# K120
# Featured Ship of the Year 2021 in Taiwan

## Taiwan SNAME

1. Concept

   The boat is designed mainly for special operation force purpose. The main design concept of the boat emphasizes on the safety during navigation as well as the completion of the mission. The boat features in being light-draft, highly mobile and maneuverable, and able to be equipped with ammunition devices. The wave resistance and shock suspension abilities are also taken into consideration for the whole boat design, since the wave during the sailing might make the crews exhausted easily. The boat is equipped with the marine tactical jockey seats (shock suspension seats) to reduce the tiredness of the crews and maintain combat abilities.

2. Design

   The hull of the boat is made up with the high-strength composite materials. The boat has great ability of being wave-resistant and is built with deep V-shaped

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structure based on the special operation force purposes. The boat could be used for executing the coastal surveillance, investigation, military, anti-robbery, emergency rescue, anti-war, and other missions.

3. Maneuverable Tactical track

The boat is equipped with tactical tracks, and the tracks could be operated with the embarkation tools and used to fix the equipment in order to strengthen the tactical operation. The boat equipment, such as the gun mounts and the jockey seats, are designed to be quick-detachable and fool-proof. The operation personnel could easy understand how to disassemble and assemble the equipment with the simple tools or by hands, which makes the deck space easily be adjusted based on the operation needs.

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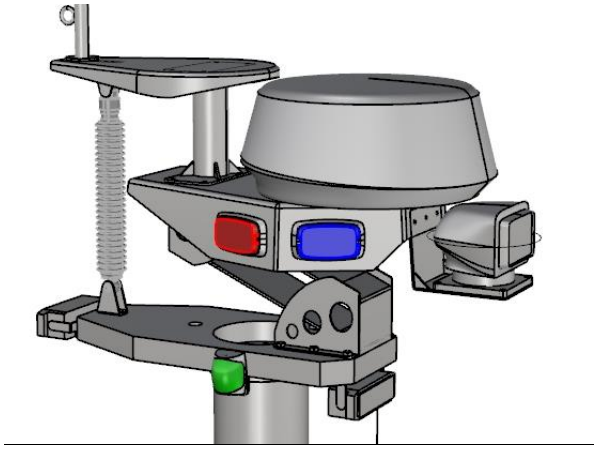
4. Special Reconnaissance-Infrared (IR) Remote-Control Searchlight

The painting of the boat appearance is designed to be the minimal visual acuity, which has a great effect of concealing. The boat is additionally equipped with the Infrared (IR) invisible tactical searchlight; the searchlight could be controlled by the console to conduct the reconnaissance. With the night vision equipment on the crews, it could greatly enhance the tactical ability of the boat during the nights.



5. Interception and Embarkation-Fast Lifting Radar Mast

When the boat is passing through the low bridge surface, the height of the radar mast could be quickly lowered to make sure the boat is able to pass through safely, which enhances the operation performance of the boat. The fast lifting radar mast could prevent the boat from hitting the ship during the embarkation mission and damaging the high-cost equipment, such as the thermal device, the radar, and other equipment.

## 6. Fire Retardant Design for the Whole Boat

Karmin worked with one of the biggest resin manufacturing companies and developed the high-performance fire retardant resin. The resin (composite material) was used during the whole construction of the boat. The tender boats for the Panshi Fast Combat Support Ship in 2012 were built up with the fire-retardant resin. In addition, the certificate application of the fire-retardant resin was sent to Registro Italiano Navale (RINA) and the test specimen that were made simultaneously during the lamination were sent to the laboratory approved by RINA. The conduction of the resin testing was based on the “IMO MSC/Circ. 1006” regulation accordingly. The resin, in the end, passed the test and received the approval by RINA.

In February, 2016, the fire-retardant testing for the actual boat was conducting in a military unit in a southeast Asian country. The tester burnt the boat hull with the gas torch gun for 5 minutes in total and the fire extinguished immediately after 5 seconds of the fire source removal.

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