

# SHOW PREVIEW



## BUSINESS AS USUAL

The 7th edition of the biennial Singapore Air Show is likely to begin on a quiet note following concerns over the spread of the novel coronavirus, which have led to some exhibitors pulling out from the exhibition. Despite the inauspicious start to

this year's international airshow calendar and indeed the new decade, exhibitors remain of the opinion that it will be business as usual once the air show gets underway. Plenty of business is expected to be conducted with many agreements

on the anvil, despite reduced participation at the show due to travel restrictions imposed by Singapore and company bans on employee travel. The majority of the exhibitors who have chosen not to participate are from China, [...See page 3](#)

### RSAF MAY CHOOSE BRITECLOUD

[...See page 6](#)

Leonardo will be promoting its BriteCloud expendable active decoy to the Republic of Singapore Air Force, for potential integration across a number of operationally-critical platforms including F-16 and F-15. If BriteCloud is chosen by the RSAF, it would become the second Air Force internationally to operate the world-leading electronic warfare capability, following the UK's Royal Air Force.

### Heron MK II TO MAKE GLOBAL DEBUT

[...See page 4](#)

The Heron MK II, an updated model of the Israel Aerospace Industries (IAI) Heron UAV will make its global debut in Singapore. The new Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicle (UAV) will benefit from IAI's extensive experience with UAVs (> 1,800,000 cumulative flight hours and over 50 operational customers) and features its most advanced technologies.

### F-22 RAPTOR TO SOAR OVER S'PORE SKIES

[...See page 4](#)

Asia's largest aviation event will welcome the U.S. Air Combat Command F-22 Raptor Demonstration Team in a major boost to the air show, which has been hit by exhibitor dropouts due to concerns on the spread of the Coronavirus. The arrival of the highly sought after, F-22 Raptor Demonstration Team will mark the start of the aerobatic team's 2020 show season.

# Unparalleled Aerial Targeting Flexibility



Realistic aerial threat simulation is critical for the qualification of weapon systems and training.

Mirach 40 is an aerial targeting system, designed for flexibility, unrivalled reliability and cost-effectiveness.

The system enables mission planning and re-tasking during operations, is adaptable to complex engagement scenarios, provides rehearsal and playback options for training activities and can be equipped with large set of optional payload configurations.

Inspired by the vision, curiosity and creativity of the great master inventor – Leonardo is designing the technology of tomorrow.

**Visit us at Singapore Air Show, stand H51**

...Cont'd from page 1

**BUSINESS AS USUAL**

with a few from the USA and Europe. Experia Events, the organisers of the Singapore Airshow 2020, is putting on a brave face, 'We are focused on delivering the show while ensuring the overall safety of our attendees. During this period, we will continue to work with the relevant authorities and do our utmost to offer support to our exhib-

itors, partners and visitors who require assistance," said Leck Chet Lam, MD of Experia Events. However, the cancellation of the Singapore Air Show Aviation Leadership Summit (SAALS) 2020, an important component of the Air Show programme which brings together a large number aviation leaders, comprising government officials, civil aviation authorities,

airport operators and airline executives could dampen the mood. It is not all gloom however, the strong growth outlook for Asia's aerospace and defence industries, mean that for many firms, the exhibition remains a must attend and in-fact prior to the emergence of the novel coronavirus, over 95 per cent of the show's exhibition space was sold-out well in advance. The Singapore Airshow presents an unmatched opportunity for countries and companies seeking to build networks and forge strategic partnerships in the aerospace and defence ecosystem. The Singapore Air Show 2018 featured participation from more than 1000 companies, in addition to the attendance of 287 VIP delegations from 91 countries/regions, there were over 54,000 trade attendees. Despite the increased participation of exhibitors from Asia Pacific and the Middle East, numbers for this year's air show are unlikely, to better the 2018 edition. The presence of a strong U.S. contingent and the presence of the F-22 Raptor Demonstration team will be a major draw to show goers. ■

## LARGE U.S. CONTINGENT TO MAKE A MARK



The US military will showcase approximately 18 fixed-wing, rotary wing and unmanned platforms at the air show. While some of the aircraft will perform aerial demonstrations, most of the aircraft will be on static display. The fighter aircraft component of the U.S. contingent which will also take part in flying displays include; Air Combat Command's F-22 Raptor demonstration team from Langley AFB, Virginia; Marine Forces Pacific's F-35B Lightning II demonstration team from Attack Squadron (VMFA) 121 located at Iwakuni and the F-16 Fighting Falcon demonstration team from 35th Fighter Wing, Misawa AB, Japan. EF-18 Growlers from Strike Fighter Squadron (VFA)-195 in Atsugi, Japan and F-22 Raptors from

154th Wing, Joint Base Pearl Harbor-Hickam, Hawaii (JBPHH) will be on static display. Three U.S. unmanned platforms will be also be displayed at the show; An RQ-21 Blackjack from Marine Unmanned Aerial Vehicle Squadron (VMU) 3 based

out of Kaneohe, Hawaii; an MQ-9 Reaper from the 432nd Wing, Creech Air Force Base, Nevada and an RQ-4 Global Hawk from the 319th Reconnaissance Wing, Grand Forks AFB, North Dakota. The rotary wing component [...See page 8](#)

