

The Future of the Aerospace
Industry is being Created by **KAI**



**CREATE HISTORY
IN AEROSPACE**

KAI KOREA AEROSPACE
INDUSTRIES, LTD.

Core Capabilities



LAH in Engine Ground-run Test

Through decades of experience and expertise in aerospace development, production, and integrated logistics support capabilities, KAI is able to offer various types of products & services exceeding customers' expectation activities throughout the life cycle.

Core Competency and Capability of Aircraft System Integration



Development Capabilities



Production Capabilities



Integrated Logistics Support Capabilities



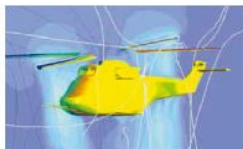
Development Capabilities

UH-1 Amphibious Assault Helicopter Simulator

KAI has World-class Development Capabilities in All Types of Aircraft, including Fixed Wing, Rotary Wing, UAV and Space Programs



T-50 Ground Test



KUH-1 Aerodynamic Interpretation



KF-X VR (Virtual Reality) Design



LCH Wiper Ground Test



NI-600VT (Vertical Take Off and Landing UAV) Ground Test



Geostationary Korea Multi-Purpose Satellite (GEO-KOMPSAT, CHEOLLUAN) Test



Production Capabilities



KAI has the Technology and Infrastructure including Composite processing, Structure Manufacturing, Final Assembly, and Painting to Produce Cutting-edge Aircraft



Laminated Production for B787 Composite Structure



Wing Assembly Automation with Robotic Drilling Systems(RDS)



B777X Wing Rib 3D Measurement



A350 Wing Rib Automated Process



T-50 Exterior Painting



KSLV-II Propellant Tank Assembly



Integrated Logistics Support



KUH-1P Police Helicopter Inspection

As an Aircraft Exporter, KAI is becoming a Total-solution Aerospace Company by Offering On-time Follow-on Support and Management Tools to Maximize the Customer's Operational Efficiency



Customer Support Center



KT-1B Indonesia Customer Support



Logistics Information System



Technical Support for the Royal Thai Air Force



Local Office Supporting T-50i Maintenance at Iswahyudi, Indonesia



Training Center Providing Education and Training to the Customer

Competence in Figures

The Capability of KAI is Proven by Objective Figures. KAI will be a Reliable Partner of Domestic and Overseas Customers Based on Our Advanced Technology and Know-how Accumulated over Decades.

Global Partners

Based on Our Unwavering Challenge Spirit, KAI will be a Global Company that Serves Customers Worldwide.

The Number of Aircraft Produced by KAI



Fixed wing



KT-1 Derivatives
T-50 Derivatives
KC-100 Derivatives
Corps-level UAV



600 + units

Rotary wing



SURION
SURION Military
· Amphibious Assault
· Medevac
SURION Parapublic
· Police
· Emergency Medical
· Forest Service
· Coast Guard
LAH/LCH



200 + units

Upgrade & Modification



FLIR (Thermal Imaging Camera)
Lynx (Maritime Operation Helicopter)
P-3CK (Maritime Patrol Aircraft)
C-130H (Transport Aircraft)
E-737 (Airborne Early Warning & Control Aircraft)
F-16D (Jet Fighter)



90 + units



KAI VISION

‘Total Solution Provider in Aerospace’



MAJOR PROGRAMS

+

Fixed Wing Programs

KT-1

T-50

KC-100

KF-X

+

Rotary Wing Programs

KUH-1 SURION Military

KUH-1 SURION Parapublic

LAH

LCH

+

Aerostructure (Commercial & Military)

+

Upgrade & Modification

+

MRO

+

Training System

+

UAV

+

Space Programs





KT-1B Indonesia



KT-1T Turkey



KT-1P Peru



KA-1S Senegal

KT-1

Basic Trainer

Basic Trainer with Excellent Spin Recovery Ability and Fuel Efficiency

The KT-1 export is launched by Indonesia and is expanding to Turkey, Peru, and Senegal. KT-1 is complimented by customers of allied country with its excellent performance, reliability, and operational efficiency.

