IKURA



CMG Flywheel



Diameter – 6.8cm Mass – 825g Max. rate – 50,000rpm



Full name	Internal Kinematic Underwater Robot Actuation system
Class	Zero-G
Capabilities	Unrestricted attitude control and 3D missions.

Description IKURA is the first prototype of the "Zero-G" class AUV. This new class of AUV has zero righting moment and so is capable of motion as if it were in space. The novel CMG based attitude control system gives IKURA the ability to hold any angle in roll, pitch and yaw. This unique ability allows IKURA to perform its missions in a truly 3D manner, maximising the use of its thrusters, sensors and power supply in a way that has not been previously possible. It is expected that in addition to improving AUV performance, this will open up new fields of research where AUVs can be applied.

Length	50cm
Diameter	22cm
Mass	16.7kg
Max. depth	20m



- surge control

First Zero-G class underwater robot.

CMG Pyramid

Thruster

First ever application of CMGs to underwater robots.

First underwater robot to demonstrate unrestricted attitude control.

First robot to perform vertically pitched diving and surfacing in surge.

Launch date June 2005