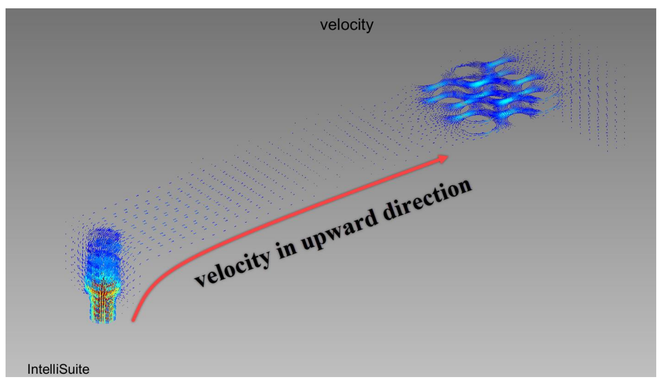
Microfluidic-design: Piezoelectric based couple Fluid-Structure interaction (FSI)

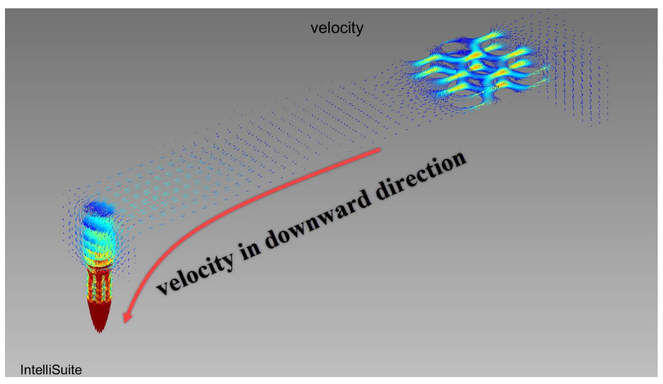


3D model of FSI



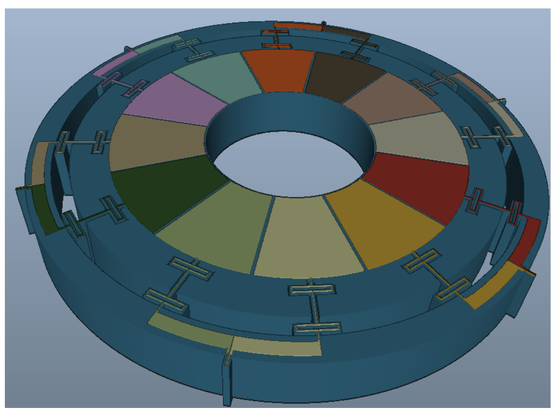
Mesh model of FSI



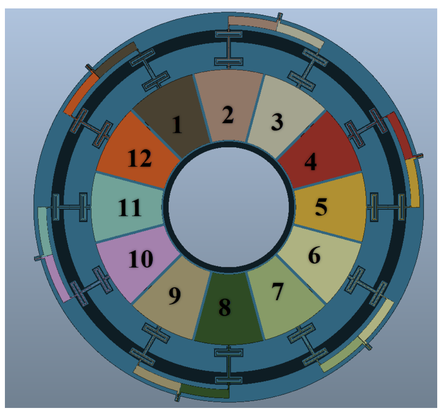


Velocity of fluid surrounding to a piezoelectric film and a liquid chamber

Piezoelectric Capacitive Analysis



3D Model of Capacitive micromotor

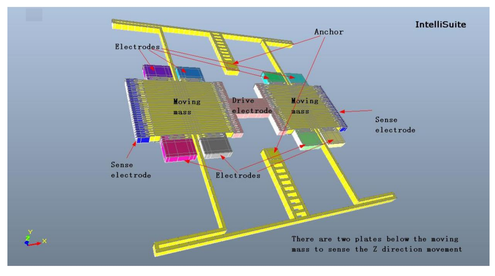


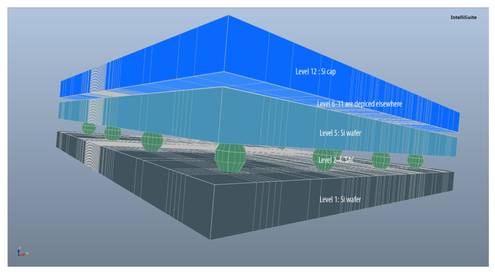
Top View with electrode numbers

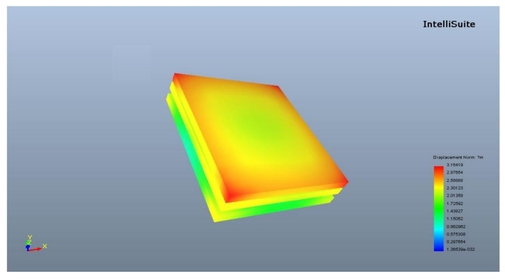
To find out the parasitic capacitance matrix across multiple electrodes at once.