KT-1 Basic Trainer

- Dimensions : 10.6m x 10.3m x 4.2m
- Power Plant : 950 ehp
- Max. Speed : 350 kt
- 2 passengers

- ① KT-1 : Basic Trainer for Air Force pilot training
- ② KA-1 : Armed Airborne Controller, guides Close Air Support (CAS) Aircraft





T-50 Advanced Jet Trainer

- Dimensions : 9.5m x 13.1m x 4.8m
- Power Plant : 17,700 lbs
- Max. Speed : M 1.5
- 2 passengers

1



T-50i Indonesia



T-50IQ Iraq



FA-50PH the Philippines



T-50TH Thailand

- 1 **T-50** : Advanced Jet Trainer for air combat training
- 2 **TA-50** : Lead-In Fighter Trainer (LIFT) Aircraft for radar tactical and combat mission training
- 3 **FA-50** : Light Combat Aircraft (LCA) with tactical data link, precision guided munitions, self-protection and night mission capabilities
- 4 **T-50B** : Acrobatic Demonstrator for ROKAF's acrobatics team, the Black Eagles

T-50

Advanced Jet Trainer

The Best Candidate for Next Generation Fighter Training

T-50 is a supersonic trainer for air combat training. With maneuver and flight speed similar to real-combat fighter jets, the T-50 is a trainer that is best-suited to the characteristics of next-generation fighter control. T-50 was introduced in the export market since 2011 to Indonesia, Iraq and the Philippines, Thailand, and KAI is expanding the market by optimizing advance training and light attack capabilities.



2



3



4



KC-100

4-seat General Aviation Aircraft

- ① KC-100 : 4-seat General Aviation Aircraft (NARAON) acquired international certification
- ② KT-100 : Primary Trainer in the flight introductory training course for ROKAF Academy cadets

The First Internationally Certified General Aviation Aircraft, Utilized for Various Purposes

4-seat general aviation aircraft KC-100 (NARAON) meets the international certification requirements of the US Federal Aviation Administration (FAA) and the Korean Ministry of Land, Infrastructure and Transport. Equipped with complex new material and high-tech electronic integrated equipment, the KC-100 can be used for various business purposes such as air transportation, and leisure sports, as well as forest fire and coastal surveillance, patrol, education, and training. The KC-100 is now being modified for flight introductory training course for the ROKAF.

KC-100 NARAON

- Dimensions : 11.3m x 8.0m x 2.7m
- Power Plant : 315 shp
- Max. Speed : 210 kt
- 4 passengers





KF-X

Korean Fighter eXperimental Program



KF-X

- Dimensions : 11.2m x 16.9m x 4.7m
- Power Plant 20,000 lbs class
- 1 passenger

Next Generation Korean Fighter Development for Future Battlefield

The KF-X (Korean Fighter eXperimental) program is full scale fighter development program for suitable performance at the future battlefields. The development period is 10 years and 6 months, and it also working on an international joint development with Indonesia.

- ❶ KF-X C109 : KF-X equipped with AESA(Active Electronically Scanned Array) radar as well as Air-to-Air and Air-to-Ground weapons
- ❷ KF-X C109 with confirmed configuration
- ❸ IF-X(Indonesia Fighter eXperimental), international joint development with Indonesia

KUH-1

SURION Military Helicopter

KUH-1 Utility Helicopter SURION

- Dimensions : 3.0m × 19.0m × 5.0m
- Power Plant : 1,855 shp × 2
- Max. Speed : 145 kt
- 18 passengers

- 1 KUH-1 : Utility Helicopter SURION in field exercise
- 2 MUH-1 (Marine Utility Helicopter) : Amphibious Assault Helicopter landing at a deck of a ship
- 3 KUH-1M (Medical) : Medevac Helicopter(MEDION) for emergency patient transportation
- 4 Medevac Helicopter (MEDION) in medical evacuation training



Equipped with State-of-the-art Equipment, SURION Carries out the Mission with Various Terrains, Day and Night, and any Adverse Weather Conditions

SURION has excellent performance and hovering ability that is comparable with the world's best helicopter. In addition, on the basis of state-of-the-art equipment including AFCS(Automatic Flight Control System), Navigation System and 3D Map, the SURION has the capability to consistently perform a mission under a diversity of conditions such as various terrains (mountain/urban areas), day/night and adverse weather. SURION is currently operated as ROK Army Utility Helicopter and expanding its mission into Amphibious Assault Helicopter for Marine Corps or Medevac Helicopter.



