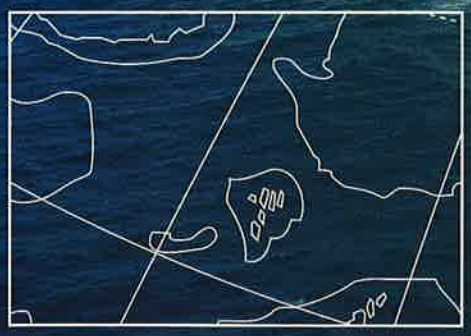
surface combatants | frigates |

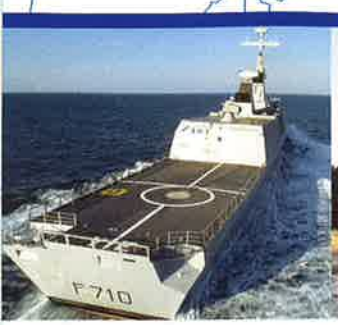
LA FAYETTE



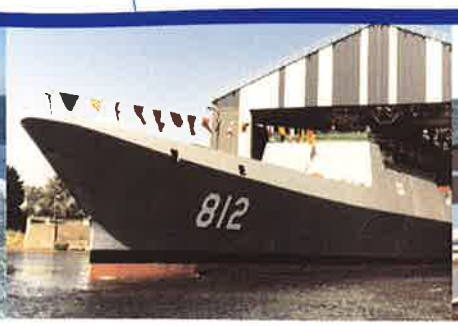
- ***First stealth frigates*** *for leading navies*
- *Improved* ***seakeeping & survivability***
- ***Highly automated platform*** *& modular design*
- *Impressive* ***combat suite***

Leading the way in programme prime contracting

DCN
EXPERTS IN NAVAL SYSTEMS



Impressive flight deck capabilities



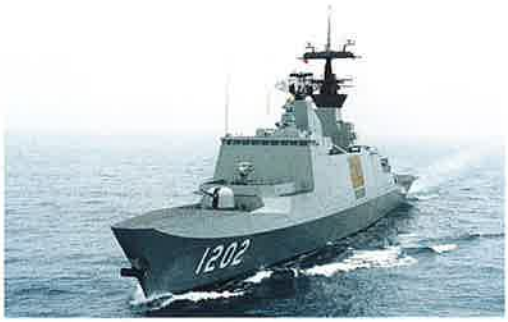
Launching of first La Fayette-class AAW frigate

DCN-designed Samahé traversing system

Operators at Shipmaster consoles on board

> Missions

La Fayette-type frigates are designed to perform a wide range of missions. Typical missions range from protecting shipping lanes and patrolling exclusive economic zones to defending national interests. More high-intensity missions range from reconnaissance to ASW, AAW, ASuW, EW and network-centric warfare.
The La Fayette family's innovative design and inherent flexibility enable DCN to tailor the platform and combat system to the customer's precise needs.



La Fayette-class ASW frigate

> Advanced stealth

The La Fayette was the first full-stealth surface combatant to enter service. Its innovative design soon established a new standard in naval architecture. The most obvious stealth feature of La Fayette-type frigates is the shape of the hull and superstructure which have been optimized to achieve a low radar cross-section. Every detail of the hull, superstructure and mast is designed to reduce the RCS, including 'tumblehome' sides and inclined bulwarks, covered decks fore and aft, solid masts with inclined sides, redesigned gun turret and missile launchers, elimination of all right angles and concealment of the ship's boats behind a metal curtain.
The infrared signature has been reduced by using special paints, carefully insulating hot spots, and adopting exhaust funnels made of glass reinforced plastic.
Benefiting from DCN's experience in SSBN signature reduction, the vessel's magnetic signature is drastically reduced by a 17-loop, tri-axial active degaussing system.
The acoustic signature has been reduced by using specially designed machinery, cradles on flexible mounts, a Prairie Masker bubble-projection system and air-flow propellers.

