



Turkey's First Unmanned Combat Surface Vehicle "ULAQ" Makes Its Debut

Turkey's first Armed Unmanned Combat Surface Vehicle (UCSV), ULAQ, was introduced at a joint press conference organized by Meteksan Defence and ARES Shipyard.

Antalya-based ARES Shipyard and Ankara-based Meteksan Defence companies have introduced the first unmanned combat surface vessel solution following the research

and development activities that have been going on for several years. The prototype of the Unmanned Combat Surface Vehicle (UCSV) "ULAQ," which will be the first platform of its series, is expected to be completed in December.

The design, construction, and outfitting activities of ULAQ are carried out by Ares Shipyard, the integration of remote command, autonomous, data-link, and data transfer systems are performed by Meteksan, and weapon systems are provided by Roketsan. All systems in the vehicle are designed to be redundant. ULAQ, which has a length of 11

meters, a payload capacity of up to 2 tons, a maximum cruising range of 400 km, and 65 km/h (35 knots) top speed, is equipped with a day/night Electro-Optical (E/O) system, national encrypted communication infrastructure, and Anti-jamming GNSS infrastructure. Manufactured from advanced composite materials, ULAQ is equipped with passive and active stabilization systems, a damage-control system with self-righting capability, a telescopic mast and an antenna system to increase detection & identification capabilities, a navigation and surveillance radar system to track surface

targets, as well as a laser and IR-guided weapon systems.

The UCSV can be operated from mobile ground control stations, military headquarters, and command centers or naval platforms such as aircraft carriers and frigates to carry out different missions such as Reconnaissance, Surveillance & Intelligence, Anti-Surface Warfare (ASuW), Asymmetric Warfare, Armed Escort & Force Protection, and Strategic Facility Security. The project started in 2018, and research and concept studies were carried out between 2018-2019. In 2019, the prototype production



process was started with national capabilities, and prototype design activities were completed in the first quarter of 2020. Production of the first prototype started in June 2020. The design studies of the prototype boat were finalized in August. Its structural production was completed and is planned to be launched in December 2020, following the outfitting activities. The first firing tests of the ULAQ prototype will be carried out in the first quarter of 2021 with 4 CIRIT and 2 L-UMTAS missile systems provided by the national missile systems manufacturer Roketsan.

In addition to missile systems, ULAQ can

also be equipped with different payloads, such as electronic warfare, jamming, and various communication and intelligence systems, to meet other operational requirements. Aside from being a remotely-controlled unmanned surface vehicle, the UCSVs will also feature superior and high-tech advanced capabilities such as artificial intelligence (AI), swarming technology, reconnaissance & surveillance, data link, network-centric communication, and data sharing capability. It will be able to serve as an element of Combat Management Systems (CMS). Following the prototype development,

ULAQ

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which is the first phase of a broader project initiated by ARES Shipyard and Meteksan Defence in the field of unmanned surface vehicles (USV), different UCSV versions for intelligence gathering, mine hunting, Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), firefighting, Electronic Warfare (EW) and humanitarian aid/evacuation missions will also be ready for production thanks to its open architecture and scalable structure.

The intelligence and electronic warfare configuration of the ULAQ unmanned surface vehicle is equipped with satellite communication and control systems, E/O systems, surface radar, jamming & anti-jamming devices, radios operating at different frequencies, and a data transfer system. This model has the same body structure as the prototype. The ASuW configuration of ULAQ is equipped with TRLG-230 and Atmaca Guided Anti-Ship Missiles and data

transfer & processing systems. This model has a larger hull structure than the prototype and allows manned operations if necessary. It is 24 m in length and has superior capabilities. The ASW model will feature a towed sonar array, ASW rockets, navigation radar, camera systems, and a stabilized weapon system to engage and destroy naval mines.

Taking the floor at the joint press briefing on October 28, 2020, ARES Shipyard General Manager Utku ALANÇ said, "As a result of our labor-intensive efforts and hard work to realize this dream, we are proud to present the first national unmanned combat surface vehicle (UCSV) solution in the field of Unmanned Naval Systems. We have achieved this success, as always, with our own resources and capabilities, keeping our national interests at the forefront. We present the Unmanned Combat Surface Vehicle Project, the production of which will be completed in December, to our great Turkish nation as the first



platform of the ULAQ series. In ancient Turkish culture, ULAQ is the name given to ambassadors, who represented the state in every field with their impressive skills in Central Asia. ULAQs were renowned for their military talents, as well as for their knowledge and wisdom. In this sense, the Unmanned Surface Vehicles we have developed are also true to this name."

In his speech, Vice President of Meteksan Defence Erdal TORUN shared information about the command and

control systems of ULAQ, "The Coastal Control Station, shortly called SAKI, is operated by two crew members (Captain and Gunner). Equipped with life-support systems, SAKI has a modular structure that allows integration into land vehicles or naval vessels. The design and outfitting of SAKI have been completely carried out by Meteksan Defence, and the system is equipped with jam-resistant C-band data link used in air platforms and munitions, mission computers, navigation systems and

software, GNSS anti-jamming systems, and communication systems, allowing it to command and control multiple naval platforms at sea. SAKI will also have joint operation capabilities with other UCSVs, UAVs/UCAVs, and manned aircraft at 200km (line-of-sight) thanks to the KEMENT C-band tactical data-link developed by Meteksan Defence; or at greater distances via relaying through the TAFICS (Turkish Armed Forces Integrated Communication System) infrastructure."



Speaking at the conference, President of Meteksan Defence Selçuk ALPARSLAN said, "With the developments in recent years, we see once again the importance of defending our country that surrounded by three seas and the blue homeland to protect our continental shelf and the exclusive economic zone. As you know, Meteksan Defence develops various high-technology indigenous critical subsystems for unmanned aerial vehicles and missile systems. Using our technological expertise in the field of communication and sensor systems of many years to unmanned surface vessels, we are proud to present you Turkey's first Unmanned Combat Surface Vehicle together with ARES Shipyard, one of the leading shipyards in Turkey and the national weapons manufacturer as well as our valuable partner Roketsan. While ARES Shipyard is designing the ULAQ Unmanned Surface Vessel, as Meteksan Defence, we will be responsible for production of critical electronic systems such as communication and navigation systems, mission computers, command control software, and autonomous algorithms. Additionally, the Coastal Control Station, which includes various management systems to command and control the Unmanned Surface Vehicles, is also developed by Meteksan Defence engineers. As Meteksan Defence, we will equip such a superior platform developed by Ares Shipyard with domestic



and national payloads such as communication systems, radar, electro-optic systems, Electronic Warfare, and sonar systems. I want to state that we prioritize the maximum domestic contribution rate while designing critical electronic systems to be used on this platform

and that we fully consider the operational needs of our Turkish Armed Forces. Moreover, ULAQ has a significant export potential for friendly and allied countries. We believe that ULAQ, which is a completely domestic and national platform, will be a superior system

compared to its foreign competitors, will make an important contribution to the defense of the Blue Homeland, and will increase the export potential of our country. May ULAQ serve our country, blue homeland, and our armed forces well" ■

