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ERANEWS



HANDOVER OF DPET SYSTEM TO THE CZECH ARMY



ADS-B system covering the entire German airspace for DFS



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ERA HANDED OVER NEW PASSIVE SURVEILLANCE SYSTEM DPET TO END USER - THE OPERATORS OF THE CZECH ARMED FORCES

DPET (DEPLOYABLE PASSIVE ESM TRACKER) IS THE MOBILE VERSION OF THE LATEST GENERATION OF VERA-NG SYSTEM, DEVELOPED AND DESIGNED TO FIT THE SPECIFIC NEEDS OF THE CZECH ARMED FORCES. IT WILL REPLACE THE OLDER VERSION VERA S/M, WHICH HAS BEEN IN USE THERE SINCE 1996. NEW SYSTEM WILL BE OPERATED BY THE SOLDIERS OF 532ND ELECTRONIC WARFARE BATTALION (A PART OF 53RD RECONNAISSANCE AND ELECTRONIC WARFARE REGIMENT), LOCATED IN SOUTH BOHEMIA, CZECH REPUBLIC.



The passive surveillance systems (PSS) have got a long tradition of usage in Czech Army. Current system is based on the R&D going back to the 1960s of 20th century, its predecessors include worldwide famous systems Ramona and Tamara. DPET (in NATO terminology Deployable Passive Electronic Support Measures Tracker) is based on the 5th generation of PSS called



VERA-NG produced by ERA since 2011, standing as the newest and the best one in long line of such systems.

VERA-NG is the most advanced system, capable of solving different use cases - Air Surveillance, Ground Based Air Defence and Electronic Warfare - at the same time. It is designed for detection, localization, tracking and identification of the air, ground and naval targets as well as pulse and continuous wave signal analysis, utilizing the multilateration Time Difference of Arrival principle. The system emits zero electromagnetic energy making it 'invisible' to adversaries.

The VERA-NG battle proven use cases are as follows:

Air Surveillance

A passive sensor is able to support traditional active radars thanks to standardized data output ASTERIX and AWCIES, which can be easily integrated to any Command-and-Control posts. In its deployable version it can be also used within NATO's deployable air surveillance and control unit DARS.

Ground Based Defence (GBAD)

Thanks to supremacy in real-time detection and identification of fast-moving targets, in airborne domain a passive sensor plays vital role to complement active sensors in GBAD, otherwise vulnerable in electronic warfare.

Electronic Warfare

The surveillance system based on TDOA is way more accurate in providing valuable data comparing to traditional ground based ELINT/ESM systems. It provides strategic ELINT (Electronic Intelligence) information to collect and evaluate the data for national reference database.



FIRST REFERENCE TO THE MSS-5: ADS-B NET FOR DFS

ERA TEAM HAS SUCCESSFULLY INSTALLED THE FIRST ROUND OF GROUND STATIONS OF ITS MSS-5 SYSTEM AS PART OF THE PROJECT OF ADS-B COVERAGE OF THE GERMAN AIRSPACE. DEUTSCHE FLUGSICHERUNG GMBH (DFS – GERMAN ANSP), PUT ITS TRUST IN ERA THANKS TO A RECORD OF SEVERAL PREVIOUS DELIVERIES OF SURFACE SURVEILLANCE SYSTEMS FOR 10 GERMAN AIRPORTS.

ERA delivers the network of 16 ADS-B ground stations (GS) of the MSS-5 system, which will be able to monitor almost the entire airspace of the Federal Republic of Germany and thus increase the safety of the congested air traffic routes there.

ERA already installed eight GS in South Germany (from the French border in the east to the Upper Palatine Forest) approved



by FAT testing and one stand-alone ADS-B station, placed in the DFS control centre in Langen, which underwent the SAT procedure. Testing proved the compliance of the ERA ADS-B station with the ED-129B standard. The rest of the stations are expected to be SAT tested in Q1/2024 and the installation of seven more stations, located in the east part of Germany (from Leipzig up north to Rügen island), will follow in Q2/2024.

“The fact that the installation of our ADS-B ground stations by ERA went so smoothly is the result of the excellent cooperation between our project teams. We are very satisfied with ERA’s work. The initial tests show that the MSS-5 operates with outstanding performance. DFS is proud to have ERA at its side,” stated Maximilian Menk, DFS.

ERA company has already been respected in Germany as a supplier of multilateration solutions. There are several ERA MLAT surface systems functioning at airports in Germany: in Munich, Frankfurt, Hamburg, Leipzig, Dusseldorf, Stuttgart, Cologne, Braunschweig, Berlin and Langen.

