

Taiwan's New Amphibious Assault Ship Bristles With Anti-Air Missiles
Thomas Newdick - The drive

Taiwan today formally introduced into service the first of a new class of amphibious assault ships to the Republic of China Navy, or ROCN. While the lead ship of the Yushan class of landing platform docks, or LPDs, has similarities with the U.S. [San Antonio class](#), what's immediately notable is its relatively enormous anti-aircraft firepower, with launch cells for no fewer than 32 medium-range surface-to-air missiles. This is almost certainly the first time an assault ship of this type has packed such a powerful air defense capability.



Taiwan's New Amphibious Assault Ship Bristles With Anti-Air Missiles © Photo by SAM YEH/AFP via Getty Images

In a ceremony today in the southern port city of Kaohsiung, the Yushan (LPD-1401) was officially transferred to the ROCN today, in the presence of President Tsai Ing-wen.

<https://www.youtube.com/watch?v=bUCSolQjNRs>

<https://twitter.com/new27brigade/status/1575704262809882625?s=20&t=rgdtG6TOBWK6TLZ25xeiuA>

The Yushan was built by the state-owned China Shipbuilding Corporation (CSBC), which laid the keel of the vessel in June 2020 and then [launched it](#) in April 2021. At-sea trials then began in July this year.



Taiwan's New Amphibious Assault Ship Bristles With Anti-Air Missiles. President Tsai Ing-wen watched the launch of the Yushan in April 2021. Office of the President of Taiwan. © Provided by The Drive

Speaking at the commissioning ceremony, Tsai said the new vessel reflected Taiwan's path to "national defense autonomy," which includes local production of advanced warships and submarines.

"When it comes to [China's military threats](#), only by strengthening our self-defense capabilities can there be true peace," Tsai said, according to a [report](#) from Reuters. "It is our constant policy and determination to implement national defense autonomy so that the military has the best equipment to defend the country."



Taiwan's New Amphibious Assault Ship Bristles With Anti-Air Missiles © Provided by The Drive. The size of the first-in-class LPS is evident in this dockside view. via Twitter.

Appropriately for a vessel named after Taiwan's tallest mountain, the new warship is the biggest of its kind to be built by local industry, by some margin. It has a fully loaded displacement of 10,600 tons, compared with 4,100 tons for the next-biggest home-built surface combatant, the [Cheng Kung class](#) frigate.

ROCS Chi Kuang (PFG-1105), one of the Cheng Kung class guided-missile frigates. These were the largest Taiwanese-built warships intended primarily for offensive operations prior to the Yushan class LPD. [玄史生/Wikimedia Commons](#).

Other specifications for the new LPD include a length of around 500 feet and a hull draught of 20 feet. The vessel has a [reported](#) maximum speed of 21 knots and a range of approximately 7,000 miles.

Other amphibious warships in ROCN service are all considerably older vessels transferred from the U.S. Navy service, while the Pan Shi and Wu Yi, both of which are notably larger than the Yushan, are one-off combat support ships and are essentially auxiliaries, with a more limited combat capacity.

The amphibious command ship ROCS Kao Hsiung (LCC-1) represents the antiquated nature of the current ROCN amphibious warfare fleet. Originally launched in 1944 as a U.S. Navy tank landing ship, this vessel is still thought to be used by Taiwan for missile launch tests. [玄史生/Wikimedia Commons](#).

It is not immediately clear what, if any assistance the United States provided to Taiwan while it was developing its new LPD, but there are clearly outward similarities with the San Antonio class, including the enclosed sensor masts, which help reduce radar cross-section.

In recent years, Washington has been more willing to share advanced technology with Taiwan, including, for example, [combat management systems](#) vital for developing submarines. The Taiwanese vessel also shares a superficial resemblance to the Chinese [Type 071](#) amphibious warfare ship, although both this and the San Antonio are significantly bigger.



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According to a tweet today from the Republic of China's Ministry of National Defense, the Yushan "will supply our outlying islands, transport troops, conduct HA/DR [humanitarian assistance and disaster relief] operations, and reinforce our forces with TF [task forces] aboard."

