

**COMPLETE PORTFOLIO FOR  
DEFENSE & SECURITY**



 **EMBRAER**



**COMPLETE  
PORTFOLIO**

*FOR DEFENSE & SECURITY*

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# EMBRAER DEFENSE & SECURITY

## WORLDWIDE PRESENCE



1,400+

AIRCRAFT  
DELIVERED

100+

RADARS IN  
SERVICE

60+

GOVERNMENTS AND  
ARMED FORCES

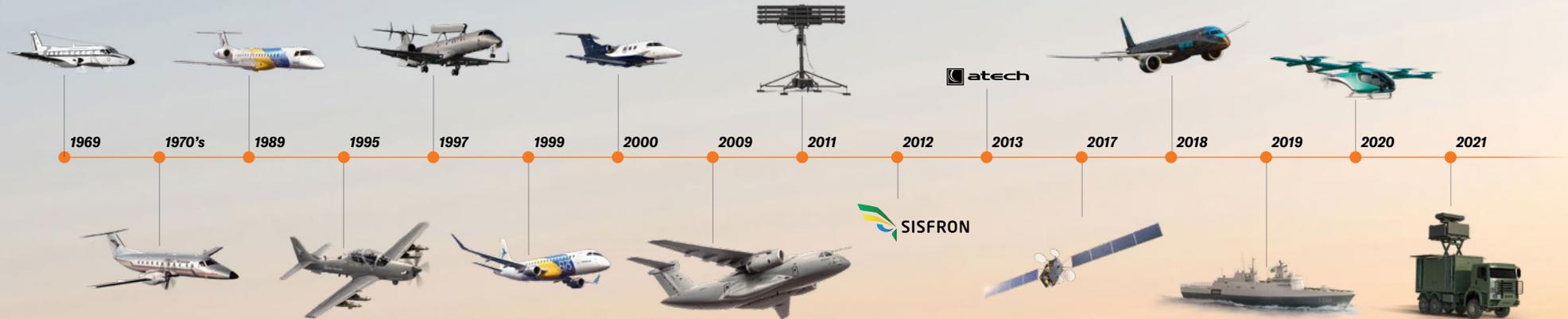
- 16 OFFICES
- 24 WAREHOUSES
- 9 OWNED SERVICE CENTERS
- 71 AUTHORIZED SERVICE CENTERS
- 110+ FIELD SUPPORT REPRESENTATIVES
- 75+ FLIGHT SIMULATORS



# EMBRAER WAS BORN DEFENSE

EMBRAER WAS BORN DEFENSE as a successful strategic plan by the Brazilian Government. The company has more than 55 years old and is recognized globally for the quality of its products and services.

Privatized in 1994 and listed on the New York Stock Exchange, Embraer is a global leader in solutions for Defense and Space, offering an integrated portfolio from aircraft to complex systems of border control.



[CLICK HERE TO LEARN MORE ABOUT OUR SERVICES AND PRODUCTS](#)

# HIGHLIGHTS



**THE LARGEST BRAZILIAN EXPORTER OF HIGH VALUE-ADDED PRODUCTS**

Embraer's contribution to Brazilian exports in the last ten years was over USD

**40 BILLION.**

## OUR PEOPLE

Embraer employs over

**23,500+**

people, of which more than 19 thousand are in Brazil. Over 2,300 employees work in joint ventures and subsidiaries.

World-class Engineering professionals

**3,700+**

Over 1,400 have master's degrees, PhDs or post-graduate qualifications.

**800+**

Patents registered in 7 different countries.

### PEE - Engineering Specialization Program

Professional master's degree in Aeronautical Engineering, given in loco at Embraer's facilities and in partnership with ITA, Technological Institute of Aeronautics.



# HIGHLIGHTS

## RESEARCH AND DEVELOPMENT

More than USD

**414 MILLION**

invested in R&D and CAPEX in 2023 (7,8% of revenue).

Over

**5,500**

people are dedicated to research and development.