ERA SHOWED ITS PASSIVE SURVEILLANCE SYSTEMS WITHIN THE NATO DAYS AIR SHOW AT OSTRAVA AIRPORT

ON THE 3RD WEEKEND OF SEPTEMBER, ERA COMPANY PRESENTED ITS PASSIVE SURVEILLANCE AND RECONNAISSANCE SYSTEMS VERA-NG AND PLESS AT THE LARGEST SECURITY SHOW IN EUROPE, THE NATO DAYS & CZECH AIR FORCE DAYS, HELD AT THE LEOŠ JANÁČEK INTERNATIONAL AIRPORT IN OSTRAVA, CZECH REPUBLIC.

ERA participated in one ground-box along with its parent company OMNIPOL and other subsidiaries (MESIT, Aircraft Industries) and the partner companies Aero Vodochody, Rhode & Schwarz and Vrgineers.

ERA demonstrated the abilities of the passive surveillance systems operated by ERA professionals, who were tracking targets and providing their positional data. The results of the surveillance were displayed on screens at the ERA outdoor chalet and commented on by Electronic Warfare experts.

The VIP guests included the Prime Minister Petr Fiala, the Minister of Defence Jana Černočová and the Chief of the General Staff of the Czech Armed Forces, Major General Karel Řehka.

The aim of the event was to consequently present the wide spectrum of resources and capabilities of the Czech Republic and its allies in the field of security provision to the public. Participants from 20 partner countries exhibited their up-to-date technologies to 185 thousand visitors over two days.

The programme consisted of the presentation of heavy military

hardware, police and rescue equipment, dynamic displays of Special Forces’ training, flying displays and presentations of the armaments, equipment, and gear of the individual units. NATO Days is the only event which presents the means of defence and security used by soldiers, fire fighters, policemen, customs officers, prison service, municipal police, and others in one location.



ERA HAS INTRODUCED A NEW SOLUTION FOR THE SAFETY OF AIR TRAFFIC CONTROL PROCEDURES

ERA HAS COMPLETED THE DEVELOPMENT OF A NEW SOFTWARE SOLUTION THAT SERVES TO STRENGTHEN TRAFFIC SAFETY AT AIRPORTS AND EN-ROUTE. THE SW SOLUTION CALLED ERA USS (ERA UNIFIED SAFETY SHELTER) UNIFORMLY CONNECTS THREE ALREADY PROVEN MODULES OF THE ERIS FAMILY PRODUCT LINE FROM THE ERA PORTFOLIO AND ENRICHES THEM WITH ADDITIONAL KEY FUNCTIONS FOR OPERATIONAL SAFETY. THE ERA USS PROJECT WAS CO-FINANCED BY THE EU PROGRAMME FOR INNOVATIONS.



ERA USS brings a unique approach to ensure operational safety, combining the capabilities of the Air Traffic Control system with warning functions, continuous evaluation of sensor performance and advanced control and distribution of overview data.

In practice it combines and extends the functions of the previous systems of ERIS family: ERIS-A/ATM (for Airports and Air Traffic Management), ERIS-DART (Data Analysis and Replay Tool) and ERIS-COMMS (Data Communication Management) and provide ANSPs with a comprehensive solution.

HENSOLDT AND ERA FORGED PARTNERSHIP TO ADVANCE PASSIVE AIR SURVEILLANCE AND DEFENCE

SIGNIFICANT MILESTONE IN THE ADVANCEMENT OF AIR SURVEILLANCE! ERA AND HENSOLDT ARE HAPPY TO ANNOUNCE THEIR STRATEGIC PARTNERSHIP TO DRIVE THE ADVANCEMENT OF PASSIVE AIR SURVEILLANCE AND DEFENCE CAPABILITIES.

The main objective of this cooperation is to jointly offer an integrated infrastructure solution by combining ERA's passive ESM tracker called VERA-NG and HENSOLDT's passive coherent locator Twinvis. Through this combination, a completely passive air picture can be created.

While the VERA-NG is designed to detect active



emissions from targets of interest at long range, targets do not have to emit signals for the passive radar Twinvis at a shorter range.

Twinvis is a passive radar, that cannot be located due to the absence of any transmitted energy and it does not need any emissions from targets to locate them.

LIFE OF ERA COMMUNITY IN PHOTOS



ERA welcomed the delegation of Bosnia and Herzegovina Air Navigation Services Agency to its premises in Pardubice. The BHANSA representatives were keen to know, how ERA ATC systems could perform at the airports in their homeland: Mostar and Sarajevo.



