Features
Guided missile destroyers are multi-mission [Anti-Air Warfare (AAW), Anti-Submarine Warfare (ASW), and Anti-Surface Warfare (ASW)] surface combatants. The destroyer's armament has greatly expanded the role of the ship in strike warfare utilizing the MK-41 Vertical Launch System (VLS).

Features unique to DDG 1000:
• Eighty peripheral vertical launch system (VLS) cells, two Advanced Gun System (AGS) 155 millimeter (mm) guns, and two 57mm Close In Guns (CIGs).
• A stern boat ramp for two 7 meter (m) Rigid Hull Inflatable Boats (RHIBs), designed with room for two 11m RHIBs.
• Aviation capacity for two MH-60R or one MH-60R and 3 VT Unmanned Aerial Vehicles (UAVs).
• It will be powered by an Integrated Power System with an Integrated Fight Through Power (IFTP). This is created by an Advanced Induction Motor (AIM).
• A Composite superstructure with integrated apertures and low signature profile.
• Aviation capacity for two MH-60R or one MH-60R and 3 VT Unmanned Aerial Vehicles (UAVs).
• Advanced sensors including a SPY-3 Multi-Function Radar.
• A wave-piercing "Tumblehome" hull form.

Background
Technological advances have improved the capability of modern destroyers culminating in the Arleigh Burke (DDG 51) class replacing the older Charles F. Adams and Farragut class guided missile destroyers. Named for the Navy's most famous destroyer squadron combat commander and three-time Chief of Naval Operations, the USS Arleigh Burke was commissioned July 4, 1991, and was the most powerful surface combatant ever put to sea. Like the larger Ticonderoga-class cruisers, DDG 51’s combat capability centers around the Aegis Weapon System (AWS). AWS is composed of the SPY-1D multi-function phased array radar, advanced AAW and ASW systems, VLS, and the Tomahawk Weapon System. These advances allow the Arleigh Burke-class to continue the revolution at sea.

The Arleigh Burke class employs all-steel construction and is comprised of three separate variants or "Flights": DDG 51-71 represent the original design and are designated Flight I ships, DDG 72-78 are Flight II ships, DDG 79 and Follow ships are built to the Flight IIA design.

Like most modern U.S. surface combatants, DDG 51 utilizes gas turbine propulsion. Employing four General Electric LM 2500 gas turbines to produce 100,000 total shaft horsepower via a dual shaft design, Arleigh Burke-class destroyers are capable of achieving 30 plus knot speeds in open seas.

The Flight IIA design includes the addition of the Kingfisher mine-avoidance capability, a pair of helicopter hangars which provide the ability to deploy with two organic Lamps MK III MH-60 helicopters, blast-hardened bulkheads, distributed electrical system and advanced networked systems. Additionally, DDGs 91-96 provide accommodations for the A/N WLD-1 Remote Mine-hunting System. The first Flight IIA, USS Oscar Austin, was commissioned in August 2000.

A DDG Modernization program is underway, commencing with USS Arleigh Burke (DDG 51) to provide a comprehensive mid-life upgrade that will ensure the DDG 51 class will maintain mission relevance and remain an integral part of the Navy’s Sea Power 21 Plan. The goal of the DDG Modernization effort is to reduce workload requirements and increase war fighting capabilities while reducing total ownership cost to the Navy through the use of a two phase program. The first phase will concentrate on the Hull, Mechanical, and Electrical systems to include new Giga Bit Ethernet connectivity in the engineering plant, a Digital Video Surveillance System, along with the Integrated Bridge, an Advanced Galley and other habitability modifications. A complete Open Architecture computing environment will be the foundation for war fighting improvements in the second phase for each ship. The upgrade plan consists of an improved Multi-Mission Signal processor to accommodate Ballistic Missile Defense capability and an improvement to radar performance in the littoral regions. Additional upgrades include, Cooperative Engagement Capability (CEC), Evolved Sea Sparrow Missile (ESSM), CIWS Mk 1B, SEWIP, and NULKA. The Arleigh Burke-class MK-41 Vertical Launching System (VLS) will be upgraded to support SM-3 and newer variants of the SM missile family. Throughout their intended service life, DDG 51 destroyers will continue to provide multi-mission offensive and defensive capabilities with the added benefit of Sea-based protection from the ballistic missile threat.

DDG 1000 Background: Developed under the DD(X) destroyer program, the Zumwalt-class destroyer (DDG 1000) is the lead ship of a class of next-generation multi-mission surface combatants tailored for land attack and littoral dominance with capabilities that defeat current and projected threats. DDG 1000 will triple naval surface fires coverage as well as tripling capability against anti-ship cruise missiles. DDG 1000 has a 50-fold radar cross section reduction compared to current destroyers, improves strike group defensive 10-fold and has 10 times the operating area in shallow water regions against mines. For today’s warfighter, DDG 1000 fills an immediate and critical naval-warfare gap, meeting validated Marine Corps fire support requirements.

