UAS and SmallSat Weekly News

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Industrial Mapping & Surveying Drone Line Unveiled 07 Jul 2021 Mike Ball

Microdrones has entered into an agreement to market GE's line of industrial drones globally, providing surveying professionals with new technology that will enable more efficient, high-accuracy operations with enhanced safety. With these new products, GE enters the professional UAV market, and Microdrones will benefit from GE's industrial market expertise, global reach, and experience in industrial businesses.

GE's industrial drone line is manufactured at the Microdrones facility in Siegen, Germany, and the systems will be sold and supported across six continents. All products that are part of the The line provides a new addition to Microdrones' portfolio of surveying solutions, the mdLiDAR1000LR, which allows collecting data from a long range, covering a greater area per flight and providing an advantage in steep or treacherous terrain.

The partnership will accelerate deployment of Microdrones survey equipment as an essential tool for the creation and maintenance of digital twins, digital terrain models, maps, and other geospatial products. Microdrones solutions are used by professionals in land surveying, construction, precision agriculture, mining, power line inspection, and forestry management. As part of its long-term commitment to Microdrones, GE has become an investor in the Microdrones parent company, mdGroup, and has committed to continue to invest. https://www.unmannedsystemstechnology.com/2021/07/industrial-mapping-surveying-drone-line-unveiled/

Volocopter and CAE Partner to Train the Air Taxi Workforce Miriam McNabb July 08, 2021

Urban air mobility, drone taxis, flying cars, passenger drones, and other electric vertical takeoff and landing (eVTOL) innovations are often discussed in terms of autonomous flight and unmanned systems. As cities begin to allow eVTOL aircraft to integrate into the transportation systems, however, they will be piloted: at least at first. Many designs offer a high degree of autonomy and may be used as unmanned systems as regulations allow. In the decades that it will take to gather sufficient safety data, up to 60,000 new pilots for passenger drones will be needed. Aviation training firm CAE and Volocopter have

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partnered to ensure that those pilots are ready. CAE has committed to expanding its international training network to support Volocopter's growth and global pilot training with a forecasted investment of up to $40 million.

It's an industry first – but a necessary initial step. Initial training will be offered through simulation. https://dronelife.com/2021/07/08/who-will-pilot-the-passenger-drones-of-tomorrow-volocopter-and-cae-partner-to-train-the-air-taxi-workforce/

See 4,000 drone photos on Instagram https://www.instagram.com/explore/tags/drones/

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New drone technology helps NOAA hurricane hunters retrieve more accurate forecasts StormWatch7 Meteorologist Veronica Johnson July 7th 2021

This season, hurricane hunting drones will be the new technology taking them deeper into what tropical systems and hurricanes will do. The new drone known as Altius-600 will fly where the airplane can't safely- right near the surface of the ocean, close to 30-foot waves and 100 mph winds.

"We really want the data from almost right above the surface of the ocean, up to maybe 1,000 or 1,500 feet is really what we want. That boundary layer to see how much of that storm, what's coupling that storm to that hot water and to transfer the energy from the ocean to the storm and back and forth," said Commander Chris Sloan, Commanding Officer NOAA's Aircraft Operations Center at Lakeland, Florida.

Altius can stay in flight for nearly four hours at a range of nearly 200 miles and all data then can quickly be implemented into modeling data for better forecasts. https://wjla.com/weather/noaa-uses-new-flying-drone-technology-to-hunt-hurricanes

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We are currently beginning our 4th annual **Drone Industry Barometer.** The final survey results will be shared with all participants in a *free* report called "*The Drone Industry Barometer 2021.* The survey will be open from now until the middle of August and the **link to fill it out is here**. Should you have any questions, please don't hesitate to email me.
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WHAT IS A 4G CONNECTED DRONE, AND WHY IS IT SO IMPORTANT? July 3, 2021 Sally French News,

Your smartphone likely connects over 4G, so why not also your drone? A 4G connected drone has theoretically unlimited range. While most drones on the market today can generally only fly out about 5-10 miles before losing their signal, a 4G drone would be able to fly anywhere there is a 4G signal.

And this summer, French drone maker Parrot released what it's calling the first 4G connected drone on the market. Dubbed the ANAFI AI, the drone improves upon Parrot's existing ANAFI drone: the ability to fly without transmission limitations. 4G offers long range transmission at low frequency bands at 700MHz – 900MHz. And given that 4G is already widely and reliably deployed worldwide, many use cases would be served.