KUH-1

SURION Parapublic Helicopter

KUH-1P Police Helicopter CHAMSURI

- Dimensions : 3.0m × 19.0m × 5.0m
- Power Plant : 1,855 shp × 2
- Max. Speed : 145 kt
- 16 passengers



- ❶ **KUH-1P (Police)** : Police Helicopter (CHAMSURI) in counter terrorism training
- ❷ **KUH-1EM (Emergency Medical)** : Fire-fighting Helicopter with various missions of search and rescue (SAR), emergency patient transportation, fire-fighting
- ❸ **KUH-1FS (Forest Service)** : Forestry Helicopter for prevention of forest fire, evacuation, search and rescue (SAR) and transportation of emergency patients
- ❹ **KUH-1CG (Coast Guard)** : Coast Guard Helicopter for marine surveillance and search & rescue



SURION Derivatives Expanding Domestic and International Civil and Parapublic Helicopter Market

KAI has been expanding its inroads into the public market, which used to heavily rely on the import, by developing the derived SURION's platform based on its excellent performance. The CHAMSURI, a Police Helicopter is undergoing its multi-missions such as integrated defense, counter-terrorism, search and rescue (SAR), surveillance and traffic management. In addition, Fire-fighting Helicopter of Jeju Fire Service Headquarters and Forestry Service Helicopter of Korea Forest Service are carrying out their duties for the safety of the people through various missions like search and rescue, patient transportation and fire-fighting.

LAH

Light Armed Helicopter

LAH

- Dimensions : 3.9m x 14.3m x 4.3m
- Power Plant : 1,032 shp x 2
- 2 passengers



- 1 Rollout ceremony celebrating the 1st LAH prototype (Dec 2018)
- 2 LAH in engine ground-run test



Contribute the Enhancement of Armed Forces with Continuous Technology Development and thorough Verification

The LAH(Light Armed Helicopter) program is to develop advanced armed Helicopter suitable for modern. Concurrent development of the LAH and the LCH(Light Civil Helicopter) program provides optimized development cost and stable follow-on supports. LAH was launched in 2015, equipped with modern avionics, weapons, fire-control systems and the first prototype was rollout in Dec 2018.

LCH

Light Civil Helicopter

LCH

- Dimensions : 3.5m x 14.3m x 4.4m
- Power Plant : 943 shp x 2
- 15 passengers



① ② LCH : Successful first flight of the LCH (July 2018)

KAI Aims to Expand the Civil and Parapublic Market with a Lightweight Platform after Successful Introduction of SURION, Medium/Heavy Helicopter

The LCH(Light Civil Helicopter) program is to develop civil Helicopter with a gross weight of 10,000 pounds in conjunction with the LAH(Light Armed Helicopter) program for efficient development and operation. Launched in 2015, LCH successfully carries out the First flight in July 2018. The LCH is an efficient and versatile rotary-wing aircraft providing a wide range of missions including police, fire-fighting, VIP, passenger transportation and EMS (Emergency Medical Service).

Aerostructure Commercial

**Based on the Commercial Aerostructure Technology and Know-how,
KAI will Lay the Foundation for the Development of Commercial Aircraft**

KAI is participating in the international co-development project of the Airbus A350XWB as a Tier 1 partner and has been acknowledged in the world by our technological capabilities. We are also participating in Boeing's next generation commercial aircraft projects such as B787 and B777X, as well as Embraer and Bombardier, Bell Helicopter, IAI structure programs. KAI will lay the foundation for the development of commercial aircraft based on the aircraft aerostructure technology and know-how.



