Navy Orders Three PteroDynamics UAS to Deliver Cargo

PteroDynamics' Transwing vertical takeoff and landing unmanned aicraft. *PTERODYNAMICS*

COLORADO SPRINGS, Colo. – PteroDynamics, an aircraft design and manufacturing company that develops innovative vertical take-off and landing (VTOL) aircraft, has secured a contract with Naval Air Warfare Center Aircraft Division (NAWCAD) to deliver three VTOL prototypes for the Blue Water Maritime Logistics UAS program, the company said in an Aug. 23 release.

In 2018, Military Sealift Command and Fleet Forces Command identified a need for the United States Navy to develop a capability to autonomously deliver cargo with unmanned aircraft to and from ships at sea. Their analysis found that 90% of critical repair cargo delivered at sea by helicopters and V-22 aircraft weighed less than 50 pounds. A VTOL UAS can fill this critical need and free the manned aircraft to perform other higher priority missions.

"We are honored to be selected for this important project," said Matthew Graczyk, PteroDynamics' CEO. "This contract is the start of an important partnership, and we look forward to delivering the prototypes to NAWCAD."

"This is an exciting milestone for our distinctive VTOL aircraft," added Val Petrov, PteroDynamics' founder and chief technology officer. "Our design is well suited for operations on ships where windy conditions and tight spaces challenge other VTOL aircraft during takeoffs and landings."

"Using unmanned, autonomous aircraft for delivery of these

critical payloads is an important capability for the Navy to have," said Blue Water's project lead, Bill Macchione. "The innovative design of PteroDynamics offers significant potential for both military and civilian missions."

General Dynamics Mission Systems Introduces Badger Software-Defined Radio for Voice, Data Communications

General Dynamics Mission Systems' new Badger software-defined radio, unveiled at Sea-Air-Space 2021. *GENERAL DYNAMICS MISSION SYSTEMS*

General Dynamics Mission Systems recently introduced its new Badger software-defined radio at the Navy League's Sea-Air-Space Symposium in National Harbor, Maryland.

The Badger is based on the company's established AN/USC-61(C) Digital Modular Radio (DMR) providing secure communications aboard U.S. Navy surface combatants, aircraft carriers and submarines as well as fixed sites at shore installations. General Dynamics has delivered more than 900 DMR radios to the Navy.

According to Stan Kordana, vice president of Surface Systems at General Dynamics Mission Systems, Badger meets a customer need for a radio offering the same waveforms, security and flexibility of the four-channel DMR, but with a more compact footprint. The two-channel Badger is a quarter of the size of DMR, and provides the same level of Multiple Independent

Levels of Security (MILS) for ship-to-ship and ship-to-shore voice and data communications.

“The reduced size, weight and power make it ideal for smaller platforms across multiple domains that only require two channels, and at the same time simplifies logistics and reduces costs,” Kordana said.

According to Kordana, “Badger is the only radio available that provides high frequency, very high frequency, ultra high frequency and SATCOM Mobile User Objective System [MUOS] waveform capability. The integration of MUOS significantly enhances beyond line-of-sight, or satellite voice and data communications.”

Bill Rau, vice president, Surface Ship Warfare System, said Badger has programmable embedded NSA certified Type 1 encryption that secures communications and simplifies the system architecture.

“It has MILS capability which enables it to communicate simultaneously at multiple levels of security on each of the radio’s two channels – and each one can be tuned to a broad range of frequencies. Furthermore, Badger’s software-defined, flexible open architecture enables future next-generation communications including waveforms, encryption algorithms and advanced network connectivity to be easily incorporated as needs evolve.”

The first DMR units were delivered to the Navy in the early 2000s, Rau said, adding, “we’re expecting to hit the 1,000th delivery in the coming months.”

According to Rau, DMR is the first software-defined radio to become a communications system standard for the U.S. military.

“It’s on every class of surface ship, aircraft carrier, submarine and shore installation. DMR is a compact four-channel radio. With only a few DMRs, ships can essentially

replace an entire ‘radio central’ room of legacy radios and equipment on older ships.”

Because these are software defined radios, Rau said, “In many cases, waveforms and features can be updated by adding software, without needing to send the radio back to a depot.”