Here's how it works: You won't actually need a subscription to 4G from the Parrot ANAFI Ai itself. Instead, you'll use any SIM card capable of sending data, and Parrot's secured infrastructure that works with all smartphones.

ANAFI Ai embeds a Secure Element in the drone and in its Skycontroller 4. The 4G link between the drone and the user's phone is encrypted. The Secure Element protects both the integrity of the software and the privacy of data transferred.

Parrot's streaming software can optimize the definition and frame rate to network quality. And yes, the 4G connection means you can operate the drone at any distance.
https://www.thedronegirl.com/2021/07/12/4g-connected-drone-parrot-anafi/

NASA's Experimental X-56B Unmanned Aircraft Suffered An "Anomaly" After Takeoff JOSEPH TREVITHICK JULY 9, 2021THE WAR ZONE

NASA says that its experimental X-56B unmanned aircraft suffered what it described as an "anomaly" today. The current state of the drone, as well as whether it technically crashed, is unclear, but an additional statement that "there are no casualties," could suggest a hard impact into the ground.

The incident occurred around 7:30 AM local time at NASA's Armstrong Flight Research Center, Edwards Air Force Base in California. The drone had just taken off when the unspecified fault emerged. "The investigation is underway and further details will be provided when available.".

NASA only recently began a new flight test series with the X-56B, in cooperation with the Air Force Research Laboratory and Northrop Grumman. It has a blended wing body planform and is powered by two small turbojets, a conversion of an earlier X-56A, with the first flight in 2013.

Those drones, also referred to as Multi-Utility Technology Testbeds, were initially used in the research and development of technologies relevant to the design of high-altitude long-endurance unmanned aircraft, including features to mitigate destructive "flutter" vibrations. One subsequently crashed in 2015 during a test of the flutter-suppressing wings, designed to be extremely thin, lightweight, and flexible.
https://www.thedrive.com/the-war-zone/41480/nasas-experimental-x-56b-unmanned-aircraft-suffered-an-anomaly-after-takeoff

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14 New Partners Added to NASA's Advanced Air Mobility Project Kelsey Reichmann July 9, 2021

NASA has added 13 new companies and one university as partners on its Advanced Air Mobility project researching the integration of air taxis and drones into the national airspace. These companies will participate in NASA's National Campaign in 2022 which will include flight demonstrations and simulations around the country over several months.

NASA has added a flight partner, Reliable Robotics Corporation working on creating autonomous Part 23 cargo and Part 25 passenger aircraft, recently forming a partnership with Daedalean. Two previous flight demonstrations partners, Wisk Aero and Joby Aviation, will also continue work with the agency, according to the release. Wisk, an electric air taxi company, has been working with NASA since November on solutions for integrating autonomous aircraft into the national airspace. Joby is set to begin flight testing with NASA later this year.

NASA will have five infrastructure partners during these demonstrations including AURA Network Systems, Raytheon Company, Robust Analytics Inc., SkyGrid, and the University of North Texas. AURA Network Systems, creating a drone communications system on an aviation-approved spectrum, will also be performing communications, navigation, and surveillance activities during the demonstrations. https://www.aviationtoday.com/2021/07/09/14-new-partners-added-nasas-advanced-air-mobility-project/

GE Industrial Drones Hit the Global Market: Microdrones Partnership Miriam McNabb July 09, 2021

The worldwide licensing partnership will allow Microdrones to "bring the GE industrial drone line to market globally, providing professionals access to aerial surveying technology that will enable them to work more efficiently, accurately, safely and profitably," says a Microdrones press release.

The partnership represents GE's first entry into the commercial drone market: but the company has been developing their drone solutions for years, announcing the formation of GE Aviation in 2017. In 2019, the company announced that they would integrate Auterion's opensource software into their growing line of commercial aircraft. The GE Industrial drones start out with a market advantage: they were developed to meet the needs of one of the largest multinational

companies in the world, and they are produced by a respected European solutions provider. As part of the deal, GE will invest in Microdrones parent company and take an observer position on the board. https://dronelife.com/2021/07/09/ge-industrial-drones-hit-the-global-market-microdrones-partnership/

Irish priest to live-stream traditional outdoor masses from his drone Bruce Crumley Jul. 12th 2021

An Irish priest has said he'll live-stream traditional July outdoor masses as a means of allowing parishioners unable to attend due to COVID-19 restrictions to follow along.