## CORE CAPABILITIES TECHNOLOGICAL DOMAIN

- World class engineering
- Key domain technologies
- Project management
- Customer support
- Lean development
- Process & efficiency management
- Custom made solutions
- Product life cycle management
- Complex systems integration

# BUSINESS UNITS



DEFENSE &  
SECURITY



COMMERCIAL  
AVIATION



EXECUTIVE  
AVIATION



EVE AIR  
MOBILITY



SERVICES  
& SUPPORT

EMBRAER DEFENSE &  
SECURITY SUBSIDIARY  
COMPANIES



Atech develops systems for civil and military air traffic control and management, Defense & Security, simulators, logistics and asset management, among others.

LEARN MORE: [ATECH.COM.BR](https://atech.com.br)



Visiona integrates space systems and develops satellites, remote sensing products and services, satellite telecommunications and SAR aerial surveys in the X and P Bands.

LEARN MORE: [VISIONAESPAICAL.COM](https://visionaespaical.com)

# ***CAPABILITIES IN THE FIVE DOMAINS***



***AIR***

***LAND***

***SEA***

***SPACE***

***CYBER***



# A I R



Embraer is one of the largest aircraft manufacturers in the world and offers a complete portfolio of Defense & Security aircraft, including the new generation military multi-mission transport aircraft, KC-390 Millennium, and the light attack aircraft A-29 Super Tucano, leader in its segment. In addition, Embraer offers surveillance aircraft, aircraft for special missions such as Medevac, training, flight inspection, authorities transport, aircraft modernization programs, air traffic management and control systems.

# KC-390 MILLENNIUM

## UNBEATABLE COMBINATION



THE NEW GENERATION MILITARY MULTI-MISSION TRANSPORT AIRCRAFT KC-390 MILLENNIUM is the answer to the 21st-century demands, with unrivaled mobility and operational flexibility in a single platform. KC-390 Millennium provides optimal fleet performance, generated by a cost-effective combination of high availability and productivity.

KC-390 Millennium also incorporates the latest communication system providing ultimate digital situation awareness and interoperability with other platforms and allies.

**RAPID RECONFIGURATION  
AND THE LATEST TECHNOLOGY**

**OPERATIONAL EFFICIENCY  
AND LOW LIFE-CYCLE COSTS**

**SPEED IN THE AIR AND  
FASTER TURNAROUNDS**

[DOWNLOAD THE KC-390 MILLENNIUM BROCHURE](#)

# KC-390 MILLENNIUM

## REFUELING POD

Quick reconfiguration to a tactical tanker aircraft, capable of air-refueling both fixed wing and helicopters with up to 400 US gal/min



## ALL WEATHER

Hot Weather, High Altitude and Cold Weather operations



## DUAL CERTIFICATION

Combining the efforts of both civil and military airworthiness authorities



## DAMAGE TOLERANT DESIGN

Modern structural design. Strong and durable airframe

## REFUELING PROBE

Allows the KC-390 to be refueled in flight

## AVIONICS

Fully interactive and CNS/ATM compliant delivers intuitive Human Machine Interfaces, enhancing productivity and safety

## SECURE COMMUNICATION

Link-16 BU3, secure radio V/UHF, tactical and real video datalink and JREAP-A and C allowing complete interoperability

## FLY-BY-WIRE

Latest generation flight control system

## EO/IR

State-of-the-art Electro-Optical Sensor

## LANDING GEAR

Designed to operate on low resistance airfields (CBR-4), brake-by-wire, wheel-by-wheel

## SEMI-PREPARED AND DAMAGED AIRFIELD OPERATION

Worst Semi-Prepared and Damaged Runway from MIL-B-8866B

## CARGO RAMP

Loading and unloading ramp equipped with the market's most advanced cargo handling and aerial delivery system

## SELF PROTECTION SUITE

A complete self-protection suite (SPS) increases survivability levels with detection and countermeasures with 360° coverage

## SATCOM GS AND GWS

Latest generation of secure satellite communication



# KC-390 MILLENNIUM

## THE MOST COMPREHENSIVE FLEXIBILITY

KC-390 is capable of transporting a maximum of 50,706 lb (23,000 kg) of distributed loads and a maximum concentrated load of 57,320 lb (26,000 kg).