ERA introduced its defence solutions VERA-NG and PLESS to Middle East partners within the World Defence Show in Riyadh, KSA.



ERA helps to develop standards for Counter UAS systems. The EUROCAE WG-115 „CUAS“ held its 21st meeting at EUROCONTROL HQ in Brussels.



Irish Security and Defence Forum in Dublin. ERA representative participated in the event, which was supposed to further strengthen cooperation between Ireland and the Czech Republic in the field of defence and security.



ERA and R-SYS took part in a conference on visionary technologies DRONTEX 2023. It covered topics such as the challenges of UAV operations and ATM and U-space safe integration.

ERA joined the recent ICAO meeting of Surveillance Panel in Montreal, Canada. ERA expert was invited as an adviser among the world-wide group of ATM specialists to discuss 1030/1090 MHz frequency topics. He presented ERA solution how to keep the spectrum occupancy on minimal levels.



ERA SHARED ITS KNOWLEDGE OF PSS WITH THE DUBAI AIRSHOW'S PARTICIPANTS

THIS YEAR OF DUBAI AIRSHOW FEATURED HUNDREDS OF THE INNOVATIVE MILITARY AND CIVIL PRODUCTS AND AVIATION TECHNOLOGIES AND OFFERED A LOAD OF FLYING DISPLAYS TO VISITORS. ERA TEAM PRESENTED THE PASSIVE SURVEILLANCE SOLUTIONS (PSS) FOR MODERN DEFENCE CONCEPT AND CIVIL AIR TRAFFIC MANAGEMENT TO ITS WELL-ESTABLISHED PARTNERS IN THE REGION.



Dubai World Central airport was packed with onlookers enjoying the breath-taking programme for five days. In the meantime, Czech stand becomes one beehive of excited visitors

interested in aviation and related technologies presented by ERA and other remarkable Czech producers. ERA participated in the event along with other companies of OMNIPOL Group: MESIT, Aircraft Industries and Aero Vodochody as part of the official pavilion of the Czech Republic.

Dubai Airshow is a biennial exhibition and trade fair held in Dubai, United Arab Emirates, in cooperation with Dubai Civil Aviation Authority, Dubai Airports, Dubai World Central and the UAE Armed Forces. This year offered 1400 exhibitors from 95 countries, 180 commercial, private and military aircraft on display, 20 country pavilions and 390 military and civil delegations. The flying displays demonstrate the technical capabilities of exhibiting companies such as Airbus or Boeing along with aerobatic displays by international teams.

MSPO KIELCE: ERA AT THE LARGEST MILITARY FAIR IN NEIGHBOURING POLAND

ERA exhibited at MSPO, 31st International Defence Industry Exhibition, in Kielce, Poland. ERA team was presenting its defence solutions for passive surveillance of airborne, naval and ground-based targets, focusing on the ERA unique surveillance and reconnaissance systems VERA-NG and PLESS. ERA shares stand with GISS, its Polish partner for civil ATM projects.

MSPO has had a long tradition, but its significance strengthens rapidly within last years along with growing number of participants. MSPO involves not only a comprehensive presentation of military equipment, but also business meetings and contracts made between defence manufacturers from different continents.

Except air defence equipment the participating companies are showcasing communications technology plus radio and optoelectronic equipment, an essential armament for naval units.



EDEX - SUCCESS AS HIGH AS THE GREAT PYRAMID OF GIZA



Egypt Defence Expo was the last important fair trade on ERA's list of exhibitions in 2023. ERA shared the stand with partners from MESIT company and other "big names" in the Czech defence and security industry. The ERA team introduced its passive surveillance systems VERA-NG and PLESS for Air Defence and Electronic Warfare to dozens of visitors including official national delegations, especially from African and Middle East countries.

The third edition of EDEX took place at Egypt International Exhibition Centre in Cairo on 4 - 7 December 2023. This tri-service exhibition and show provided an opportunity for the participants to witness the latest technology, equipment and defence systems across the land, sea and air domains.

ERA HAS OBTAINED AN AWARD FOR ITS CONTRIBUTION TO ELECTRONIC WARFARE

ERA representatives participated in the celebration of the 10th anniversary of founding of the 53rd Reconnaissance and Electronic Warfare Regiment of the Czech Armed Forces. The event was held on September 13, 2023, at the National World War II Memorial near the city of Opava, where this military unit is located. Within the ceremony, the company has received a commemorative medal for its long-term contribution to the development of electronic warfare systems and technologies for the surveillance and reconnaissance.

