

# EXPERIENCE IN MARINE ROBOTIC PLATFORM DEVELOPMENT FOR LIGHT-WEIGHT CLASS AUV

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The paper presents the experience of creating a product family of modular light-weight class AUV based on a universal platform. The platform includes the main functional systems of AUV: an onboard control system, a propulsion and steering complex, an onboard energy system. From 2014 till 2022, based on the longstanding groundwork in integrated automation of marine equipment, JSC "Concern "NPO "Aurora" created a modular light-class AUV and successfully finished all types of tests and trials for full-scale production. Described main solutions for solving the problems for the AUV development consider interests of a wide range of potential customers. The paper also briefly describes implemented technologies, which reduce the time required to create marine robotic complexes. They include research design and simulation technology, CAD/CAM development-manufacturing cycle, model-oriented software development technology, adaptation of the control system to payload change, combination of AUV/ROV advantages in survey class AUV, power supply system based on hydrogen transformation for light-weight AUV.

**Keywords:** autonomous underwater vehicle, marine robotic complexes, universal platforms

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