## ONE AIRCRAFT, MANY CAPABILITIES



## MISSION MODULES

- AERIAL ASSAULT
- AERIAL RESUPPLY
- SPECIAL OPERATIONS
- MEDICAL EVACUATION
- AERIAL FIREFIGHTING
- SEARCH AND RESCUE
- HUMANITARIAN AID
- AIR-TO-AIR REFUELING

# KC-390 MILLENNIUM

THE MOST COMPREHENSIVE FLEXIBILITY

## PARATROOPERS

Capacity for 64 fully equipped paratroopers or 80 troops

## SEMI-PREPARED RUNWAYS

Worst Semi-Prepared and Damaged Runway from MIL-B-8866B

## LIGHT AND HEAVY VEHICLES

Capacity for 3 to 4 light vehicles or 1 to 2 heavy vehicles

# KC-390 MILLENNIUM

THE MOST COMPREHENSIVE FLEXIBILITY

## PALLETS

Capacity for 7x 463L pallets or 24x CDS 48" x 48" packages

## HELICOPTERS

Capacity for one Black Hawk or similar size helicopter

## MEDEVAC STRETCHERS

Capacity for 74 litters with 8 attendants or 50 litters and 36 pax

# A-29 SUPER TUCANO

## IF IT'S PROVEN WHERE IT MATTERS...

Meet the aircraft that has just achieved 600,000 flight hours globally, the A-29 Super Tucano. It offers three different solutions on a single platform – light attack, armed reconnaissance, and tactical training – and the flexibility to change between them to meet your operational needs. It all adds up to real cost-effective versatility.

## ...IT'S THE A-29 SUPER TUCANO.

**RAPID RECONFIGURATION  
AND THE LATEST TECHNOLOGY**

**OPERATIONAL EFFICIENCY  
AND LOW LIFE-CYCLE COSTS**

**SPEED IN THE AIR AND  
FASTER TURNAROUNDS**

[DOWNLOAD THE A-29 SUPER TUCANO BROCHURE](#)



# A-29 SUPER TUCANO

## COMBAT PROVEN

Liable and precise with dozens of thousands of combat hours

## LOW OPERATIONAL FOOTPRINT

Low visual, audible, thermal signatures and low logistics footprint

## EXTREMELY RUGGED PLATFORM

Designed to operate from forward air bases

## OPERATIONAL AFFORDABLE

The most cost-effective of the category

## 5 PYLONS

Capable of receiving extra fuel tanks, weaponry and different types of pods

## CERTIFIED

by the USAF Military Airworthiness Authority

## ALWAYS READY

High Level of availability and constantly updated

## HIGHLY MANEUVERABLE AND CONTROLABLE

Excellent tactical flying qualities

## ARMORED

for protecting the cockpit and engine

## ACCURATE TARGETING SYSTEM

with optimal target-weapon matching

## SELF PROTECTION SYSTEM

CHAFF & FLARE, MAWS, RWR, and Self-Sealing enhance the survivability when facing threats