> Highly automated platform

The Shipmaster® integrated ship management system ensures flexible platform management. Shipmaster® uses a distributed and redundant architecture allowing most installations to be remotely controlled from a single location, thereby significantly reducing crewing.
Propulsion plant, power generation and distribution, and most auxiliaries are monitored and controlled from the ship control centre (SCC). Sensor data is relayed first to local programmable logic controllers, then to the SCC via a secure redundant network, and finally to colour consoles.

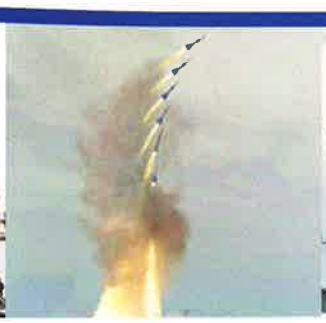
Characteristics

	ASUW VERSION	ASW VERSION	AAW VERSION
Length, overall	124 m	124 m	134 m
Beam	15 m	15 m	17 m
Displacement	3,500 tons	3,500 tons	4,500 tons
Speed	25 kts	25 kts	25 kts
Range	9,000 nm	9,000 nm	9,000 nm
Endurance	50 days	30 days	30 days
Helicopter	Medium size, ASW or ASuW	Medium size, ASW or ASuW	Medium size, ASW or ASuW

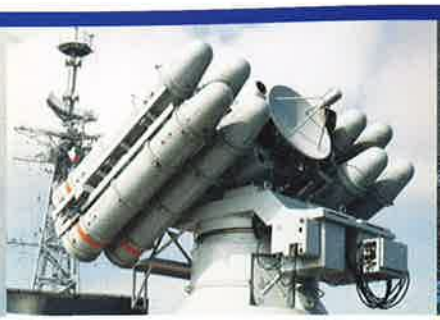
World's first stealth frigates

ADVANCED STEALTH
AUTOMATED PLATFORM
SURVIVABILITY & SEAKEEPING
MODULAR DESIGN
IMPRESSIVE COMBAT SUITE

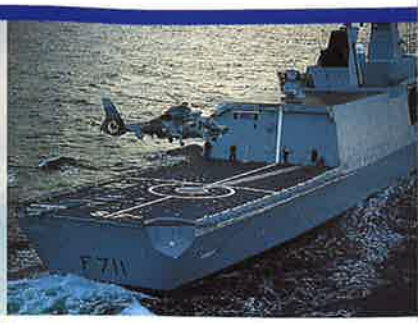
Weapon module



Launching Aster anti-air missile



Crotale missile system featuring turret reshaped by DCN



Helicopter landing

> Improved survivability

The La Fayette design takes into account the lessons of the past conflicts. The ship is well protected against such threats as high-calibre bullets, fire hazards and explosions.
The crew's quarters and the other critical compartments are protected by armour plate. In the event of an explosion, the double bulkheads separating the damage control zones offer outstanding resistance to blast propagation. In addition, critical equipment needed to operate the ship is mounted on high-performance shock/vibration mounts.
The main engines and piping systems, generator sets and power distribution networks, the combat system and the rudders are all arranged for optimal redundancy.
Three watertight bulkheads separate the fore and the aft main engine compartments to ensure the vessel can proceed under its own power should one compartment suffer an explosion, fire or flooding.

> Excellent seakeeping

The platform and all shipboard systems offer unrestricted operation up to sea state 6. The DCN-designed steadying system uses the ship's stabilization fins and rudders plus real-time computer control to reduce roll, pitch and yaw. This system is an adaptation of that developed for the Charles de Gaulle aircraft carrier.
Thanks to an efficient hull and active stability control, all La Fayette frigates can accommodate and operate a medium ASW/ASuW helicopter even in heavy seas.