Badger doesn’t replace DMR. “It’s a newer, smaller version based on the DMR but with two channels instead of four.” Rau said. “Badger takes the goodness of the DMR and puts it into a smaller package with a modern voice-over internet protocol interface to the ship systems so it can be used on even more platforms, including unmanned surface vessels.”

DMR and Badger are produced at the General Dynamics Mission Systems facility in Scottsdale, Arizona.

HII Celebrates Ceremonial First Cut of Steel for the Aircraft Carrier Doris Miller

Members of Doris Miller’s family attend the ceremonial first cut of steel for the aircraft carrier Doris Miller (CVN 81) at Newport News Shipbuilding division, Aug. 25, 2021. *HUNTINGTON INGALLS INDUSTRIES*

NEWPORT NEWS, Va. – Huntington Ingalls Industries hosted a ceremonial event Aug. 25 at its Newport News Shipbuilding division that marked the first construction milestone in the life of the aircraft carrier Doris Miller (CVN 81), the company said in a release.

During a small ceremony held inside of a manufacturing

facility, Thomas Bledsoe, the great nephew of the ship's namesake, gave the order to "cut that steel" to shipbuilder Gerald Bish, who operated a large plasma-cutting machine that sliced into a steel plate. Shipbuilders, U.S. Navy leadership, elected officials and Doris Miller's relatives signed their names on the plate.

"Today we recognize the start of construction of the fourth ship of the Gerald R. Ford class," said Jennifer Boykin, president of Newport News Shipbuilding. "From this day forward, our shipbuilders will put their hearts into every pipe they fit, every unit they lift and every inch of steel they weld.

"Shipbuilders, I thank you for the hard work, innovation and dedication you will put into transforming this first piece of steel into an awe-inspiring aircraft carrier."

Ceremony participants included U.S. Rep. Bobby Scott, D-Virginia, who offered remarks; Rear Adm. James Downey, program executive officer for aircraft carriers; Master Chief Petty Officer of the U.S. Navy Russell Smith; shipbuilders and six members of Miller's family.

"It is so fitting and timely during a period of significant discussion and change we come together to begin construction of one of our Navy's next great aircraft carriers, in the name of one of the finest heroes of the greatest generation," Downey said. "We will construct a sound and mighty warship worthy of his legacy."

Members of Virginia's congressional delegation, including Reps. Rob Wittman and Elaine Luria also attended the event. Other guests included Capt. Andrew P. Johnson, commanding officer of Supervisor of Shipbuilding, Conversion and Repair, Newport News.

Doris Miller is the second ship named in honor of Miller, and the first aircraft carrier ever named for an African American.

This also is the first aircraft carrier named in honor of a sailor for actions while serving in the enlisted ranks.

Miller is credited with heroic actions while serving aboard the Newport News-built West Virginia (BB 48) during the Dec. 7, 1941, attack on Pearl Harbor, Hawaii. Miller's bravery earned him the Navy Cross.

Doris Miller also is the second ship of the two-carrier contract award HII received in January 2019 for the detail design and construction of the Gerald R. Ford-class aircraft carriers; Enterprise (CVN 80) being the first ship of the contract.

Newport News currently is performing early manufacturing of Doris Miller, which includes structural fabrication and shop work. The ship also will be the second aircraft carrier built completely using digital drawings and procedures rather than traditional paperwork packages and products.

Doris Miller's keel is scheduled to be laid in 2026 and delivered to the Navy in 2032.

"The Doris Miller story provides so many lessons to us as Americans," Bledsoe said. "The Miller family cannot express in words what this means to us, to Americans and to anyone inspired by Doris Miller's story."

The Ford class features new software-controlled electromagnetic catapults and weapons elevators, a redesigned flight deck and island, and more than twice the electrical capacity of the preceding Nimitz-class carriers. These aircraft carriers are designed to be the centerpiece of the nation's security strategy and support and protect the global economy through the protection of sea lanes around the world.