## LEONARDO OFFERS MULTI-MISSION RADAR SYSTEMS

Two variants of the Kronos family of radar systems designed and developed by Leonardo for specific applications in the land and naval domain will be displayed at the Changi Exhibition Center. The Land and Grand Mobile variants belonging to the multi-mission Kronos radar family,

feature an Active Electronically Scanned Array (AESA) technology, developed in-house by Leonardo. The highly mobile and quickly deployable Kronos Land radar is at the heart of Italy's SPADA NG air defence missile system and latest customer for this [...See page 8](#)



## SINGAPORE SKIES TO WITNESS F-22 RAPTOR DEMO TEAM

Asia's largest aviation event will welcome the U.S. Air Combat Command F-22 Raptor Demonstration Team in a major boost to the air show, which has been hit by exhibitor dropouts due to concerns on the spread of the Coronavirus. The arrival

of the highly sought after, F-22 Raptor Demonstration Team will mark the start of the aerobatic team's 2020 show season. The F-22 Demo Team will join a contingent of other service members from the Pacific Air Forces Command who will be

in Singapore.

The F-22 Raptor Demonstration Team is the only aerobatic team in the world to fly a 5th generation fighter aircraft and worldwide appearances are limited due to the secrecy that still surrounds the type. "It's an absolute honour to kick off our 2020 season in such a spectacular location, and we are humbled to be a part of an event that showcases the strong partnership between the United States and Singapore," said U.S. Air Force Major Josh Gunderson who will also fly his first demonstration profile as the pilot and commander of the F-22 Demo Team over the skies of Singapore.

This is only the second time the F-22 Raptor has been displayed at the Singapore Airshow and the first since the Bulldogs of the 525th Fighter Squadron, Joint Base Elmendorf-Richardson, Alaska, brought two Raptors to make an appearance back in 2016. The F-22 Raptor Demonstration Team will perform their demos using aircraft assigned to the Hawaii Air National Guard, Joint Base Pearl Harbor-Hickam, Hawaii. The demo team typically uses jets from the closest F-22 squadron in relation to the shows they are attending, a concept known as "Raptor Nation". ■

## SHOW UNVEIL FOR IAI HERON MK II

The Heron MK II, an updated model of the Israel Aerospace Industries (IAI) Heron UAV will make its global debut in Singapore. The new Medium Altitude Long Endurance (MALE) Unmanned Aerial Vehicle (UAV) will benefit from IAI's extensive experience with UAVs (> 1,800,000 cumulative flight hours and over 50 operational customers)

and feature some of the company's most advanced technologies. "We are proud to introduce another major development in IAI's UAVs. The Heron MK II allows for considerable expansion of the operational package with an emphasis on standoff intelligence collection. The new member of the Heron family, already considered one of the prime strategic

UAVs in the world, allows us to expand our range of operational solutions we offer our customers," says IAI Executive Vice President and General Manager of the Military Aircraft Group, Moshe Levy. The Heron MK II will be offered in new configurations, including those with long-range observation sensors and radars. A wide range of additional payloads such as: Electronics Intelligence (ELINT), Communications Intelligence (COMINT), special and more will also be available. IAI is highlighting the new MALE UAV's 'Standoff Capability' due to its ability to carry larger and improved sensors.

The Heron MK II has a wider and stronger body structure (with no weight penalty), as a result of improved manufacturing technologies and this will facilitate quick and easy maintenance. The Heron MK II can attain a maximum speed of 140 knots, an altitude of 35,000 feet and is powered by a Rotax 915 iS engine. It can remain in the air for 45 consecutive hours. IAI has also improved the avionics of the Heron MK II. IAI's Heron family of UAVs is in use with the Israeli Air Force and are operational with over 20 other organizations worldwide. ■



# Naval Pedigree

**AW159**

Operating worldwide in the most demanding open ocean and littoral environments, Leonardo Helicopters extend theatre horizons to provide force projection for Maritime Commanders.

Embarked multi-role platforms capable of autonomous detection, identification and engagement against surface and sub-surface targets, capable of rapid re-role to SAR and humanitarian support.

Inspired by the vision, curiosity and creativity of the great master inventor - Leonardo is designing the technology of tomorrow.

**Visit us at Singapore Air Show, stand H51**

*leonardocompany.com*

Helicopters | Aeronautics | Electronics, Defence & Security Systems | Space

 **LEONARDO**  
HELICOPTERS

# RSAF MAY CHOOSE LEONARDO'S BRITECLOUD EW CAPABILITY



Leonardo will be promoting its BriteCloud expendable active decoy to the Republic of Singapore Air Force, for potential integration across a number of operationally-critical platforms including F-16 and F-15. If BriteCloud is chosen by the RSAF, it would become the second Air Force internationally to operate the world-leading electronic warfare capability, following the UK's Royal Air Force.