## BUILT-IN MACHINE GUN

Over 1000 round/min



# A-29 SUPER TUCANO

THREE-IN-ONE AIRCRAFT



**LIGHT ATTACK  
AIRCRAFT**



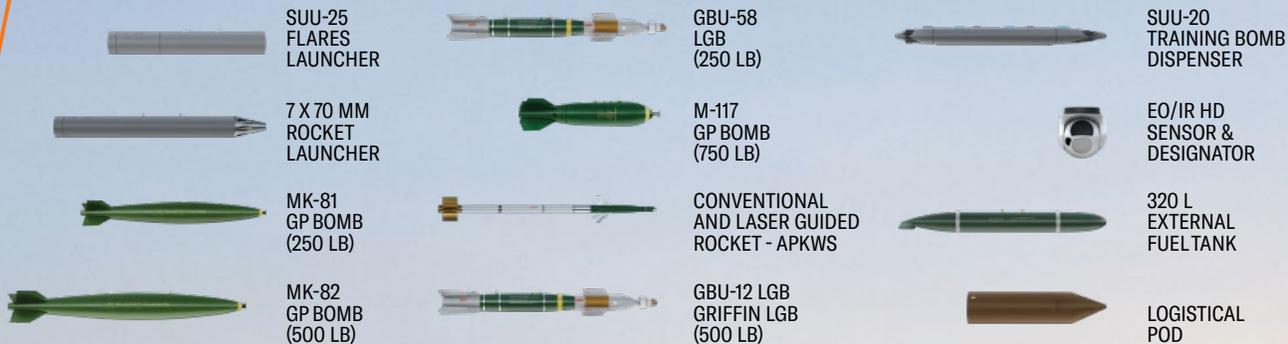
**ARMED RECONNAISSANCE  
AIRCRAFT**



**TACTICAL TRAINER  
AIRCRAFT**

# A-29 SUPER TUCANO

## EXTERNAL STORES



## CHARACTERISTICS



## MODERN COCKPIT OUTSTANDING MISSION SITUATIONAL AWARENESS

The A-29 Super Tucano's cockpit design reduces the pilot's workload and provides maximum situational awareness. Excellent accessibility, ergonomics, and an advanced human machine interface that allows the crew to focus on mission outcomes.



# SPECIAL MISSIONS



In addition to Defense & Security products and services, Embraer also produces commercial and executive aircraft and offers customized solutions that use these aircraft platforms and meet military needs such as transport of authorities, flight inspection, pilot training and medical evacuation. All the comprehensive portfolio of aircraft produced by Embraer is available for use in special missions, with tailor-made solutions developed for each client's needs.

# SPECIAL MISSIONS



## SPECIAL TRANSPORTATION

Combining technology, reliability and safety with a decade-long tradition of providing aircraft for the transport of authorities and large delegations, Embraer offers the ideal solution for any mission – from short-range flights to long trips with large commissions.



**E-JETS / E-JETS E2**  
60 to 146-seat



**PRAETOR FAMILY**  
up to 12 passengers



**PHENOM FAMILY**  
up to 11 occupants



## MEDEVAC MEDICAL EVACUATION

### PHENOM 300MED: AN UNRIVALED MEDEVAC SOLUTION

The Phenom 300MED – based on the best-selling light jet for thirteen years in a row – is the finest, most comprehensive Medevac solution available today. Created in partnership with Umlaut and Aerolite, the Phenom 300MED features best-in-class cabin altitude, the fastest speed and longest range in its category, high mission flexibility, plus low operating cost and the best residual value in its class.



# SPECIAL MISSIONS



## MEPT

### MULTI-ENGINE PILOT TRAINING

The Phenom 100 MEPT is a capable platform to support all multi-engine pilot training tasks with the following enhanced capabilities:

- Single-pilot workload philosophy
- Low operating costs
- Designed for high utilization and availability
- Observer seat
- Military communication
- Quick access recorder to retrieve flight data



## FIS

### FLIGHT INSPECTIONS SYSTEMS

State-of-the-art platform able to perform flight inspection tasks in the following modes:

- Site Evaluation
- Surveillance
- Test inspection
- Periodic inspection
- Commissioning inspection

It offers fly-by-wire and the most advanced flight control system, which increases mission efficiency and reduces pilots' workload.



# AIRCRAFT MODERNIZATION

Embraer Defense & Security performs aircraft modernization to exchange existing systems and avionics for updated versions, whether for aircraft of its manufacture or other brands, extending their useful life and adapting them to the contemporary requirements of the missions they must perform and new regulations.



## **E-99M**

Airborne Early Warning and Control aircraft (AEW&C) manufactured by Embraer have been updated after two decades of operation and more than 30,000 flight hours.



## **A-1M**

A fighter manufactured by the AMX International Consortium, of which Embraer was a part, it incorporated new technologies such as the HUD, HOTAS, MFD and RWR, in addition to new navigation systems, weapons, oxygen generation and electronic countermeasures.

# AIRCRAFT MODERNIZATION



## A-4

The A-4 Skyhawk aircraft of the Brazilian Navy, produced by McDonnell Douglas, was manufactured in 1977 and received new cockpits and a comprehensive process of systems modernization.



## F-5M

Produced by Northrop, the F5 aircraft have been in operation by the Brazilian Air Force since 1975. It received new weapons and equipment for BVR combat (Beyond Visual Range), as well as new software and other engineering improvements, bringing a vast transfer of technology in military software development with a high level of complexity.