Strike Groups with Fifth-Generation Fighters Demonstrate Interoperability, Interchangeability

Ships from four nations take part in large scale formation sailing. On Aug. 24, the ships of the United Kingdom Carrier Strike Group, led by the Royal Navy flagship HMS Queen Elizabeth, met with the USS America, USS New Orleans, JS Ise and JS Asahi. Working with ships from the US Navy and the Japan Maritime Self Defence Force, a close formation was formed and on completion the Japanese ships broke away to conduct a ceremonial sail past. *ROYAL NAVY / Dan Rosenbaum*
A multinational task force is operating together as part of Large Scale Global Exercise 2021 (LSGE 21) in the Pacific.

The U.K. Carrier Strike Group 21 (CSG 21) and U.S. Expeditionary Strike Group 7 (ESG 7) are conducting multinational advanced aviation operations as part of U.S. Indo-Pacific Command's LSGE 21.

According to Lt. Cmdr. Sherrie Flippin, spokesperson for ESG 7, "LSGE is a Joint Staff-sponsored exercise intended to rehearse the integration of defense activities in the Indo-Pacific Region. LSGE 21 is the first iteration of this event, involving the coordination of operations, activities, and investments in support of large-scale operational maneuvers.

"Currently, both HMS Queen Elizabeth Carrier Strike Group and USS America Expeditionary Strike Group are conducting multinational advanced aviation operations to further enhance

proficiency and capability to respond to shared challenges in the region."

LSGE 21 commenced Aug. 2 and is taking place throughout the Indo-Pacific region. It will run until the end of this week.

Royal Navy Commodore Steve Moorhouse commands Carrier Strike Group 21 and is embarked aboard HMS Queen Elizabeth (R08). Rear Adm. Chris Engdahl is in command of ESG 7 and is aboard his flagship, USS America (LHA 6). They spoke to a small group of reporters by phone while they were underway on Tuesday.

HMS Queen Elizabeth leads the U.K.'s Carrier Strike Group and is operating a mixed air group of F-35Bs, with a squadron of U.K. jets and a squadron from the U.S. Marine Corps, Marine Fighter Attack Squadron 211 (VMFA 211), and is escorted by surface combatant escorts from the U.S. Navy, Dutch Navy and Royal Navy – HMS Defender (D36), USS The Sullivans (DDG 68), HMS Kent (F 78) and HNLMS Evertsen (F805).

"HMS Queen Elizabeth is the largest warship has ever built for the Royal Navy, and she was designed from the keel up to operate the F-35B aircraft," said Moorhouse. "We have our own 617 Squadron of Royal Air Force and Royal Navy personnel, as well as a U.S. Marine Corps Squadron. When we talk about a fifth-generation aircraft, we now have ourselves a fifth-generation aircraft carrier. This is the largest force of fifth-generation aircraft to put to sea anywhere in the world."

For LSGE 21, both strike groups have been contending with a multi-domain tactical scenario, from undersea to surface and air, as well as cyber and space, and to include the Marines going ashore and operation on land.

The USS America Expeditionary Strike Group (AMA ESG) is carrying Sailors and Marines from 31st Marine Expeditionary Unit with aviation support from Marine Medium Tiltrotor

Squadron 262 (Reinforced), and Marine Fighter Attack Squadron 12 (VMFA 12), along with staff members from Expeditionary Strike Group 7, Amphibious Squadron 11, and Destroyer Squadron 7, Tactical Air Control Squadron 12, Fleet Surgical Team 7 and an embarked helicopter detachment from Helicopter Sea-Combat Control Squadron 25. Also part of the ESG is USS New Orleans with personnel from Naval Beach Unit 7, Fleet Surgical Team 7, and additional personnel from the 31st MEU.

“For years we have operated with partners, and we’ve been able to talk and communicate. But what we’re really trying to do here is take it to the next level of integrating. Our Dutch and American warship are absolutely integral to our strike group operations,” Moorehouse said. “But as we operate with the America strike group, our aircraft – both fixed and rotary – have been flying and operating from each other’s deck seamlessly.”

“We extended the range of our fifth-generation fighters by moving them from one aircraft carrier to another. We recovered, rearmed, refueled and relaunched those planes to continue the mission,” Engdahl added.

Helping to sustain the task force at sea are the Royal Fleet Auxiliaries RFA Fort Victoria and RFA Tidespring. Furthermore, USS America is optimized for aviation operations and does not have a well deck for LCACs (landing craft air cushion) or LCUs (landing craft-utility) with amphibious vehicles inside.