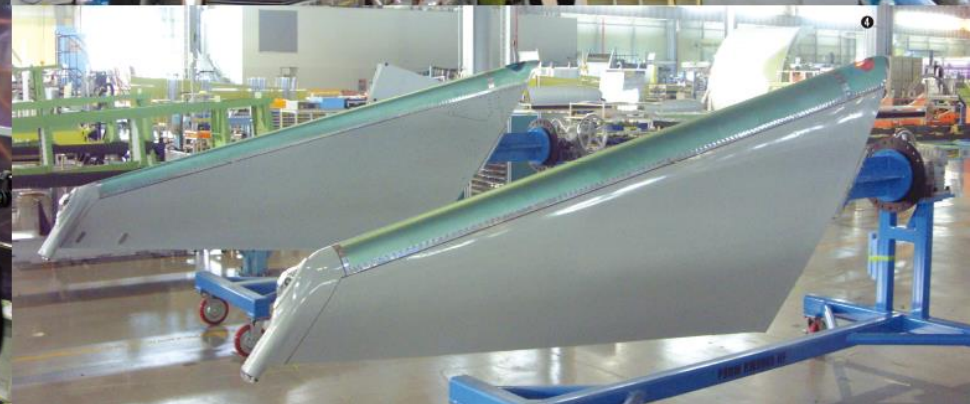
Aerostructure Military

We Maintain Customer's Confidence with World-class Quality Control

Recognized for our world-class production technology and quality, KAI is producing and delivering the Main Fuselages for Boeing's AH-64 Apache attack Helicopter and Forward Fuselages/Main Wings of F-15 Jet Fighter. Also, we manufacture the Outer Wing of the A-10 and the Racked Wing Tip/Emppennage of the P-8. We will continue to strengthen our business capabilities by participating in the design and production of various military aircraft structures based on our experience and expertise.



- ① AH-64 : Production of Apache large Attack Helicopter Main Fuselage
- ② A-10 : Production of Attack Aircraft Outer Wing Panel
- ③ F-15 : Production of Multi-purpose Fighter Main Wing and Forward Fuselage
- ④ P-8 : Production of Maritime Patrol Aircraft Racked Wing Tip and Empennage
- ⑤ F-16 : Production of Forward/ Center/ Backward Fuselages
- ⑥ KC-390 : Production of Military Transport Aircraft Wing Upper/Lower Stringer
- ⑦ C-130J : Production of Transport Aircraft Nacelle



Upgrade & Modification

Realizing the Dream of Flying Longer and Further

Upgrade and Modification programs have the goal of upgrading and improving aircraft currently in operation to better suit their new missions and purposes. KAI has purchased the pre-owned P-3s from the US Navy and implemented lifecycle expansion and equipment modernization program to reform it into the P-3CK, a modernized Maritime Patrol Aircraft, for the ROK Navy. Based on the B737 commercial aircraft, we modified the E-737 Airborne Early Warning & Control Aircraft equipped with radar and advanced avionics equipment and delivered it to the ROKAF. Currently, KAI is carrying out the performance improvement program for the C-130H Transport Aircraft of the ROKAF. In the future, the Company will expand Upgrade & Modification Program to incorporate various domestic and international aircraft.



- ① C-130H : Improved performance of Transport Aircraft operated by ROKAF
- ② P-3CK : Improved performance of US Navy aging aircraft with the ROK Navy latest Maritime Patrol Aircraft through extension of fuselage life and modernization of mission equipment
- ③ LYNX : Installation of FLIR thermal imaging cameras to improve nighttime operational capability of ROK Navy Maritime Operation Helicopter
- ④ HH-47 : Installation of FLIR thermal imaging cameras to improve nighttime operational capability of ROKAF Search and Rescue Helicopter
- ⑤ UH-60 : Installation of FLIR thermal imaging cameras to improve nighttime operational capability of ROK Army / Air Force / Navy Utility Helicopter
- ⑥ E-737 : Renewed / improved aerial surveillance capability by B737 commercial aircraft to ROKAF Airborne Early Warning & Control Aircraft
- ⑦ F-16D : Improved performance for longer life of ROKAF Jet Fighter



Maintenance, Repair & Overhaul

Taking Responsibility for Safety Based on the Experience of Military MRO

As a final aircraft system integrator, KAI carries out Maintenance, Repair and Overhaul (MRO) programs for aircraft development, production test evaluation and life management. KAI has participated in the US Navy's H-53 Heavy Transport Helicopter maintenance program and currently maintains the US Air Force's F-16 Jet Fighter and ROK Navy's P-3CK Maritime Patrol Aircraft. In particular, KAI has established the KAEMS(Korea Aviation Engineering & Maintenance Service) as the first aviation MRO specialized company, and has been supporting the stable operation of domestic and foreign airlines by expanding maintenance services to large commercial aircraft.



- ❶ P-3CK : Inspection and repair of Maritime Patrol Aircraft operated by ROK Navy
- ❷ H-53 : Inspection and repair of Heavy Transport Helicopter operated by US Navy
- ❸ T-50 Derivatives : T-50, T-50B, TA-50 and FA-50 follow-on logistics support
- ❹ KT-1 Derivatives : KT-1 and KA-1 follow-on logistics support
- ❺ RQ-101 : Corps-level UAV follow-on logistics support
- ❻ KAEMS : Launched MRO specialized company (July 2018)

Training System

Providing Systematic Training to Maximize the Training Efficiency

KAI is developing a training system to provide systematic training and education throughout the life cycle in addition to aircraft development and integrated logistics support. The training system developed by KAI has been evaluated as an optimized training solution due to its high level of effectiveness, such as shortening the training period of pilots and mechanics, and reducing training costs. KAI will build a comprehensive training center to provide systematic and efficient training services to the customers who operate aircraft supplied by KAI. It will also take the lead in the establishment of a Live-Virtual-Constructive model, which is coming into the spotlight nowadays, for sustainable future growth.