# AIR TRAFFIC MANAGEMENT AND CONTROL



## MAKRON

Makron is comprised of modularized and customizable systems that allow the ANSPs to control and optimize flights from takeoff to landing, gate-to-gate, offering maximum safety, reliability and efficiency in the use of resources.

- Compliance with international standards and with ICAO regulations
- Flight Plan Management
- Training & Simulation
- Information Processing and Exchange
- Meteorological Information Repository
- Air Traffic Control

# AIR TRAFFIC MANAGEMENT



## BRAZIL

22 MILLION KM<sup>2</sup>

OF AIRSPACE SERVED BY DECEA IN BRAZIL USING ATECH SYSTEMS

1.6 MILLION

ANNUAL AIR MOVEMENTS

5 ACC CENTERS

(AREA CONTROL CENTER)

25 APP CENTERS

(APPROACH CONTROL) AND A FLOW MANAGEMENT CENTER (ATFM), IN ADDITION TO OTHER SUPPORT SYSTEMS (AMHS, OPMET, ETC)



## INDIA

CENTRAL FLOW MANAGEMENT CENTER (SKYFLOW)



## VENEZUELA

ENROUTE AND APPROACH CENTER (SAGITARIO)



## PARAGUAY

ENROUTE AND APPROACH CENTER (SAGITARIO)



ATC BRAZIL SIMULATION CENTER



ATFM BRAZIL CENTER



ATC BRAZIL CENTER



ATFM CENTER INDIA

# LAND

Embraer's Radar and Land Systems solutions guarantee the protection of critical assets, creating layers of surveillance from the surface to medium heights and from very short to medium range, including air traffic management. In addition, Embraer develops Command and Control Centers and integrates all the systems it creates, both with each other and with legacy actuators, with total flexibility for the customer to personalize the solutions according to their specific needs, in a modular and scalable way.



# RADAR & LAND SYSTEMS

## PROTECTING NATIONAL ASSETS AND SOVEREIGNTY

### TECHNOLOGICAL INTEGRATION AND AUTONOMY.

COMPREHENSIVE, LOW-RISK, AND SCALABLE RADARS & LAND SYSTEMS SOLUTIONS for territorial monitoring and protection, including Border Surveillance, Air Defense and ATC. Embraer offers proven, precise, reliable, and cost-effective solutions.

From portable radars to mobile shelters for diverse applications, such as ISR, communications and command & control, as well as COMINT sensors, C2 and C4I software, Embraer develops fully integrated and customizable solutions to meet each customer's specific needs, giving them complete autonomy and operational flexibility.

[DOWNLOAD THE RADARS & LAND SYSTEMS BROCHURE](#)



# RADAR & LAND SYSTEMS

## ISR-M RADAR AND LONG RANGE EOIR INTEGRATED

Intelligence,  
Surveillance and  
Reconnaissance

## COAAE LOW ALTITUDE AIR DEFENSE

- Anti-Aircraft Artillery Operation Center
- VSHORAD Application
- MANPADS easy integration

## ACCESS NODE TACTICAL COMMUNICATION VEHICLE

- Multiple communication technologies integrated on a single network
- High throughput
- Support to Soldiers, Vehicles and Fixed Stations

## M60 LOW ALTITUDE AIR DEFENSE

- 3D Radar
- Range 60 km (32NM)
- Integrated IFF

## M200 VIGILANTE MEDIUM RANGE AIR DEFENSE SURVEILLANCE AND EARLY WARNING

- 3D Radar
- Active Electronically Scan
- Range 200 km (108NM)
- Integrated IFF

## COMINT ESM STATION

- Radio Comm. Direction finding & Monitoring
- HF, VHF and UHF
- 20 MHZ (HF) and 80 MHZ (V/UHF)
- Modular wideband digital receiver
- AOA technology