BriteCloud is the culmination of decades of UK leadership in responding to the threat of radar-guided missiles. In WWII, the RAF fielded the very first anti-radar countermeasures and, in 2018, it vaulted to the front of the field once again by becoming the first to adopt Leonardo's BriteCloud technology for active service. This miniaturised radar jammer, which is ejected from an aircraft to draw away incoming missiles, is unique in the market and has consequently drawn a great deal of international interest. It is currently undergoing evaluation by the United States' Armed Forces. BriteCloud is unique because Leonardo is the only company in the world which has managed to sufficiently miniaturise Digital Radio Frequency Memory (DRFM) countermeasure technology to the point where it can be launched from a standard chaff and flare dispenser.

**LEONARDO'S NEW BRITECLOUD 218 VARIANT IS DESIGNED TO FIT THE AN/ALE-47 COUNTERMEASURES DISPENSERS USED BY MANY F-15 AND F-16 AIRCRAFT SUCH AS THOSE IN-SERVICE WITH THE RSAF AND, BECAUSE EACH BRITECLOUD IS A SELF-CONTAINED UNIT, WOULD**

**NOT REQUIRE ANY INTEGRATION WORK TO SIGNIFICANTLY IMPROVE THE SURVIVABILITY OF THE FLEETS.**

As part of a mid-life upgrade or retrofit capability programme, adopting BriteCloud would be a cost-effective way to also equip its fleet with world-class protection from radar-guided missiles. Beyond BriteCloud, Leonardo is also finding further potential for its miniaturised DRFM technology in its partnership with MBDA to create SPEAR-EW.

An electronic attack variant of MBDA's SPEAR 3 missile, SPEAR-EW replaces SPEAR's explosive payload with a Leonardo DRFM jammer and additional fuel, allowing for long-range Suppression of Enemy Air Defence (SEAD) missions while improving the survivability of its host platforms. Effectively, a combat aircraft

equipped with SPEAR-EW will be able to launch multiple convincing 'ghost' signals ahead of itself into enemy airspace, confusing enemy radars with overwhelming false targets. SPEAR-EW is currently being integrated onto the F-35, making it an option for the Republic of Singapore Air Force which is acquiring a fleet of F-35B aircraft, the same variant as the UK Royal Air Force.

**SPEAR-EW IS A VARIANT OF THE SPEAR 3 MISSILE AND ADDS SIGNIFICANT CAPABILITY AND FORCE MULTIPLICATION WITHOUT NEED FOR REPEAT PLATFORM INTEGRATION. THE SPEAR FAMILY'S COMPACT SIZE ALLOWS 4 WEAPONS TO BE CARRIED INTERNALLY IN EACH OF THE 2 INTERNAL WEAPONS BAYS OF THE F-35.**

BriteCloud and SPEAR-EW are just two of Leonardo's leading electronics capabilities which will be on-show at the Singapore Air Show. Leonardo will also showcase its range of advanced radar systems, including the Osprey E-scan surveillance radar which has been selected by the US Navy and the Grifo-346 fire control radar which is on-board the M-346FA (Fighter Attack). As a leader in IFF (Identification Friend/Foe) systems, Leonardo will also be highlighting its Mode 5-capable M428 compact transponder. Other products on show include the ULISSES submarine-detection capability that can be used for airborne applications, including for carriage by UAS, and the airborne SRT-800 Airborne software-defined radio (SDR), the lightweight new addition to Leonardo's family of S-Wave communication systems. ■



# ATR EYES GROWTH IN ASIA

Regional Transport Aircraft specialist ATR is focussing on its new ATR 42-600S (STOL) variant and the ATR 72-600F freighter with the intent to enhance its growth prospects in the region. The airframer continues to make inroads into Northeast Asia, where it has been a recent entrant. "We have identified 500 airports around the world that were previously only accessible by 19-seat aircraft or below but can now be accessed using the ATR 42-600S. Nearly a third of those airports are in Asia Pacific," tells Fabrice Vautier, ATR Senior Vice President Commercial, in an exclusive interview with Show Preview. "FedEx is the launch customer for the ATR 72-600F, which is the only straight from factory dedicated regional aircraft freighter. We see potential for this aircraft in Asia Pacific too, because e-commerce is very strong in Asia Pacific," he says while commenting on the strong potential for the freighter version of this popular commuter aircraft. Edited Excerpts of the Interview



.....  
**Fabrice Vautier, ATR Senior Vice President Commercial**  
 .....

## What are the reasons for ATR to participate in the Singapore Airshow?

Southeast Asia is ATR's largest market globally accounting for about 50 per cent of the order backlog. Many of our customers will be at the show. We value the opportunity to meet with our customers and promote our products and services. We are promoting the ATR 42-600 and ATR 72-600 at the show as well as new variants of the aircraft in development, namely the ATR 42-600S short take-off and landing (STOL) version, and the ATR 72-600F which is the new dedicated freighter. On static display we will have a Bangkok Airways ATR 72-600 passenger aircraft. People who come to our stand can also see and learn about ClearVision, our new vision system that combines synthetic vision with enhanced vision. ATR is the first commercial aircraft-maker to have such a vision system. The benefit of ClearVision is it improves situational awareness when flying in poor weather conditions.