“One of her attributes is the capacity for significantly more fuel than other amphibious ships – literally millions of gallons of fuel – which means she can supply fuel to the other ships in company,” Engdahl said.

Engdahl said LSGE 21 provided great practice to enhance the tactical abilities of the crews of the ships and the aviation units embark.

“It reflects the strength of our alliance, our partnerships, the ongoing military relationship. And the relationship that we have is really bolstered by the interchangeability of the platforms that we employ.”

BAE Systems Unveils World’s Smallest M-Code Military GPS Receiver

CEDAR RAPIDS, Iowa – Aug. 25, 2021 – BAE Systems Inc. unveiled its ultra-small MicroGRAM-M global positioning system (GPS) receiver compatible with next-generation M-Code military GPS signals that are resistant to jamming and spoofing, the company said in an Aug. 25 release. About the size of a postage stamp, MicroGRAM-M is the world’s smallest, lightest, and most power-efficient M-Code embedded GPS receiver – delivering assured positioning, navigation, and timing (PNT) for size-constrained and other micro-applications.

“We’re delivering reliable PNT where our customers need it – from soldiers’ handheld devices to small unmanned aerial vehicles,” said Greg Wild, director of Navigation and Sensor Systems at BAE Systems. “MicroGRAM-M provides our armed forces and allies with a low-SWAP M-Code GPS solution that’s resistant to adversaries’ disruption efforts in highly contested environments.”

MicroGRAM-M features rapid secure GPS signal acquisition, enhanced security and resiliency, anti-jamming and anti-spoofing capabilities, and the industry’s lowest power consumption for an M-Code device. The 1.0” x 1.25” x 0.275” MicroGRAM-M has the same physical dimensions as its

predecessor, enabling quick upgradability to M-Code and reduced system integration costs. At its core is a proven, tamper-proof M-Code Common GPS Module that encapsulates classified data and signal processing.

“MicroGRAM-M is the latest BAE Systems M-Code military GPS product, joining MPE-M and NavStrike-M, which deliver enhanced awareness in highly contested environments and precision munitions guidance,” said John Watkins, vice president and general manager of Precision Strike & Sensing Solutions at BAE Systems. “Qualification of MicroGRAM-M is underway, with full-rate production expected in 2022.”

HII Technical Solutions Division Announces New Business Groups

NEWPORT NEWS, Va. – Huntington Ingalls Industries (HII) announced on Aug. 25 new business groups within its Technical Solutions division, on the heels of the successful acquisition of Alion Science and Technology.

The new business groups include:

- Intelligence, Surveillance and Reconnaissance (ISR) – This group designs, develops, integrates and manages sensors, systems, and other assets to support ISR operations, exploitation and analysis.
- Live, Virtual and Constructive (LVC) Solutions – This group designs, develops and operates enterprise tactical training systems to ensure full coordination and readiness.

- Cyber and Electronic Warfare (EW) – This group provides full spectrum cyber, big data architectures, analytics and cloud migration; EW and foreign material exploitation.
- Fleet Sustainment – This group is responsible for full-spectrum sustainment, including hull, mechanical and electrical and C5ISR maintenance, modernization, and integrated product support.

The Unmanned Systems and Nuclear and Environmental Services business groups are unchanged.

Coast Guard, Partner Agencies Continue to Support Haiti

A U.S. Army CH-47 Chinook Helicopter crew chief assists a partner rescue agency crew with the delivery of food and medical supplies in Haiti, Aug. 23, 2021. The Coast Guard and partner agencies conducted humanitarian efforts in impacted areas of Haiti following a magnitude 7.2 earthquake, Aug. 14, 2021. *COAST GUARD / Petty Officer 3rd Class Ryan Estrada*

MIAMI – The Coast Guard, USAID, U.S. Southern Command and Joint Task Force-Haiti continue to have unity of effort and respond to critically injured Haitian citizens, Aug. 24, by transporting them to a higher level of care in Port au Prince, Haiti, the Coast Guard 7th District said in an Aug. 25 release.