Father Patsy Lynch of south County Kerry announced his aerial innovation after the Diocese advised people against congregating amid rising rates of Delta variant COVID-19 infection. Lynch, a tech enthusiast and drone pilot, told Irish media that using his craft to beam a feed to his Prior parish faithful was the best way to adapt to what risks being a doubly cruel July. Not only are Delta cases spiking in Kerry, but the resulting restrictions threaten to upend the region's tradition of holding July masses in cemeteries to honor the recently departed.

In addition to video feeds from above the graveyards in Portmagee, The Glen, and Ballinskelligs, Lynch says he'll fly his drone down low so worshippers following remotely can see plots of relatives who have passed. "I'll also put lighted candles on the graves of those who were buried in the last year."

Current anti-COVID-19 restrictions in Ireland permit indoor religious services of up to 50 worshippers, and outdoor event participation of as many as 200 people. But the rise of Delta variant cases in Kerry caused local authorities and the Diocese to urge people to avoid gatherings altogether. As a work-around, Lynch says he'll take to the air for the traditional outdoor services during the second half of July. https://dronedj.com/2021/07/12/irish-priest-to-live-stream-traditional-outdoor-masses-from-his-drone/#more-62440

Automated drones being taught to locate fallen meteorites Bruce Crumley Jul. 12th 2021

Scientists estimate some 500 meteorites plummet to Earth every year, yet less than 2% of those bodies from space are ever located – usually the larger chunks. Now researchers are seeking to

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up that count with drones using with artificial intelligence (AI) to distinguish meteorite fragments from regular rocks.

A team of experts from the University of California, Davis published their study using AI to boost the efficiency of automated drones as they scour areas of established or suspected meteorite falls, or strewn fields. The unmanned aerial vehicles fly grid patterns at relatively low altitudes, the images from which are fed through a computer system developed to differentiate matter fallen from the skies from rocks and other objects. The technology relies on thousands of photos of recovered meteorites that, over time, serve as the drone system's base of reference and gradually improve identification capacities.

"Those images can be analyzed using a machine-learning classifier to identify meteorites in the field among many other features," the study says of the system, which uses "different convolution neural networks to recognize meteorites from images taken by drones in the field."

Though recovery of larger meteorites is fairly easy (and often quite competitive, with many amateur hunters also getting involved), the smaller bits are a more complicated affair. They tend to break up and scatter over wide areas. Studying those more plentiful smaller meteorites is essential to learning about their origin, the collisions that sent them to Earth, and flight path down to the ground. That information further educates experts on the 40 asteroid families in the asteroid belt and the early evolution of our solar system. https://dronedj.com/2021/07/12/automated-drones-being-taught-to-locate-fallen-meteorites/#more-62432

Stockpile Reports Selects American Robotics to Build Out Automated Drone Program July 11, 2021 News

American Robotics today announced that Stockpile Reports, a solutions provider for the bulk materials industry serving over 300 companies in 48 countries, selected American Robotics' Scout System to build out its automated drone program. With American Robotics' first-of-its-kind FAA approvals to operate without any humans on the ground, Stockpile Reports and its users can truly access the benefits of commercial drones and the full features of the Scout System. With more than 10,000 sand and gravel mines and more than

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3,000 ready mix and asphalt plants in the U.S. alone, Stockpile Reports will partner with American Robotics to deploy autonomous drone systems to address the market demand for this technology.

"The bulk materials industry suffers chronic financial write-offs due to a lack of accurate inventory data and Stockpile Reports helps customers solve problems with inventory using on demand measurements from image processing. As experts in 3D reconstruction and digitization, we know what it means to dance on the edge of innovation," said David Boardman, Founder and CEO of Stockpile Reports. The opportunity is limitless as we see the potential to deploy hundreds if not thousands of autonomous drones as we create inventory solutions for our customers across the bulk materials supply chain."

The Scout System provides a cost-effective solution to proactively monitoring and inspecting assets in the oil, gas and infrastructure sectors. Capable of running upwards of 20 autonomous flights per day, the Scout System automatically transmits data for decision makers to review and act upon instantly. https://uasweekly.com/2021/07/11/stockpile-reports-selects-american-robotics-to-build-out-automated-drone-program/?utm_source=rss&utm_medium=rss&utm_campaign=stockpile-reports-selects-american-robotics-to-build-out-automated-drone-program&utm_term=2021-07-12

The Air Force and Drone Racing League Expand Partnership July 11, 2021

Military News

The United States Air Force and the Drone Racing League today announced a renewal and expansion of their partnership ahead of the 2021-22 DRL Allianz World Championship Season. Following a successful partnership with the league over the past four years, the Air Force added custom content, virtual drone racing experiences, and season-broadcast integrations that will inspire drone pilots to aim high and prepare to fly.