## What would be the interest in the region for the ATR 42-600S?

There has been a lot of interest, from operators in Asia Pacific, for the ATR

42-600S. The ATR 42-600S, like all ATRs, is a pressurized aircraft but the 'S' variant has additional short take-off landing capability. It is designed for accessing runways as short as 800m. There are many short airfields in Asia Pacific, particularly in the Pacific islands and parts of Southeast Asia, such as Papua and East Malaysia. We have commitments from customers for 20 aircraft. For example, Air Tahiti is the airline launch customer with a firm order for two. We have identified 500 airports around the world that were previously only accessible by 19-seat aircraft or below but can now be accessed using the ATR 42-600S. Nearly a third of those airports are in Asia Pacific.

## What is the demand for ATR freighters in Asia Pacific?

One factor driving demand for ATR freighters is the growth of e-commerce. When people order a product online, they expect next day delivery. Often, the only way to meet that timeframe is to air freight the goods. FedEx is the launch customer for the ATR 72-600F, which is the only straight from factory dedicated regional aircraft freighter. We see potential for this aircraft in Asia Pacific too, because e-commerce is very strong in Asia Pacific. There are also national governments in

Asia Pacific actively encouraging the launch of air cargo services to smaller cities and towns. Indonesia has the 'air bridge' program, for example, which is likely to lead to the development of more air cargo services in eastern Indonesia using turboprops.

## Commercial turboprop operations have moved to Seletar Airport in Singapore, Subang Airport in Kuala Lumpur and now turboprop operations are being established at Sangley Airport in Manila. What's your point of view on this?

We see it as an opportunity. Subang Airport is a downtown city airport that is closer to the city-centre, and thus more convenient to get to, than Kuala Lumpur International Airport. The commercial turboprop services at Subang Airport have proven to be very popular with the flying public, especially business travellers. They like the convenience and time saved. From the front door of the terminal to your gate, it only takes about five minutes. Sangley Airport is located within the metropolitan area of Manila, so has huge potential as a downtown city airport. The authorities have been working to upgrade Sangley Airport to get it ready for commercial passenger services.

Singapore's Seletar Airport is also a very convenient airport, especially for people living in the north and western parts of Singapore. Singapore reportedly spent \$80 million Singapore dollars on the new passenger terminal at Seletar. It is an outstanding terminal that provides airline passengers with a very convenient and comfortable experience. The terminal feels more like a VIP terminal, which is not surprising considering business jet operators also share the building.

## What has been some interesting new developments for ATR in the region?

ATR has made inroads into northeast Asia. We have three ATR operators now in Japan, namely Amakusa Airlines, Japan Air Commuter and Hokkaido Air Service. The latter two are part owned by Japan Airlines. Hokkaido Air Service took delivery of its first ATR in December. Also, in December, Korean carrier HiAir launched operations using pre-owned ATR 72-500s to fly domestically. In terms of Southeast Asia, Cebu Pacific Air recently added two ATR 72-500 freighters that it had converted from passenger aircraft. The ATR 72-500 is the airline's first dedicated freighters. ■

# EMBRAER E195-E2, PRAETOR 500 TO MAKE SHOW DEBUT



Brazilian airframer Embraer is bringing its E195-E2 to the airshow for the first time and will make the Asian debut for its new

Praetor 500 midsize business jet. The E195-E2 is the largest of the three aircraft in the E-Jets E2 family and features

a special 'TechLion livery for the show. The E195-E2 has been in operation with Brazil's Azul Linhas Aéreas Brasileiras S.A. since October 2019. The E195-E2 not only carries more payload but burns 25.4 per cent less fuel per seat than the E195. The new jetliner has a maximum range of 4,815 km with a full passenger load (600 nm more than the E195). 120 passengers can be accommodated in a two class layout or 146 passengers in a single class. Making its Asia debut at Singapore, the new Praetor 500 is the only midsize jet with full fly-by-wire. The first delivery of the Praetor 500 took place in December 2019 to Flexjet. It is also the only jet in its class with Ka-band internet connectivity. The Praetor 500 can make nonstop flights from Miami to Seattle, Los Angeles to New York, or Singapore to Beijing or Dubai to Bangkok. ■

...Cont'd from page 3

## LEONARDO OFFERS MULTI-MISSION RADAR SYSTEMS



radar system was the Bangladesh Air Force. The Kronos Land radar has a proven ability to detect and follow high manoeuvring tracks, hovering tracks and low-altitude tracks. It can, not only be easily integrated into a surveillance network but also control short-range air defence (SHORAD) and very short-range air defence (VSHORAD) systems. With its ability to simultaneously detect and locate enemy artillery, the radar provides Counter-Rocket, Artillery & Mortar (C-RAM) capabilities for directing fire from friendly forces, estimating and recording shell impact points. The Kronos Land radar's superior Counter-UAS (C-UAS) capabilities, affords operators with the ability to detect and track potentially hos-

tile drones in tough scenarios. The Kronos Grand Mobile is a powerful land-based radar that can undertake surveillance and missile defence against traditional aerial threats, at a variety of altitudes, and defence against tactical ballistic missiles, whose speed and trajectories are extremely challenging even for modern defensive systems. The Kronos radar family also features the Grand Naval maritime variant, Ground Shield variant and brand-new Kronos Dual Band variant, which is a four-face fixed radar system. These variants of the radar can be combined to deliver the full spectrum of Ballistic Missile Defence (BMD) capabilities. Leonardo has sold over 40 Kronos family radars worldwide. ■