The ship will carry two 155mm Advanced Gun Systems (AGSs) which fire the Long Range Land Attack Projectile. DDG 1000's AGS battery is designed to satisfy Marine Corps naval surface fires requirements by providing sustained precision and volume fire support for U.S. and coalition forces inland. AGS will fire precision-guided Long-Range Land Attack Projectiles that reach up to 63 nautical miles, tripling fire-support coverage compared to the Mk45 5-inch gun. In July 2008, Navy announced its decision to truncate the DDG 1000 program at three ships and restart the construction of BMD capable DDG 51s.

Point Of Contact
Office of Corporate Communication (SEA 00D)
Naval Sea Systems Command
Washington, D.C. 20376

General Characteristics, Arleigh Burke class
Builder: Bath Iron Works, Huntington Ingalls Industries
SPY-1 Radar and Combat System Integrator: Lockheed-Martin
**Date Deployed:** July 4, 1991 (USS Arleigh Burke)

**Propulsion:** Four General Electric LM 2500-30 gas turbines; two shafts, 100,000 total shaft horsepower.

**Length:** Flights I and II (DDG 51-78): 505 feet (153.92 meters)

**Flight IIA (DDG 79 AF):** 509½ feet (155.29 meters).

**Beam:** 85 feet (28 meters).

**Displacement:** DDG 51 through 71: 8,230 L tons (8,362.06 metric tons) full load DDG 72 through 78: 8,637 L tons (8,775.6 metric tons) full load DDG 79 and Follow: 9,496 L tons (9,648.40 metric tons) full load.

**Speed:** In excess of 30 knots.

**Crew:** 276

**Armament:** Standard Missile (SM-2MR); Vertical Launch ASROC (VLA) missiles; Tomahawk®: six MK-48 torpedoes (from two triple tube mounts); Close In Weapon System (CIWS), 5” MK 45 Gun, Evolved Sea Sparrow Missile (ESSM) (DDG 79 AF)

**Aircraft:** Two LAMPS MK III MH-60 B/R helicopters with Penguin/Hellfire missiles and MK 46/MK 50 torpedoes.

**Ships:**
- USS Higgins (DDG 79), Norfolk, VA
- USS Porter (DDG 78), Pearl Harbor, HI
- USS Triton (DDG 80), Yokosuka, Japan
- USS(grid 81), Pearl Harbor, HI
- USS(grid 82), San Diego, CA
- USS(grid 83), Norfolk, VA
- USS(grid 84), Mayport, FL
- USS(grid 85), San Diego, CA
- USS(grid 86), Norfolk, VA
- USS(grid 87), Pearl Harbor, HI
- USS(grid 88), San Diego, CA
- USS(grid 89), Yokosuka, Japan
- USS(grid 90), Everett, WA
- USS(grid 91), San Diego, CA
- USS(grid 92), Pearl Harbor, HI
- USS(grid 93), San Diego, CA
- USS(grid 94), Pearl Harbor, HI
- USS(grid 95), Norfolk, VA
- USS(grid 96), San Diego, CA
- USS(grid 97), San Diego, CA
- USS(grid 98), Norfolk, VA
- USS(grid 99), Mayport, FL
- USS(grid 100), San Diego, CA
- USS(grid 101), San Diego, CA
- USS(grid 102), San Diego, CA
- USS(grid 103), Norfolk, VA
- USS(grid 104), San Diego, CA
- USS(grid 105), No homeport
- USS(grid 106), San Diego, CA
- USS(grid 107), San Diego, CA
- USS(grid 108), San Diego, CA
- USS(grid 109), Norfolk, VA
- USS(grid 110), San Diego, CA
- USS(grid 111), San Diego, CA
- PCU Michael Murphy (DDG 112), Pearl Harbor, HI
- PCU(grid 113-115)

**General Characteristics, Zumwalt class**

**Primary Function:** DDG 1000

**Builder:** General Dynamics Bath Iron Works and Northrop Grumman Shipbuilding

**Length:** 600 ft

**Beam:** 89.7 ft

**Displacement:** 15,482 long tons

**Speed:** 30 kts

**Crew:** 148

**Aircraft:** (2) MH60R or (1) MH60R and (3) VTUAVs

**Ships:**
- PCU Zumwalt (DDG 1000), No homeport - under construction
- PCU(grid 101), No homeport - under construction

**Last Update:** 21 November 2011