Tapping into DRL's fans who are 23x more likely to follow the Air Force compared to the general population, the partnership will ramp up their pilot-recruitment as the global drone market continues to grow to an expected $58 billion industry by 2026.

"The U.S. Air Force is the world's greatest air power, and we need the best and brightest Airmen on our team to fly, fight and win. Working with the Drone Racing League is critical to boosting our recruiting pool, reaching millions of young fans who include top drone pilots,

engineers and technologists, and we're excited to continue our partnership with this innovative league," said Maj. Jason Wyche, Chief of National Events Branch at Air Force Recruiting Service. https://uasweekly.com/2021/07/11/the-united-states-air-force-and-drone-racing-league-expand-partnership-as-global-drone-space-skyrockets/?utm_source=rss&utm_medium=rss&utm_campaign=the-united-states-air-force-and-drone-racing-league-expand-partnership-as-global-drone-space-skyrockets&utm_term=2021-07-12

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Missile Defense Agency confirms deployment of cubesats launched by Virgin Orbit Sandra Erwin July 12, 2021

Missile Defense Agency and VOX Space engineers integrate the cubesat networked communications experiment at the company's integration facility in Long Beach, Calif., in preparation for launch June 30, 2021. MDA's cubesats were two of seven government and commercial payloads launched in Virgin Orbit's second operational mission.

WASHINGTON — Two Missile Defense Agency cubesats launched June 30 aboard Virgin Orbit's LauncherOne successfully began communicating with ground stations last week. The satellites are the first of a series of network communications experiments planned by MDA to demonstrate mesh networking in space and satellite-to-ground links. The cubesats will mimic two suborbital missile interceptor vehicles and test communications between them.

"Transmitting data between interceptors, sensors and communication systems is critical to a missile defense architecture that must quickly identify, track and destroy incoming enemy missiles before they reach their targets," MDA said in a news release. MDA is developing a hypersonic and ballistic sensor payload to detect and track missile threats. https://spacenews.com/missile-defense-agency-confirms-deployment-of-cubesats-launched-by-virgin-orbit/

RED CAT TO ACQUIRE TEAL DRONES IN MOVE TO SCALE ENTERPRISE, MILITARY OFFERINGS July 12, 2021 Sally French News

Big news for Teal Drones, the company perhaps most famous for being founded by a 16-year-old. Teal Drones announced today that it would be acquired by Red Cat Holdings, a publicly traded company that provides drone products, technologies and services.

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Red Cat, which is based in Puerto Rico, acquired Teal in an all-stock transaction and will add Teal Drones to its existing portfolio as an anchor of Red Cat's enterprise group.

Red Cat previously had four operating subsidiaries (now five), including famous names like Fat Shark, which is perhaps best known for its role making FPV goggles for drone racing (though it also makes other products like an all-in-the-box FPV drone racing kit. The portfolio also includes drone lifestyle and racing brand Rotor Riot, remote inspection company Skypersonic and Dronebox, an analytics platform for cloud-based flight intelligence.

That's a pretty comprehensive coverage of the entire drone world — racing, lifestyle, data analytics, inspections and more. And with the additional of Teal, there's an enterprise and military component to Red Cat, too. https://www.thedronegirl.com/2021/07/13/teal-drones-red-cat/

NIST Prize Challenge Launches Research for Unmanned Aircraft in Search and Rescue July 07, 2021

BOULDER, Colo. — The U.S. Department of Commerce's National Institute of Standards and Technology (NIST) has launched a new prize competition to advance the use of unmanned aircraft systems in first responder search and rescue operations.

Named the First Responder UAS Triple Challenge, this prize competition comprises three challenges with three different focus areas — all aimed at advancing UAS technology to support critical, lifesaving missions. NIST's Public Safety Communications Research (PSCR) division will accept contest entries beginning Aug. 2, 2021, with multiple stages running through June 2022.

"Our goal at PSCR is to accelerate the development and adoption of advanced wireless communications for the public safety community," said Dereck Orr, the division chief. "These prize competitions are a way for us to find solvers from around the world to help us with this important research."

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The FastFind: UAS Search Optimized Challenge is focused on search and rescue operations using optical sensors and data analysis to improve image detection and location. The LifeLink: UAS Data Relay Challenge is centered on supporting continuous delivery of broadband data in a degraded cellular area, and the Shields Up! Securing UAS Navigation and Control Challenge asks participants to identify and demonstrate cybersecurity threats and countermeasures that prevent navigation and control of the UAS.