- ❶ MUH-1 (Amphibious Assault Helicopter) Simulator
- ❷ KT-1 (Basic Trainer) Simulator
- ❸ T-50 (Advanced Jet Trainer) Simulator
- ❹ FA-50 (Light Combat Aircraft) Simulator
- ❺ KUH-1 (Utility Helicopter) Simulator
- ❻ P-3 (Maritime Patrol Aircraft) Simulator
- ❼ KF-16 (Jet Fighter) Simulator



UAV

Unmanned Aerial Vehicle

Continuous R&D in Preparation for the Future UAV era

KAI participated in the development and production of the RQ-101 (SONGGOLMAE) Corps-level Unmanned Aerial Vehicle(UAV), which is being deployed in the ROK Army. KAI is currently participating in the development of the Next Generation Corps-level UAV. KAI is preparing for the future UAV era by securing diverse UAV technologies such as Unmanned Combat Aerial Vehicle (UCAV) and Vertical Take Off and Landing (VTOL) UAV through continuous inner advance research.



- ① UAV- II : Next Generation Corps-level UAV
- ② ③ RQ-101 : Corps-level UAV SONGGOLMAE
- ④ UCAV : Unmanned Combat Aerial Vehicle developed through advance research
- ⑤ NI-600VT : VTOL(Vertical Take Off and Landing) UAV under advance research



Space Programs

Leading the Civil Space Industry from Satellites to Launch Vehicle

KAI has been actively participating in the entire fields of satellite development programs and accumulating technical know-how through experiences from KOMPSAT-1 (Korea Multi-Purpose Satellites, ARIRANG) to KOMPSAT-7, CAS-500 (Compact Advanced Satellite) and GEO-KOMPSAT (Geostationary Korea Multi-Purpose Satellite, CHEOLLIAN) series. In addition, KAI is expanding its boundaries of space programs by engaging in various practical satellites and surveillance satellites such as CAS-500 and National Defense Satellite development program. In the space launch vehicle sector, KAI is participating in the system integration of KSLV-II (Korea Space Launch Vehicle-II) program and the first stage development of propellant tanks. KAI is taking a step forward into a specialized space company that will lead the industry from satellites to space launch vehicle production and space launching services.



- ❶ KSLV-II : Assembly of Korea Space Launch Vehicle-II (NURIHO)
- ❷ Diversified Space Programs of KAI
- ❸ Geostationary-KOMPSAT(Korea Multi-Purpose SATellite)
- ❹ Groundbreaking ceremony for KAI Space Center site (Mar 2019)
- ❺ Bird's eye view of KAI Space Center





The Future of the Aerospace
Industry is being Created by KAI



South Korea business sites

Headquarters	78 Gongdan 1-ro, Sanam-myeon, Sacheon, Gyeongsangnam-do
Seoul Office	6~8th Floor, Samsung Jael Building, Tehaeran-ro, Gangnam-gu, Seoul
Daejeon Research Center	9th Floor, Annville Plaza, 7 Banseok-ro, Yuseong-gu, Daejeon
Sancheong Plant	2436, Chinhwangyeong-ro, Geumseo-myeon, Sancheong-gun, Gyeongsangnam-do
Jongpo Plant	194 Jongposandan-ro, Yonghyeon-myeon, Sacheon-si, Gyeongsangnam-do



Overseas business sites

Indonesia Office	SKADRON 15 PANGKALAN TNI AU ISWAHJUDI, MAOSPATI MAGETAN JAWA TIMUR, INDONESIA 63302
Turkey Office	FETHIYE MAH. HAVACLIK BUL. NO: 17 06980 KAZAN-ANKARA



Subsidiaries

Korea Aerospace PW, Inc	USA TX, Fort Worth
KAI EC	463 Cheongpa-ro, Jung-gu, Seoul
TAAS	723 Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do
KAEMS	64, Hanggong-ro, Sacheon-eup, Gyeongsangnam-do