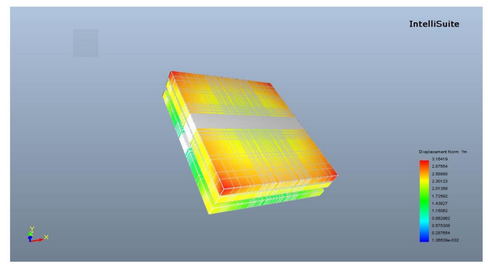
Electrodes	1	2	3	4	5	6	7	8	9	10	11	12
1	1.09E+01	-8.82E-01	-8.68E-01	-8.82E-01	-8.78E-01	-8.82E-01	-8.85E-01	-8.64E-01	-9.08E-01	-8.63E-01	-9.65E-01	-8.17E-01
2	-8.82E-01	8.82E-01	-1.24E-02	3.17E-05	1.50E-05	9.49E-06	7.05E-06	6.25E-06	8.00E-06	9.95E-06	1.13E-05	2.95E-05
3	-8.68E-01	-1.24E-02	8.62E-01	-4.97E-03	3.43E-05	1.45E-05	8.79E-06	6.65E-06	7.56E-06	7.74E-06	7.22E-06	1.45E-05
4	-8.82E-01	3.17E-05	-4.97E-03	8.79E-01	-1.71E-02	3.26E-05	1.39E-05	8.70E-06	8.16E-06	7.05E-06	5.62E-06	8.42E-06
5	-8.78E-01	1.50E-05	3.43E-05	-1.71E-02	8.81E-01	-4.63E-03	3.45E-05	1.23E-05	1.00E-05	7.26E-06	4.78E-06	6.55E-06
6	-8.82E-01	9.49E-06	1.45E-05	3.26E-05	-4.63E-03	8.73E-01	-5.78E-03	3.06E-05	1.72E-05	9.64E-06	5.45E-06	6.32E-06
7	-8.85E-01	7.05E-06	8.79E-06	1.39E-05	3.45E-05	-5.78E-03	8.75E-01	-5.58E-03	3.43E-05	1.33E-05	6.52E-06	6.21E-06
8	-8.64E-01	6.25E-06	6.65E-06	8.70E-06	1.23E-05	3.06E-05	-5.58E-03	8.72E-01	-2.03E-02	3.00E-05	9.61E-06	8.13E-06
9	-9.08E-01	8.00E-06	7.56E-06	8.16E-06	1.00E-05	1.72E-05	3.43E-05	-2.03E-02	9.08E-01	-4.88E-03	2.64E-05	1.41E-05
10	-8.63E-01	9.95E-06	7.74E-06	7.05E-06	7.26E-06	9.64E-06	1.33E-05	3.00E-05	-4.88E-03	8.69E-01	-3.71E-02	3.47E-05
11	-9.65E-01	1.13E-05	7.22E-06	5.62E-06	4.78E-06	5.45E-06	6.52E-06	9.61E-06	2.64E-05	-3.71E-02	1.04E+00	-4.86E-03
12	-8.17E-01	2.95E-05	1.45E-05	8.42E-06	6.55E-06	6.32E-06	6.21E-06	8.13E-06	1.41E-05	3.47E-05	-4.86E-03	8.64E-01

Package / device couple analysis

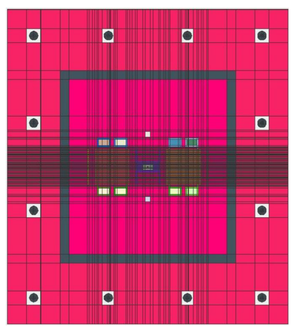


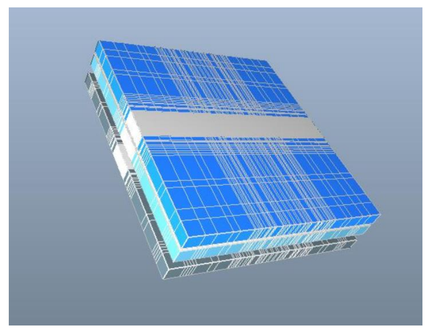




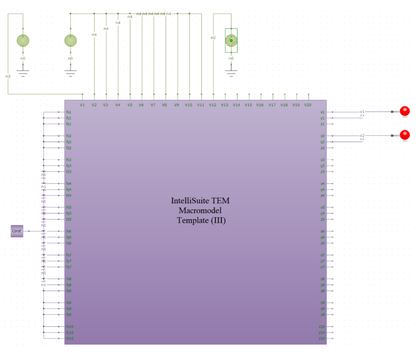


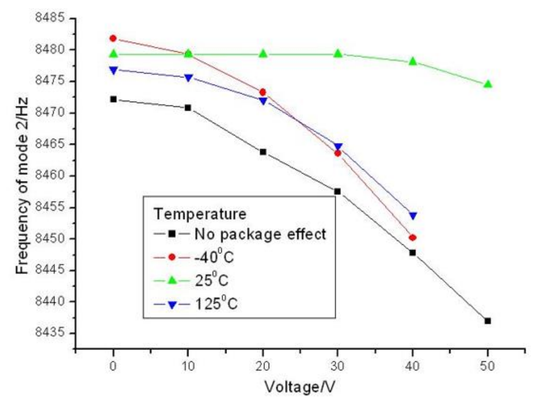
FEA Model of Packaged Gyro





Mask to 3D structure





Package gyro Macro-Model Extraction with thermal effects