...Cont'd from page 3

## LARGE U.S. CONTINGENT TO MAKE A MARK



comprises of an MV-22B Osprey from Marine Medium Tiltrotor Squadron (VMM) 262, AH-1Z Viper from Marine Light Attack Helicopter Squadron (HMLA) 369 and a UH-1Y Venom from HMLA 369 all based out of Futenma, Japan. Apart from these aircraft, there will also be a C-17 Globemaster III from 15th Wing, JBPHH, Hawaii; E-3 Sentry from 18th Wing, Kadena Air Base, Japan; B-52 Stratofortress from 20th Expeditionary Bomb Squadron, 36th Wing Andersen Air Force Base, Guam; KC-135 Stratotanker from the 507th Air Refueling Wing, Tinker AFB, Oklahoma; P-8 Poseidon from Patrol Squadron TEN (VP-10), Naval Air Station Jacksonville, Florida and an E-2D Advanced Hawkeye from Carrier Airborne Early Warning Squadron (VAW)-125, NAS Norfolk, Virginia. ■



**ATR**

# move with the times

**40% less fuel and 40% less CO<sub>2</sub>\***

[atr-intolife.com](http://atr-intolife.com)

\* per trip compared to regional jets

 **into life**



**FORCE STUDENT PILOTS AND 60 AVAILABLE TO PILOTS OF FOREIGN ALLIED COUNTRIES, THEREFORE DOUBLING THE CURRENT 35-40 PILOTS TRAINED ANNUALLY.**

The IFTS training syllabus will be based on the current versatile AM modular syllabus exploiting Leonardo's innovative integrated training system (ITS). The advanced training courses offered will consist of a standard set including air-to-air and air-to-ground modules that all student pilots must complete. The standard package can be expanded by additional modules such as advanced air-to-air training, advanced air-to-ground training with sorties to the polygon range, the use of Night Vision Goggles (NVG), aerial refuelling and specific training focused on the use of sensors, datalink and electronic warfare. In total six different courses will be available, and slightly more than half of the total amount of sorties during the course(s) will be flown in the simulator.

## TRAINING AT THE TOP

Leonardo delivered the final M-346 to the International Flight Training School (IFTS) at Lecce-Galatina, an Italian Air Force airbase in south-eastern Italy on October 30, 2019. In total, four aircraft have been added to the already existing fleet of 18 T-346As (the designation of the M-346 in Italian Air Force service) to increase the advanced lead-in to fighter training capability.



The joint initiative between Leonardo and the Italian Air Force to launch the IFTS was announced on July 17, 2018 at the Farnborough International Airshow in the UK. The agreement was inked by the-then Italian Air Force Chief of Staff, Lt. Gen. Enzo Vecciarelli and Leonardo's CEO Alessandro Profumo during an official ceremony held at the event, attended by (former) Italian Defence Minister, Elisabetta Trenta.

The objectives of a collaboration between Leonardo and the Italian Air Force are

to further exploit the training capabilities provided by the 61° Stormo (Wing), based in Lecce-Galatina, and to establish a new IFTS to support both national and international pilot training. During the signing ceremony, Alessandro Profumo made the company's ambitions clear: "Leonardo has to move from being a platform supplier to being a service provider as well. We aim to become the international flight training school for air forces worldwide."

The IFTS was initiated with the objective to consolidate the growth and the internationalisation process of the Italian Air Force (AM) flight school by increasing capacity and the range of courses available to foreign countries. This will allow growing demands in advanced flight training from allied and partner air forces to be satisfied. The IFTS will primarily provide: advanced Phase IV courses of the AM training syllabus, the Lead-In to Fighter Training (LIFT) phase, this will adequately prepare the student pilot to handle the latest 4th and 5th generation fighter aircraft like the F-16 or the F-35 in an operational environment.

**WHEN IFTS REACHES ITS FULL OPERATIONAL CAPABILITY (FOC), THE SCHOOL WILL BE ABLE TO OFFER UP TO 80 COURSES ANNUALLY, 20 TRAINING POSITIONS FOR ITALIAN AIR**

The IFTS will offer tailored training modules to meet specific needs of other countries' Air Forces. This is achieved by a detailed analysis of the training programme run by the relevant air force, with basic training included. With this approach training can be optimised improving capabilities of the (foreign) student pilot while reducing the amount of training required in an Operational Conversion Unit (OCU) saving cost in terms of expensive flight hours, time and resources. The IFTS project foresees in the short term a relocation of the school to exploit the full potential of the T346A ITS, enabling at the same time a further expansion of advanced flight training capacity to an estimated 8,000 flight hours annually.

The relocation of Phase IV to a different base will create spare capacity at Galatina to enhance basic training capacity offered by 61° Stormo with the introduction of the M-345 integrated training system. The amount of T-345A (AM designation of the M-345) training flights could be increased up to the maximum operational capacity of 61° Stormo at the airbase, approximately 12,000 flight hours a year.