The movement of troops, including in amphibious assaults launched from a standoff distance, via landing craft and helicopters, is part of an LPD's standard mission set. Five new landing craft mechanized (LCM) were handed over to the ROCN at the same time that the Yushan was commissioned:

For its primary role of amphibious assault, the Yushan can accommodate up to 673 troops and the vehicle deck has the capacity to carry AAV7 tracked amphibious landing vehicles, that can be launched and recovered via a well-dock. A hangar provides space for two UH-60-sized helicopters, which can operate from a single flight deck spot.



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However, these kinds of vessels would also be ideal for maintaining supply lines to Taiwan's more distant islands, [close to the Chinese coast](#), which are especially vulnerable to attack from the mainland.

Indeed, the chairman of CSBC, Cheng Wen-lung said that in addition to amphibious warfare, the Yushan will assume the "main transport role" for Taiwan's offshore islands close to China, as well as in the South China Sea, where various islands, atolls, and other features are claimed by Taiwan, among other nations.



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However, the warship's unusual ability to be fitted with surface-to-air missiles capable of medium-to-long-range defense means that it could also be used for a variety of surface warfare contingencies, perhaps even as the flagship of a surface action group, while also providing significant air defense coverage.

*In terms of armament, the pair of 20mm **Phalanx close-in weapon systems (CIWS)**, fore and aft, is standard for LPDs of this type, primarily providing protection against anti-ship missiles and other close-range threats.*

Unusually, the Yushan is also armed with a single 76mm gun that can engage aircraft and missiles, and other surface vessels, and provide fire support for ground operations.



Taiwan's New Amphibious Assault Ship Bristles With Anti-Air Missiles© Provided by The Drive. A view of some of the crew quarters below decks on the Yushan. Office of the President of Taiwan

*The 76mm gun and Phalanx CIWS mounted on the bow of the ship. via Twitter
More impressively, the vessel is also equipped with a pair of missile launchers, each of which can accommodate 16 medium-range Tien Chien-2N, or **TC-2N**, surface-to-air missiles. Part of the Sky Sword family of anti-aircraft missiles, the TC-2N has a range of up to 62 miles and uses active radar guidance.*



Taiwan's New Amphibious Assault Ship Bristles With Anti-Air Missiles© Provided by The Drive. Angled launchers for 32 Tien Chien-2N, or TC-2N, surface-to-air missile on the deck of the Yushan. Office of the President of Taiwan.

Developed by the National Chung-Shan Institute of Science and Technology (NCSIST), this missile fills the gap between the Phalanx point-defense system and the longer-range SM-2 Standard missiles that arms the Kee Lung class destroyers (former U.S. Navy Kidd class).

In the past, there have been reports that the same two missile launchers can each be outfitted with eight Hsiung Feng II anti-ship missiles.

The domestically produced Hsiung Feng II, or HF-2, would give the Yushan an impressive surface warfare capability, as well as much-reinforced self-defense against maritime targets.

The subsonic anti-ship missile, powered by a turbojet engine, carries a 500-pound warhead over a distance of 62-75 miles. An extended-range variant is also in development, with a range of over 150 miles. The HF-2 is already found on a range of ROCN warships, from frigates to fast attack craft.



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Potentially, the missile cells on the Yushan could also be arranged to provide a mix of both anti-ship and surface-to-air missiles.



PACIFIC OCEAN (Feb. 11, 2022) The amphibious transport dock ship USS Anchorage (LPD 23) fires a RIM-116 Rolling Airframe Missile (RAM) during a live-fire exercise in the Pacific Ocean, Feb. 11. Anchorage is underway conducting routine operations in U.S. 3rd Fleet. (U.S. Navy Photo by Mass Communication Specialist 2nd Class Hector Carrera)© Provided by The Drive.

However, more recent [reports](#) indicate that the plan to fit HF-2 anti-ship missiles has been dropped, for now, at least.