"We are proud to be part of it. Not just "the birthday" of our trusted partner today, but even more part of the Czech defence and security industry contributing to our safe future in the field of passive surveillance systems for electronic warfare operation and air defence," stated Jakub Thomas, ERA Commercial Director.



ERA SYSTEMS FOR THE AVIATION SECTOR PRESENT AT THE PARIS AIR SHOW

Paris Air Show was held at the Paris Le Bourget airport exhibition area for seven days. PAS is considered one of the most significant air shows in the world. However, it is not only a show for aviation fans, but also a week of innovation and trade.

ERA and the companies of OMNIPOL group (including Aero Vodochody and Aircraft Industries demonstrating their new aircrafts L-39 NG and L 410 NG) presented their product portfolio at the Czech stand, where business negotiations and many official visits of foreign politicians and army representatives took place every day.

ERA representatives had the opportunity to meet the commander of the Air Force of Czech Armed Forces, Maj. Gen. Petr Čepelka, and Minister of Trade and Industry of the Czech Republic Jozef Síkela, who visited the exhibition stand to support Czech aviation companies, participating in PAS in record number this year.

Other VIP guests there were the Czech ambassador to France Michal Fleischman, MoD official Radka Konderlova and the president of the Association of the Aviation and Space Industry Josef Kašpar.

ERA AS THE PROUD HOST OF THE EUROCAE WG-41 MEETING

EUROCAE Working Group 41 met in ERA HQ in Pardubice, Czech Republic, on 14 – 16 November 2023. The team of experts has continued its work preparing the new standard for A-SMGCS solutions within EUROCAE standardization processes.

While holding the workshop in ERA, experts from ANSPs, various global institutions and industrial bodies of several European countries (Eurocontrol, EASA, DFS to name a few) built upon the progress achieved during the last WG-41 meeting in Frankfurt in September.

The WG-41 members have incorporated the previous results – obtained while considering the range of system interfaces, use cases, associated data exchange requirements, etc. – into the new Interoperability standard for A SMGCS (Advanced Surface Movement Guidance and Control System) and started 'polishing' the draft of the document for open consultation. The public release of the document describing the new standard for A SMGCS should follow in the near future.

ERA has been an active member of EUROCAE working groups for years, and its specialists regularly contribute as co-authors to

creating standards for ATM. ERA expertise is welcomed thanks to its pioneering role in creating the multilateration technology; MLAT sensors are currently an integral part of any modern A SMGCS system ensuring airport safety worldwide.

The next meeting of WG-41 will be organized in Paris in April. EUROCAE is the European leader in the development of worldwide recognised industry standards for aviation by coordinating European and global standardization.



ERA IN NEWS



ERA announced that its team had successfully installed the first round of ground stations of its MSS-5 system as part of the comprehensive project of ADS-B coverage of the German airspace. The customer, Deutsche Flugsicherung GmbH (DFS – German ANSP), put its trust in ERA once more thanks to a record of several previous deliveries of surface surveillance systems for 10 German airports.

ABOUT ERA:

ERA (a member of OMNIPOL group) is a leading company in multilateration, multistatic surveillance, and reconnaissance technology. Unrivalled experience in passive surveillance sensor development provides ERA with unique know-how to deliver comprehensive solutions for global markets. We develop, manufacture and implement mission-critical systems for military and civil purposes.

ERA made air traffic control history when deploying the first multilateration system and introducing gate-to-gate surveillance. ERA has brought to the world a novel passive medium range surveillance sensor category called Passive ESM Tracker (PET) for defence and electronic warfare purposes - which is today in its 5th generation known as VERA-NG - tailored for air, maritime and land target surveillance and reconnaissance. The company heritage and global experience in passive ESM/ELINT helped ERA introduce

another category of the Over the Horizon Direction Finding (OTH DF) long-range sensor, in its 2nd generation known as PLESS.

The above-mentioned sensors make possible a broad ecosystem consisting of sensor performance prediction and evaluation tools and data mining tools together with a full virtual EW scene simulator to help military intelligence.

Over the last 3 decades, ERA has reached a number of more than 160 installations, deployed in over 67 countries on 5 continents with 24/7 operations fulfilling demanding customer requirements. More important, however, than the given number of references is the experience we have achieved and lessons learnt during implementation of our solutions. We intend to continue introducing new technologies to adapt to tomorrow's challenges.