More than $700,000 will be awarded in prizes throughout the three competitions. Prize recipients will be determined by a panel of judges, assisted by a team of subject matter experts, through each stage of the competitions. https://www.nist.gov/news-events/news/2021/07/nist-prize-challenge-launches-research-unmanned-aircraft-search-and-rescue

EHang firefighting drone passes official testing phase Scott Simmie Jul. 13th 2021

Chinese company EHang has announced another first: It has passed a technical evaluation of its EH216F AAV, a drone built for firefighting.

Drones can reach heights that ladders and hoses cannot. When a fire starts on an upper floor of a high-rise building, firefighters generally must reach the site by walking up many, many flights of stairs. And while a single EHang EH216F won't extinguish a towering inferno, it clearly has greater capabilities than the other drones we've seen in this space.

There are rules involved and standards that must be met. In China, that includes an intensive examination by the China National Fire-Fighting Equipment Quality Supervision Testing Center. The NFFE conducted a 10-month examination, and 52 types of tests were completed in flight control functions, hovering and return accuracy, high/low altitude flights, electromagnetic compatibility, wind resistance, high/low temperature adaptability, vibration/shock resistance, radiant heat resistance and smoke performance.

How does the EHang firefighting drone work? Well, it's capable of precisely aiming flame retardant and firing it in a stream. But it also contains six fire-retardant devices that can literally be launched like missiles into hotspots. It's clear a machine like this could be put to good use to help supplement ground-based firefighters. It's also a pretty cool design. We anticipate this device may well be deployed – for real – in the not-so-distant future.
https://dronedj.com/2021/07/13/ehang-firefighting-drone-passes-technical-tests/

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UAV Solutions, Inc. Delivers AsUAS Ghost 60 Platforms to Special Operations Forces July 12, 2021 Military News

The Ghost 60 system was selected by the Irregular Warfare Technical Support Directorate for their Affordable small UAS program in January of 2020. Operators from six different Army & Air Force organizations have been trained thus far with additional training exercises planned through the end of 2021.

Under the IWTSD AsUAS program, UAVS will deliver 44 systems totaling 88 air vehicles plus ground control stations, support equipment, and training. The total contract value is $2.3 M including the base development costs. The U.S.-manufactured Ghost 60 sUAS is a backpackable platform with 56 minutes of endurance when carrying the UAVS 400-gram EO/IR payload. The UAVS-designed gimbal payload with its 10x optical zoom HD day camera and Flir 640×480 IR allow the system to maintain ISR capability in a cost-effective package.

UAV Solutions, Inc. is a woman-owned small business and has supported its DOD customers' most important missions for over fifteen years. Located in the Baltimore-Washington Corridor, UAVS's state-of-the-art facility allows for the design, manufacture, and sales of innovative unmanned systems and sub-components. https://uasweekly.com/2021/07/12/uav-solutions-inc-delivers-asuas-ghost-60-platforms-to-special-operations-forces-2/?utm_source=rss&utm_medium=rss&utm_campaign=uav-solutions-inc-delivers-asuas-ghost-60-platforms-to-special-operations-forces-2&utm_term=2021-07-13

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Drones Catch Poachers, Monitor Endangered Species in Madagascar Miriam McNabb July 13, 2021

Plymouth Rock Technologies Inc. has announced a contract with the Durrell Wildlife Conservation Trust to provide the drones for these operations. PRT drones have been used for military and civil operations including firefighting, search and rescue, security, and inspections. Now, equipped with thermal infrared cameras, they will be used to save a vulnerable population of lemurs.

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Trials began 2 years ago in Lac Alaotra, as conservationists from Durrell and researchers from Liverpool John Moores University studied the use of drone-based thermal infrared cameras as a new way of monitoring the lemurs and identifying any potential poachers. "…the drone would fly over large areas of otherwise inaccessible marshes and detect the lemurs from their body heat, making them much easier to spot and allowing the team to obtain more accurate estimates of their population size. In a single 20-minute flight, the drone was able to cover a greater area of the marsh than a canoe team could cover in two days, hugely increasing the efficiency of the surveys."