At the 2019 Paris Airshow held at Le Bourget in June, Decimomannu, located in the southern part of the island of Sardinia, was announced as the second training base alongside Lecce-Galatina. In 2021, IFTS will move to its new, dedicated facility, which will also entail the relocation of all 22 T-346s to Decimomannu. ■



GBP Aerospace & Defence will bring out print and e-editions of its internationally reputed show daily "Daily News" at Defence Services Asia Exhibition and Conference (DSA) 2020, as the official show daily.

## HIGHLIGHTS

- 3,000 printed copies of DAILY NEWS will be distributed at the show site to conference attendees, visitors and at exhibitor stalls and chalets
- DAILY NEWS is a popular offering at defence shows and trade exhibitions worldwide, due to its handy size and quality editorial content
- The e-edition of Daily News will be emailed each morning of the exhibition for unprecedented local and international exposure.
- More than 8,000 digital copies will be emailed every morning to military, defence and industry professionals worldwide, with a special focus on the Asia region.

Defence Services Asia (DSA) 2020 will be held at Malaysia International Trade and Exhibition Centre (MITEC) in Kuala Lumpur, Malaysia from 20-23 April, 2020.

The print edition of "Daily News" and the e-edition of "Daily News" will be made available to a global audience on the first three days of DSA 2020.

Both print and digital editions of Daily News issue will carry a mix of news items, feature stories, product briefs, and feature interviews with senior officials across Government, military and defence OEMs and suppliers. The 17th edition of (DSA 2020) will be held alongside National Security – covering Law Enforcement, Public Security, Border Control (NATSEC)

### KEY FIGURES OF DSA 2020

- 1,500 Participating Companies
- 350 VIP Delegations
- 55,000 Visitors
- 33 International Pavilions

SPONSORSHIP OPPORTUNITIES FOR PRINT AND DIGITAL DAILY NEWS (OFFICIAL SHOW DAILIES) ARE AVAILABLE.

### Distribution

**3,000 PRINT COPIES PER DAY**  
DAY1 : April 20th  
DAY2 : April 21st  
DAY3 : April 22nd

**8,000 E- EDITION COPIES PER DAY**  
DAY1 : April 20th  
DAY2 : April 21st  
DAY3 : April 22nd

### Advertising orders

1st April

Reserve your advertising space in Daily News for DSA 2020 now!

FOR MORE INFORMATION, CONTACT  
vittorio.prudente@gbp.com.sg

### Materials

10th April

# CONTROP TO DISPLAY NEW STAMP PAYLOADS

Controp, the specialist Israeli provider of Electro-Optics and IR defence and homeland security solutions will showcase a range of new STAMP payloads at the air show. The company will highlight its T-STAMP-XD, an advanced solution that enables armed forces to shorten the sensor-to-shooter loop, and STAMP-VMD, a unique wide area persistent surveillance payload with Video Motion Detection.

**“IN HIGHLIGHTING THESE THREE NEW STAMP PRODUCTS AT THE SINGAPORE AIRSHOW 2020, WE CONTINUE TO SHOW OUR COMMITMENT TO OUR CUSTOMERS IN SOUTHEAST ASIA TO PROVIDING THE MOST ADVANCED SOLUTIONS TO THIS IMPORTANT REGION,”** Johnny Carni, Controp’s VP Marketing Southeast Asia & Pacific.

“The STAMP payloads have been supplied to many UAV and drone manufacturers worldwide, enabling them to



provide their customers with the best and most cost-effective EO/IR capabilities. Controp recently secured a significant repeat order from a satisfied customer in this market, again confirming for us that we are successfully answering the specific requirements of customers in this region.” Controp will also promote

the new MD-STAMP, which now features laser-designator capability for small UAVs and drones and is the addition to the STAMP family of miniature payloads. While the MD-STAMP weighs less than 1kg, the MD-STAMP is a miniature version of the T-STAMP-XD, which weighs 5.7kg. The STAMP-VMD weighs only 1.3kg. ■

# STEADICOPTER BLACK EAGLE 50 READY FOR EW MISSIONS



Steadicopter is now offering the ability to undertake Electronic Warfare (EW) missions with its Black Eagle 50 robotic unmanned helicopter. This capability will be presented for the first time at the show, highlighting the platform’s ability to perform detection, collection and monitoring of cellular and Wi-Fi intelligence. Commenting on the expanded capabilities, Noam Lidor, Sales & Marketing Director at Steadicopter, said, “Israel’s security industry is made up of companies at the forefront of technology. Thanks to our collaboration with these companies, we were able to extend Black Eagle 50’s

capabilities to EW missions by integrating their cellular payload for collecting and detecting cellular identities and RF signals, and their Wi-Fi payload for identifying, detecting and intercepting Wi-Fi broadcasts. These EW capabilities have been added to Black Eagle 50’s existing GPS independence and marine capabilities. Today, Steadicopter provides a comprehensive response for ISTAR, marine, and inland missions.”