"The Coast Guard immediately responded to the government of Haiti's request for assistance following the tragic 7.2 magnitude earthquake just over a week ago," said Coast Guard 7th District Commander, Rear Adm. Brendan C. McPherson. "Since

then, the U.S. Coast Guard saved or assisted more than 350 lives and transported more than 350 medical personnel and first responders to the areas most damaged. As the USAID-led, DOD-supported mission transitions to an extended humanitarian assistance and disaster response operation, we will begin to transition our people and aircraft to best support Joint Task Force-Haiti while meeting our other mission demands in the region. We will continue to provide agile and versatile search and rescue capability if needed. Alongside U.S. Embassy Haiti, we remain a proud partner in our whole of government approach to help the people of Haiti."

In the past 24 hours, Coast Guard men and women deployed to Haiti have flown 14 evolutions, saved three people, assisted three others, transported four urban disaster and relief personnel and transported 1,800 pounds of disaster and relief supplies.

Since Aug. 15, Coast Guard men and women have flown 227 evolutions, saved 219 people, assisted 145 people, transported 362 urban disaster and relief personnel and transported 13,400 pounds of disaster and relief supplies.

NAVCENT Stands Up Task Force Supporting Afghanistan Evacuation

U.S. Navy personnel construct a tent in a hanger in the U.S. 5th Fleet area of operations for use during efforts to support the safe transit of U.S. citizens and evacuees from Afghanistan. *U.S. NAVY / Mass Communication Specialist Seaman*

Andy A. Anderson
NAVAL SUPPORT ACTIVITY BAHRAIN – A U.S. Naval Forces Central Command (NAVCENT) task force established Aug. 19 is temporarily assisting the safe evacuation of personnel from Afghanistan, the command said in an Aug. 24 release.

More than 700 U.S. military personnel stood up Task Force 58 from units operating in the U.S. 5th Fleet region. U.S. Sailors, Marines, Soldiers and Airmen are working alongside their U.S. Embassy and Bahraini counterparts to temporarily facilitate the safe departure of U.S. citizens and evacuees from Afghanistan through Bahrain.

“We are extremely grateful for the Kingdom of Bahrain’s critical efforts and assistance in the safe transit of U.S. citizens and evacuees from Afghanistan,” said Vice Adm. Brad Cooper, commander of NAVCENT, U.S. 5th Fleet and Combined Maritime Forces. “We deeply value our enduring bilateral relationship.”

International military staff from the Combined Maritime Forces are also contributing to efforts that include providing travelers meals, short-term lodging and medical services before departing for the United States.

“Every organization is contributing,” said Cooper. “The entire team is stepping up and doing phenomenal work during a challenging time. I could not be prouder.”

The U.S. 5th Fleet area of operations encompasses nearly 2.5 million square miles of water area and includes the Arabian Gulf, Gulf of Oman, Red Sea and parts of the Indian Ocean. The region is comprised of 20 countries and includes three critical choke points at the Strait of Hormuz, the Suez Canal and the Strait of Bab-al-Mandeb at the southern tip of Yemen.

Pentagon: FDA Vaccine Approval Opens Way for Mandatory Military Vaccinations

U.S. Navy Hospital Corpsman 2nd Class Orbie VanCurine, a native of Mansfield, Texas, with Combat Logistics Battalion 22 (CLB-22), prepares a COVID-19 vaccine during the opening of the state-run, federally supported Center City Community Vaccination Center at the Pennsylvania Convention Center in Philadelphia on March 3, 2021. *U.S. MARINE CORPS / 1st Lt. Kevin Stapleton / Combat Logistics Battalion 22*

ARLINGTON, Va. — The U.S. Food and Drug Administration's approval of the Pfizer-BioNTech COVID-19 vaccine paves the way for the Defense Department to require all military personnel to be vaccinated against the coronavirus strain, officials say.

Because the three available anti-COVID vaccines were only approved for human application by the FDA under an emergency use authorization (EUA), no one — including members of the military — could be compelled to get vaccinated. More than 73% of active duty personnel had received at least one shot of the vaccines by mid-August. However, thousands more service men and women declined to roll up their sleeves for inoculation.

"Now that the Pfizer vaccine has been approved, the department is prepared to issue updated guidance requiring all service members to be vaccinated," Pentagon Press Secretary John F. Kirby told reporters Aug. 23. He said a timeline for completing vaccination of the total force would be provided in

coming days.