The team will utilize machine learning to detect and classify images. We work with images from visual spectrum and thermal infrared cameras that are used on drones or in camera traps," says the company. "The aim is to provide a user-friendly workflow that can allow for near-real time detection/classification and non-real time detection/classification."
https://dronelife.com/2021/07/13/drones-catch-poachers-monitor-engangered-species-in-madagascar/

New photos from the Mars helicopter Ingenuity's 9th flight help refine science goals

Tereza Pultarova - Senior Writer

NASA's Ingenuity Mars Helicopter captured this image of tracks made by the Perseverance rover during its ninth flight, on July 5, 2021

A new batch of images taken by the Ingenuity helicopter during its recent flight over the surface of Mars is helping NASA scientists to refine science goals for the Perseverance rover and chart the best route forward as they search for signs of life on the Red Planet.

The color images, downlinked on Thursday (July 8) following Ingenuity's ninth flight, show the surface of Jezero Crater, the landing site of the Perseverance rover, from an altitude of merely 33 feet. The images allow scientists to see much smaller terrain features, such as individual boulders and rocks, than are visible in the images from Mars orbiters that are usually used for planning the route of the rover. For example, NASA's High Resolution Imaging Science Experiment, a camera aboard the Mars Reconnaissance Orbiter, provides a resolution of 3 feet. To get to a finer level of detail, the teams would have to use the rover itself.

"Once a rover gets close enough to a location, we get ground-scale images that we can compare to orbital images," Perseverance Deputy Project Scientist Ken Williford of the NASA Jet Propulsion Laboratory said in a statement. "With Ingenuity, we now have this intermediate-

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scale imagery that nicely fills the gap in resolution." https://www.space.com/ingenuity-helicopter-unprecedented-flight-images-guide-perseverance

DroneUp Completes First Smart City Drone Delivery in Ontario, California

Virginia Beach, Virginia, July 14, 2021 – DroneUp announced today that they completed the first smart city drone delivery in Ontario, CA, with Brookfield Properties at New Haven. Other firsts for the residents of Ontario and the New Haven masterplan community included robot carts, e-scooters, and smart hubs.

The technology advancements result from long-term investment by the City of Ontario and Brookfield Properties, which further define the city as one of the most progressive in the U.S., providing technology that vastly improves everyday life for residents. New Haven is the fastest growing community in California and 5th in the U.S.

DroneUp, along with drone software leader Airspace Link, worked to bring drone delivery from New Haven Marketplace businesses and services directly to residents via drone. Following these test trials, Ontario and New Haven plan to offer the first authorized drone flights in this large California city. These will also be the first flights near a major airport (Ontario International Airport) and the first drone flights with direct city involvement. Media Contact: Amy Wiegand 757-657-4886 amy.wiegand@droneup.com

Regulations and battery technology standing in the way of making more advanced drones Jordan Hogan *Jul 11, 2021*

LOGAN, Utah — "Drone racing is getting more popular. There are local Utah races that are held every year. Over the summer, they do them about once a month," Kevin Plaizier said.

He's also a safety pilot and electrical engineer at AggieAir, a drone research department at Utah State University. In June, Plaizier won an international drone design contest for his Lynchpin model drone, along with a $25,000 prize.

The drone he made has 12 motors that are all at different angles, and it's different from the standard drones you can buy in stores and online. "All of the motors are in different directions,

which gives the drone the ability to hover in any orientation," Plaizier said. "So you can rotate it, hover it upside down, sideways, whichever way, and still have full control of the drone."

The drone engineer and enthusiast thinks that as designs for drones evolve, they will be able to do more things — like get people from one place to another. However, that also depends on how quickly battery technologies advance.

He also thinks the way drones are regulated prevents them from making progress with how drones can be used. "Drone delivery could be happening today if five years ago the Federal Aviation Administration was allowing it and allowing these companies to pursue that goal," he said.. https://www.fox13now.com/news/technology/regulations-and-battery-technology-standing-in-the-way-of-making-more-advanced-drones-expert-says

Southern California city receives first drone delivery at 'connected' residential community Ishveena Singh Jul. 14th 2021

A resort-style residential community in Ontario, California, has begun testing package deliveries via drones. At the first delivery from the skies today, a drone delivered ribbon-cutting scissors and microbrew beverages to the Ontario mayor, thus commemorating the opening of a marketplace at the New Haven master-planned development. Drone technology companies Airspace Link and DroneUp made the project possible.

The New Haven community has got the digital infrastructure to enable safe and scalable drone delivery operations for a variety of products. Experts believe the Ontario property would serve as a testbed for future connected, smart communities. Future drone delivery services in New Haven could include water meter readings, safety reports, and on-demand pharmaceutical delivery.