170722-N-YG104-011 CORAL SEA (July 22, 2017) The amphibious transport dock USS Green Bay (LPD 20), the dock landing ship USS Ashland (LSD 48) and a Royal Australian Navy replenishment oiler HMAS Success (OR 304) steam along with a Combined Amphibious Force during a mutli-ship sailing formation during Talisman Saber 17. Talisman Saber is a biennial U.S. bilateral exercise held off the coast of Australia meant to achieve interoperability and strengthen the U.S.-Australia alliance. (U.S. Navy photo by Mass Communication Specialist 2nd Class Sarah Villegas/Released)© Provided by The Drive

Regardless, the kind of air defense armament offered by the Taiwanese LPD is in stark contrast to the U.S. Navy's similar San Antonio class, for example. These warships have a pair of [Rolling Airframe Missile](#) launchers and two [30mm Bushmaster II](#) guns for close-in defense. Theoretically, they can be armed with two eight-cell vertical launch systems for Evolved Sea Sparrow Missiles ([ESSM](#)), but these are not fitted. You can read [more about this latent capability here](#).

Clearly, the armament of the Yushan class reflects the fact that it's expected to undertake a wider variety of missions than the San Antonios, including anti-air warfare, although it would undertake this task as part of a larger surface action group offering a balanced range of capabilities.

At the same time, the fact that these kinds of weapons have been fitted in the Taiwanese LPD (in the case of the TC-2N) or at least considered (HF-2), likely reflects the assumption that any kind of conflict involving China in the Taiwan Strait, or the South China Sea would involve a significant air and surface threat. That kind of confrontation, especially in the confines of the roughly 110-mile-wide Taiwan Strait, could leave a warship like the San Antonio class highly vulnerable, even when working alongside other surface combatants and submarines.

Furthermore, simply having access to more surface-to-air missiles would likely be highly beneficial when dealing with the significant numbers of Chinese aircraft that would be expected to flood into the Taiwan Strait during a major offensive, for example. The TC-2N has also been tested against [sea-skimming targets](#), and one of its key wartime roles would be to engage Chinese [anti-ship missiles](#), a wide variety of which are available for launch from [multiple platforms](#).

On the other hand, the ROCN remains wholly outnumbered and outgunned by the People's Liberation Army Navy, making the survivability of even a heavily defended vessel like the Yushan questionable in any kind of serious conflict.

Nevertheless, Taiwan has previously demonstrated a willingness to add missiles to ship classes that wouldn't normally be associated with these kinds of capabilities. In particular, recent exercises have seen the Taiwan Coast Guard's Anping class catamaran patrol ship [reconfigured](#) to fire HF-2 anti-ship missiles. Measures like this reveal a keen interest in finding ways to bolster the country's naval capabilities as part of its defense strategy against China.

It is noteworthy, too, that expanded amphibious warfare capabilities are just one part of a much broader effort to modernize the ROCN, while at the same time reducing the reliance upon the United States as Taiwan's primary arms supplier.

As well as plans to build a total of four Yushan class LPDs, Taiwan's shipbuilders are busy working on the [Tuo Chiang class](#) of corvettes, with work also now having begun on a new class of attack submarines, in a program run by NCSIST, which you can read more about [here](#).

Efforts like these are not only planned to increase self-sufficiency in the defense realm but also to respond to increasing pressure applied by the Chinese People's Liberation Army, primarily in the Taiwan Strait.

While Beijing makes no secret of its claims over Taiwan, tensions have increased in recent months, starting with the [visit to Taipei](#) by the U.S. House Speaker Nancy Pelosi, in early August. In response, China launched a series of war games that included [launching missiles](#) over Taiwan and sending an [unprecedented number of aircraft](#) into the Taiwan Strait. Since then, Chinese military activity has continued, albeit on a reduced scale.

With Taiwan's defensive posture primarily set up to defend against a Chinese attack on the main island, which would likely include a large-scale amphibious assault, fielding a powerful new LPD is also a statement of intent from Taiwan.

Whether it receives the anti-ship missiles that were planned in the past is unclear. But even without them, the Yushan class LPD offers a unique air warfare capability and it will be highly interesting to see how the Republic of China Navy develops operational procedures for these impressive warships.