The Black Eagle 50 is ideal for naval missions and is fitted with a special inertial navigation system capability which does not rely on GPS, delivering a significant advantage in GPS-denied areas. The system has a steady hovering endurance of up to 3 hours and flight endurance of up to 4 hours. The Black Eagle 50 has a 35 Kg Maximum Take-Off Weight (MTOW) and 5 Kg payload capacity. It can maintain a hover for up to 3 hours (service ceiling up to 10,000ft) with a total flight endurance of four hours. It has a maximum communication range of up to 150km and a cruising speed of 45 knots (81 Km/h). ■

# PPG TO DISPLAY PRODUCT RANGE

Paints, coatings and specialty materials firm PPG will showcase its wide range of products along with new industry offerings that include lightweight, sustainable aircraft products. The company continues to invest in the region and its largest investment to date in Southeast Asia, is a new 38,750-square-foot (3,600-square-meter) application support center (ASC) at Seletar Aerospace Park near the Seletar Airport. The ASC is being built at a cost of approximately US\$15 million and is slated for completion later this year. The new facility will allow PPG to cater for the increased demand for aerospace sealants, adhesives, coatings, transparencies, chemical management services and the packaging of third-party products. PPG will also showcase a recent technology that helps protect aircrews, passengers and aircraft interiors from solar radiation, which is being marketed with the name Solaron Blue Protection. This UV+ blocking technology is used on aircraft windows. ■

# GROWING INTEREST IN LEONARDO'S FALCO XPLOER



The Falco Xplorer Remotely Piloted Air System (RPAS) being developed by Leonardo, is already attracting strong market interest, in an encouraging sign for the new platform. First unveiled at last year's Paris Air Show, the Falco Xplorer is the largest drone built by Leonardo with a Maximum Take-Off Weight (MTOW) of 1.3 tons and an operating ceiling above 24,000ft. It is being designed to offer persistent, multi-sensor strategic surveillance to military and civil customers and will be made available either as an integrated system or as a fully-managed information-superiority service, flown and operated by the company. The new drone is being promoted as an affordable and potent option for Intelligence Surveillance and Reconnaissance (ISR). Since the Falco Xplorer is not subject to

International Traffic in Arms Regulations (ITAR) restrictions and meeting the criteria for Missile Technology Control Regime (MTCR) class II, it will be readily exportable.

"We have already been speaking to a range of potential new customers about the Xplorer. We have received some requests for quotation and had some productive discussions with further potential new customers following the launch of the system at Paris Air Show last year and again in November when the platform was exhibited at Dubai Air Show, where we saw a great deal of interest," says Fabrizio Boggiani, SVP Airborne Systems - Electronics Italy at Leonardo. The Falco Xplorer is also being proposed for military and non-military arms of the Italian government. "There will be further flight

campaigns over the next few months which will assess the aircraft's full range of capabilities including its integrated sensor system. These campaigns will also certify the Falco Xplorer against NATO's airworthiness STANAG 4671, dramatically expanding the territory over which it can operate," Boggiani adds.

The new drone aircraft made its first flight in January, when Falco Xplorer S/N0001 took off from Trapani Air Force base. "We are pleased to report that the Falco Xplorer behaved even better than predicted during the first flight. The flight was also the first good opportunity to collect data which we can now re-introduce to our modelling to improve the simulations, all of which contributes to our continuing to develop the Xplorer in a cost-effective manner," says Boggiani. Leonardo also intends to certify Falco Xplorer for use in non-segregated airspace.

The Falco Xplorer combines endurance of over 24h with a max payload of 350kg and also feature an integrated sensor system, which will include the Gabbiano T-80 multi-mode surveillance radar, SAGE electronic intelligence system, an Automatic Identification System (AIS) for maritime missions and an Electro-Optical (EO) turret. An optional hyperspectral sensor will allow the drone to monitor pollution and agricultural development and native satellite link capability allows for beyond-line-of-sight operations. An open system architecture means that third-party sensors can be easily integrated.

## PROSPECTS FOR LEONARDO UAV'S IN EXPORT MARKETS

**Fabrizio Boggiani, SVP Airborne Systems - Electronics Italy at Leonardo**

We are seeing a great deal of interest from around the world. There are a number of countries which are looking to procure persistent, multi-sensor assets or services for strategic surveillance and we are confident that the Falco Xplorer can be tailored to meet many of these individual requirements. Important to note is that the Falco Xplorer is not subject to International Traffic in Arms Regulations (ITAR) restrictions and meets the criteria for Missile Technology Control Regime (MTCR) class II, meaning that the system is readily exportable.

We have had a number of international

customers already for our Falco and Falco Evo models of UAS, all of whom have been very satisfied with the system, so we are talking to these customers about potentially upgrading to the new system. In fact, it is our regular engage-

ment with current Falco family customers which prompted the development of the Xplorer: some customers noted a requirement for the mission benefits brought by a higher capacity for payloads and longer endurance. ■



## DASSAULT BRINGS 6X BUSINESS JET MOCK-UP TO ASIA



Dassault Aviation will display a full-size mock-up of its Falcon 6X at the air show. This will be the first time that a 6X mock-up will be displayed in Asia. The Falcon 6X is still in development and is Dassault's newest business jet with the ability to fly

as far as 10,186 km. On completion of the airshow, Dassault will transport the 6X mock-up to Europe, where it will be showcased at EBACE. Dassault will also have its 8X and the 2000LXS business jets on static display.