“We’re going to move forward, making that vaccine mandatory,” Kirby said. “We’re preparing guidance to the force right now. In other words, how we want to see it get done. We’re working through that right now.”

Kirby noted Defense Secretary Lloyd Austin announced Aug. 9 that with the increasing spread of more lethal COVID variants, he intended to mandate vaccination as soon as the FDA licensed one of the three available anti-COVID vaccines from Pfizer, Moderna or Johnson & Johnson. If none received FDA licensure by mid-September, Austin said he would seek a waiver from President Joe Biden to make vaccination mandatory for the military, which Biden indicated he would grant.

In announcing FDA approval of the Pfizer vaccine for the prevention of COVID-19 in individuals 16 years of age and older, acting FDA Commissioner Dr. Janet Woodcock said, “the public can be very confident that this vaccine meets the high standards of safety and effectiveness, and manufacturing quality the FDA requires of an approved product.”

For service members with religious objections to receiving the vaccine, exemptions are governed by the individual military services’ regulations, Kirby said Aug. 10, adding there are provisions for medical exemptions to mandatory vaccination, including pre-existing medical conditions.

Meanwhile, the number of COVID-19-related deaths among uniformed personnel has climbed to 34 as of Aug. 18, including the first death in the Marine Corps.

Sgt. Edmar J. Ismael died on Aug. 14 in Seattle due to complications related to COVID-19. Ismael, 27, a native of Alaska, was an electrician assigned to Support Platoon, Engineer Support Company, 8th Engineer Support Battalion, II Marine Expeditionary Force, according to a Marine Corps statement.

Across the uniformed services there has been a total of 222,138 cases of COVID-19, resulting in 1,998 service members requiring hospitalization while 211,034 have recovered.

USS Billings and USNS Burlington Support Haiti Relief

An MH-60R Seahawk helicopter, assigned "Easyriders" of Helicopter Maritime Strike Squadron (HSM) 37 delivers cargo to the Spearhead-class expeditionary fast transport USNS Burlington (T-EPF-10) Dec. 10, 2020. *U.S. NAVY / Mass Communication Specialist 3rd Class Maria G. Llanos*

CARIBBEAN SEA – The Freedom-variant littoral combat ship USS Billings (LCS 15) and USNS Burlington (T-EPF-10), a spearhead-class expeditionary fast transport ship, operated by Military Sealift Command are supporting humanitarian assistance and disaster relief operations off the coast Haiti, Aug. 22, the U.S. Naval Forces Southern Command/U.S. 4th Fleet said in an Aug. 23 release.

Both ships are supporting U.S. Agency for International Development (USAID) and Bureau for Humanitarian Assistance (BHA) following a 7.2-magnitute earthquake that struck Haiti on Aug. 14, 2021.

"As the maritime component for this mission, we are on scene ready to provide whatever support we can to USAID," said Capt. Peter Ehlers, Joint Force Maritime Component Commander (JFMCC). "Our ships, aircraft, and personnel are ready to provide relief to the people of Haiti."

Burlington is utilizing its ScanEagle unmanned aerial system to obtain aerial images of the destruction on the ground which helps relief planners determine where supplies are needed, what airfields can be used, and what roadways are accessible.

Both Burlington and Billings, along with her embarked MH-60S Seahawk assigned to Helicopter Sea Combat Squadron (HSC) 28, will be prepared for any additional tasking such as afloat refueling from U.S. Southern Command Joint Task Force-Haiti, commanded by Navy Rear Adm. Keith Davids, which was stood up to coordinate military support.

They join other U.S. Southern Command components and U.S. Coast Guard ships already on station, in addition to allies and partners from the Netherlands, France, and United Kingdom.

USS Billings and USNS Burlington have been to deployed to the U.S. 4th Fleet area of operations to support Joint Interagency Task Force South’s mission, which includes counter-illicit drug trafficking missions in the Caribbean and Eastern Pacific.

U.S. Naval Forces Southern Command/U.S. 4th Fleet supports U.S. Southern Command’s joint and combined military operations by employing maritime forces in cooperative maritime security operations to maintain access, enhance interoperability, and build enduring partnerships in order to enhance regional security and promote peace, stability and prosperity in the Caribbean, Central and South American region.