As Ontario Mayor Paul S. Leon explains: *The New Haven masterplan debuted in 2015 as a 'gigabit community,' with lightning-fast downloads far surpassing other cities in the country. It's all about community, connectivity, and convenience. And these new tools – enhancing and*

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simplifying life at New Haven – boost sustainability and businesses while propelling Ontario among the nation's top, smart-technology cities. https://dronedj.com/2021/07/14/drone-delivery-ontario-california/

Percepto joins Skydio, others on FAA's new Aviation Rulemaking Committee

Scott Simmie Jul. 14th 2021

Percepto, a company that produces an autonomous "drone-in-a-box" solution, has issued a news release announcing its selection as one of six vendors on the FAA's new UAS Beyond Visual Line of Sight Aviation Rulemaking Committee, also known as ARC.

The Federal Aviation Administration, like many regulators, typically consults with key stakeholders when it's considering new rules and technologies. And for the drone world, there's probably nothing more critical than the regulatory path toward routine, automated BVLOS missions in airspace shared with crewed aircraft.

That's really the key thing the FAA's ARC will be looking at, and the FAA selected Percepto as one of the six manufacturers on board. The other five are: Aerovironment, AirRobotics, Boeing Insitu, Matternet, and Skydio – and all have experience with autonomous BVLOS flight.

Percepto produces an integrated solution for autonomous inspection and data acquisition. Its Sparrow drone can take off and land from a protective charging station, meaning human beings don't even have to touch it except for maintenance and other checks. https://dronedj.com/2021/07/14/percepto-work-on-faa-committee-advising-on-bvlos-autonomous-drone-flight/#more-62662

Israel hosts first-ever international drone exercise for US, UK, France, Italy, Germany

Ishveena Singh Jul. 14th 2021

In a world first, Israel is hosting an international drone training exercise. Called the "Blue Guardian," the military exercise is seeing participation from the United States, France, Italy, Germany, and the United Kingdom. The two-week-long exercise that kicked off on Monday is being led by the Israeli Air Force's Remotely Piloted Aerial Vehicle (RPAV) division.

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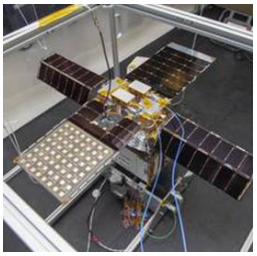
The drills are divided into two parts. The first week will focus on training international crews to operate the Israeli “Zik” (Hermes 450) drone.Tthe daily briefings will be led by a different country every day, creating a foundation for mutual learning.

Meanwhile, the second week of the exercise will see the participants drilling a simulated combat scenario between a coalition of allied nations against an enemy. Further, during the second week, forces will fly in joint formations and cooperate with the IAF’s fighter and helicopter divisions as well as commando units. https://dronedj.com/2021/07/14/international-drone-exercise/

15Jul21

NASA Artemis I Mission to Launch Solar Sailing Spacecraft for Asteroid Study

Christine Thropp July 14, 2021 News

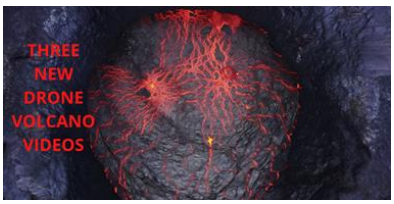


NASA will send its small spacecraft with solar sail propulsion to space as part of the Artemis I human exploration mission, which will mark the first integrated flight of the agency's Space Launch System rocket and the Orion spacecraft.

Les Johnson, principal technology investigator for the Artemis I mission at NASA's Marshall Space Flight Center, said in a statement published Wednesday the flight of the Near-Earth Asteroid Scout payload is partly meant to demonstrate the use of solar sailing spacecraft to reach new places and conduct science experiments.

The cubesat's aluminum-coated plastic film sail is designed to reflect sunlight and generate thrust to enable the spacecraft to accelerate and navigate through space for asteroid data-gathering efforts. "This type of propulsion is especially useful for small, lightweight spacecraft that cannot carry large amounts of conventional rocket propellant."
https://www.executivegov.com/2021/07/nasa-artemis-i-mission-to-launch-solar-sailing-spacecraft-for-asteroid-study-les-johnson-quoted/

Three new drone volcano videos for the lava geeks out there… Scott Simmie Jul. 14th 2021



Three more Fagradalsfjall volcano drone videos… The first comes from YouTube creator Traveller In The Whole World. His work is slow and smooth and allows the viewer to truly

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appreciate the scale of this volcano before he goes in for the hot stuff. And wow… some of the lava in this one is spectacular:

The second video of the Fagradalsfjall volcano comes to us from Armando Martinez, a Denver-based photographer who also does video and aerial work. Armando dropped us a note with a link to this video… and we love it.