"Dassault has seen a significant pick up in business jet sales activity in Southeast Asia, which has helped to offset the relatively quiet China market. The business jet fleet in Southeast Asia is growing 5-10 per cent per year with the strongest markets for growth being Singapore, Malaysia and Thailand," company officials tell Show Preview, adding, "There are also some business jet markets that have emerged that didn't exist before. There are now business jets based in Vietnam and Cambodia. These countries never had business jets before."

Dassault is promoting the Falcon 6X as the most spacious, modern and versatile twin in its class, with a particular emphasis on efficiency, cabin comfort and value for money. The company's newest business jet will offer the largest cabin cross-section of any purpose-built business jet – 2.58 m / 102 inches wide, 1.98 m / 6 feet 6 inches high and 12.30 m / 40 feet 4 inches long. Final assembly of the 6X which is powered by a Pratt & Whitney Canada PW812D engine, is slated to begin early next year and the first flight is set for 2021. Certification followed by initial deliveries are planned for 2022. ■

## ST ENGINEERING TO DISPLAY NEW LONG-HAUL ECONOMY SEAT

ST Engineering of Singapore will showcase for the first time, a long-haul Economy Class seat conceptual design. The new long-haul Economy Class seat will deliver up to 30 per cent weight savings, when compared to an identical seat structure built using aluminium. This is due to ST Engineering's use of a high-performance, proprietary magnesium alloy developed by its Land Systems sector. The new concept seat is also designed with parts maintainability and availability in mind. An alternate method of manufacturing has been factored into the design and for plastic parts which are especially prone to passenger abuse or wear and tear, ST Engineering will cater for their replacement with additive manufactured parts. Also, to make its show debut will be the world's first expandable lavatory in an aircraft which has been designed to create greater accessibility and convenience for Persons with Reduced Mobility. ACCESS is an innovative design from ST Engineering and is the world's first expandable Reduced Mobility (PRM) aircraft lavatory. ACCESS is a path-leading

aircraft lavatory which can be expanded to become 40 per cent larger than a typical lavatory, offering passengers with reduced mobility greater access and ease of use. The ACCESS lavatory uses a moving wall and can be retrofitted or line-fitted to narrow-body aircraft such as the A321 and B737. ST Engineering is the largest exhibitor at the show with over 100 exhibits on display. ■



## DE HAVILLAND TO PROMOTE DASH 8-400

De Havilland Aircraft of Canada Limited (De Havilland Canada) will display a Dash 8-400 Regional Transport Aircraft (RTA) belonging to PAL Express at the air show. Philippine Airlines had brought a dual-class 86-seat Q400 to the previous edition of the show. PAL Express' Dash 8-400 will fly through seven countries en-route to its final destination, Singapore. The aircraft took off from Toronto and made its first stop in Labrador, Canada. The Dash 8-400 is the only turboprop in its class certified for high altitude airports. The RTA delivers 30 per cent less fuel burn than competing jets, while cruising 160 km/h faster than conventional turboprops. The Dash 8-400 fleet globally has logged almost seven million flight hours with operators in almost 40 countries and a dispatch reliability rate of over 99.5 per cent. Longview Aviation Capital, which acquired the Dash 8 aircraft programme from Bombardier has relaunched the aircraft under the De Havilland Canada brand. ■

# Daily News

## MEDIA PARTNER OF CHOICE, AT AEROSPACE AND DEFENCE EXHIBITIONS WORLDWIDE

GBP Aerospace & Defence is a leading publisher of show dailies at high profile defence exhibitions, airshows and MRO events around the globe.

[www.gbp.com.sg](http://www.gbp.com.sg)

For 2020, GBP Aerospace & Defence is present at more industry exhibitions and airshows than ever before!

- **SINGAPORE AIRSHOW**
- **DEFEXPO . DIMDEX**
- **EURASIA AIRSHOW**
- **FIDAE . DSA**
- **KADEX . HEMUS**
- **EUROSATORY**
- **FARNBOROUGH**
- **VIDSE . ADEX**
- **EURONAVAL**
- **ARMS & SECURITY**
- **INDODEFENCE**
- **AIRSHOW CHINA**
- **EDEX 2020**
- **IDEAS . EXPONAVAL**



DON'T MISS OUT ADVERTISING WITH DAILY NEWS FOR 2020!

FOR MORE INFORMATION CONTACT:  
[vittorio.prudente@gbp.com.sg](mailto:vittorio.prudente@gbp.com.sg)

**GBP** AEROSPACE  
&  
DEFENCE

# Whatever the Threat

The KRONOS® family of land and shipborne multifunction radars provide unparalleled situational awareness for timely, effective decision making.

Utilising leading-edge AESA technology and unique modularity, KRONOS® radars ensure detection of every threat, from UAV's to ballistic missiles.

Inspired by the vision, curiosity and creativity of the great master inventor - Leonardo is designing the technology of tomorrow.

**Visit us at Singapore Air Show, stand H51**