> Modular design

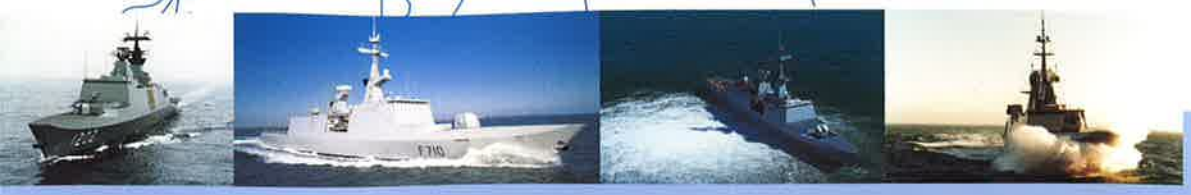
The La Fayette family's modular design shortens production cycles, cuts costs and allows DCN to tailor the basic architecture to each customer's needs. Modular construction also contributes to improved maintainability throughout the ship's life cycle.
The platform is composed of several hull blocks produced in different shipyards in just a few months. Major items of equipment, including the main engines and generator sets are mounted on cradles, along with all ancillaries (piping, filters, valves etc.). Each element of the combat system is designed as a single module combining all electronics and ancillaries. After shore-based acceptance testing, the components are installed and connected to the shipboard networks.

> Impressive combat suite

The combat suite was designed from the outset to be tailored to the customer's needs without compromise.
The combat management system is highly automated for reduced crewing.
The CMS uses high-performance computers to fuse and correlate data from shipboard sensors (radar, EO/IR, TV, ESM) along with external data received via tactical datalinks (L11, L14, L16) to generate the tactical picture. All data is displayed on multifunction consoles.
The CMS, which manages all weapons and sensors, can respond automatically to a missile attack using the ship's self-defence weapons.
La Fayette frigates are available in ASuW, ASW and AAW versions. To ensure that DCN customers get value for money, all weapons and sensors are chosen from among the most cost-effective available on the world market.

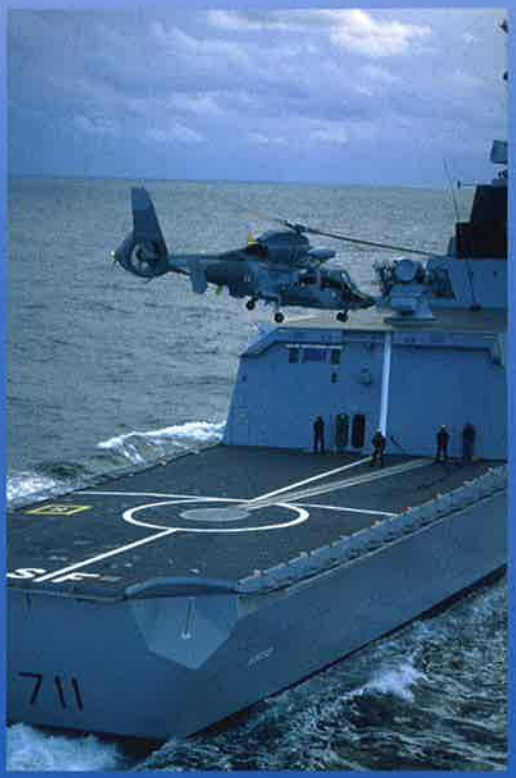
La Fayette-class frigates have achieved worldwide acclaim for stealth

surface combatants | frigates | **LA FAYETTE**



Combat system

Radars	• 2D long range • 3D multifunction
ASW sensors	• Hull-mounted sonar • Towed sonar
Electronic warfare	• ESM • Comint • Elint • Jammers • Decoys
Communications	• HF/V/UHF • Satcom • Datalinks
Weapons	• SAM missiles: Crotale, Aster, Sea Chaparral • Main Gun: 100 mm, 76 mm • Anti-ship missiles: Exocet, Hsiung Feng II • ASW: light- and heavyweight torpedoes



Satisfied customers

Fourteen La Fayette-type frigates are currently in service with the French Navy, the Royal Saudi Naval Forces and the Republic of China Navy.

2, rue Sextius-Michel - 75732 Paris cedex 15 - France
Tel: 33 (0)1 40 59 50 00 - Fax: 33 (0)1 40 59 56 48
www.dcn.fr

DCN
EXPERTS IN NAVAL SYSTEMS