While we were watching Armando's footage, YouTube helpfully popped up an FPV flight by Joshua Turner posted two days ago. He's flying a DJI FPV drone with a GoPro Hero8 strapped to the top. Here you go – and nice audio edit, Joshua!

There is, by the way, a part two to this video – just in case you still want more.
https://dronedj.com/2021/07/14/three-new-drone-volcano-videos-for-the-lava-geeks-out-there/

New SwellPro Splashdrone 4 waterproof drone offers fishing options, new features Scott Simmie Jul. 15th 2021

SwellPro has a very niche line of waterproof drone products and accessories. The company says they can be used for research, recreation, and even fishing, providing you purchase an optional bait-dropping release mechanism with a whopping 2-kilogram payload capacity. That means you could lift a baited line with a heavy hook from the shore, take it out past the breaking surf, and drop it into areas far beyond the casting techniques of even the best pro fisherperson. These drones can also go underwater.

The Chinese company identified the market for waterproof drones early on and has been in the business now for seven years. The company's newest offering is the Splashdrone 4. It is designed to have the best waterproofing technology in the industry. It is factory-sealed and air-pressure tested for the 100% waterproof guarantee. The waterproof motors and internal electronics are also coated with corrosion-resistant coating adding an extra layer of protection.

The price is $2,498, including the 4K, three-axis camera. Shipping is free and will start July 22.
https://dronedj.com/2021/07/15/new-swellpro-underwater-splashdrone-drone/#more-62865

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Drones Made in America: The FTC Crackdown on Fraudulent Labeling Miriam McNabb July 15, 2021

Since the U.S. military began a campaign to limit Chinese-made drone tech purchased with government funds, drones made in America have had a significant marketing advantage. Global manufacturers like Parrot are offering a U.S. made model added to the Blue sUAS list: Autel went through a lengthy process of working with U.S. export authorities to establish one of their models "made in the U.S.A.," according to stringent rules about the percentage of parts and labor that must originate in the U.S. Many U.S. companies assembling drones in the U.S. have made the claim that they provide drones made in America. Now, however, the U.S. Federal Trade Commission is cracking down on which companies may genuinely claim the coveted "Made in the U.S.A." title.

Many companies based in the U.S., and with U.S. manufacturing and assembly facilities, may find that they can no longer claim their products are "Made in the U.S." if more than the allowed proportion of parts are globally sourced. The FTC's new Made in the USA labeling rule specifies that products may not carry the label unless "1) final assembly or processing of the product occurs in the United States; 2) all significant processing that goes into the product occurs in the United States; and 3) all or virtually all ingredients or components of the product are made and sourced in the United States," says the FTC announcement. "Virtually all" components may be the difficult issue for drone manufacturers.
https://dronelife.com/2021/07/15/drones-made-in-america-the-ftc-crackdown-on-fraudulent-labeling-and-what-that-means-for-the-industry/

Astranis accelerates production with four more small GEO satellites Jason Rainbow July 15, 2021

Astranis recently raised $250 million to expand satellite production.

TAMPA, Fla. — Astranis has started building four very small geostationary orbit satellites as it gears up to produce dozens and later hundreds of them simultaneously.

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The San Francisco-based company has placed orders worth more than $30 million with aerospace component suppliers to kick-start manufacturing operations. Suppliers include L3 Harris Technologies, RUAG Schweiz, Kongsberg Defense and Aerospace, Aitech Systems and Moog.

"The plan is to have these built by the end of next year," Astranis CEO John Gedmark said in an email to SpaceNews. "That timeline is largely driven by long lead components right now, so we are starting to work with our suppliers on ways to either reduce that or have some things in stock so we can really bring that timeline down for future satellites." He said three of the four new spacecraft under production have secured a customer, "and we have multiple parties in advanced stages of negotiations for the fourth one."

The company recently said that Arcturus, its first commercial satellite that U.S.-based telco Pacific Dataport Inc. (PDI) plans to lease to provide internet services across Alaska, is entering final assembly for a launch next year on a SpaceX Falcon 9 rocket.
https://spacenews.com/astranis-accelerates-production-with-four-more-small-geo-satellites/

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