## M200 MULTI-MISSION & COUNTER-BATTERY MID RANGE AIR DEFENSE

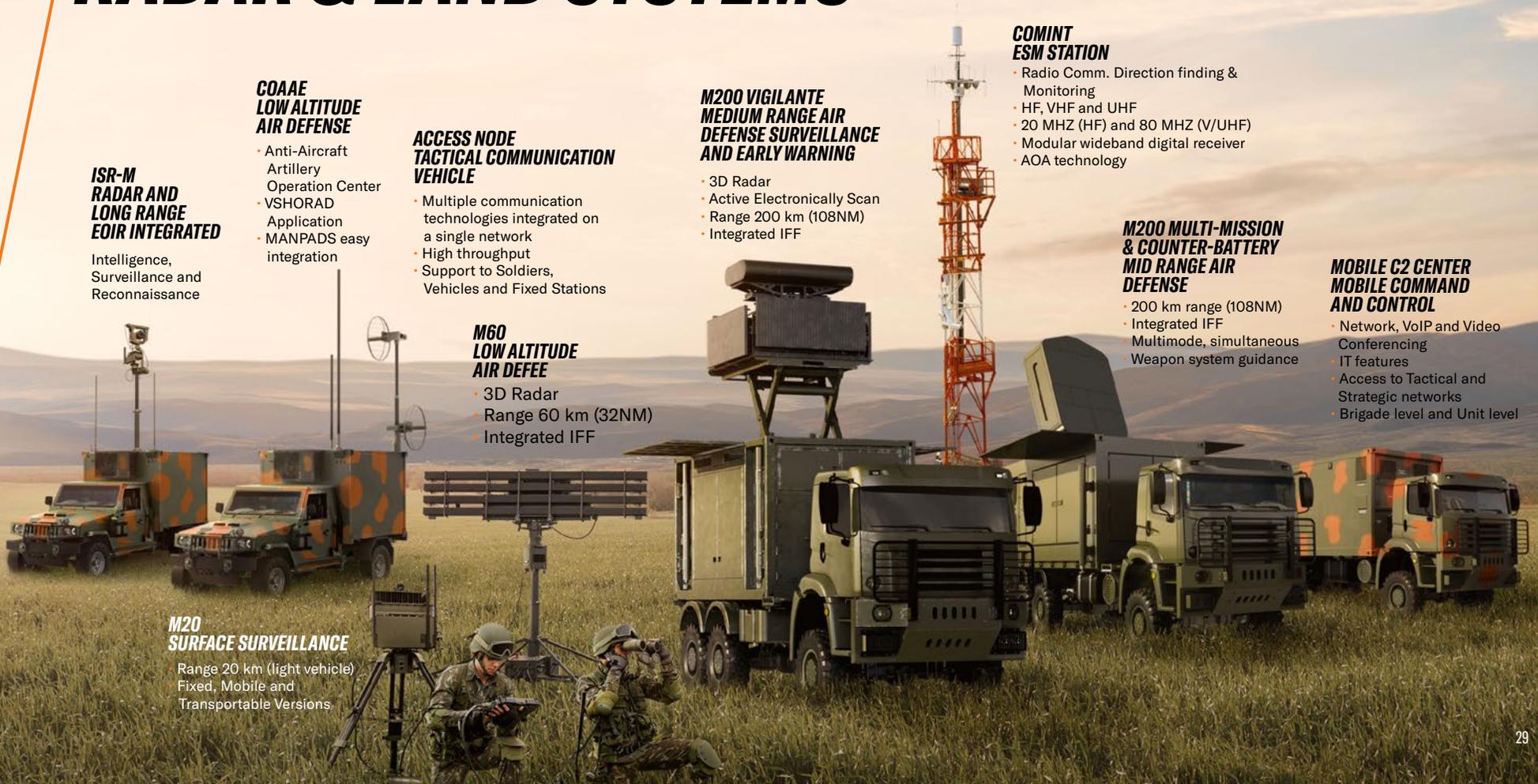
- 200 km range (108NM)
- Integrated IFF
- Multimode, simultaneous
- Weapon system guidance

## MOBILE C2 CENTER MOBILE COMMAND AND CONTROL

- Network, VoIP and Video Conferencing
- IT features
- Access to Tactical and Strategic networks
- Brigade level and Unit level

## M20 SURFACE SURVEILLANCE

- Range 20 km (light vehicle)
- Fixed, Mobile and Transportable Versions



# BORDER SURVEILLANCE SYSTEMS

## SUCCESS EXPERIENCE

SISFRON is one of the largest military programs in the world and aims to protect Brazil's borders – an extent of 16,886 kilometers (10,492 miles) between the country and ten neighbors. It was born with the purpose of strengthening the presence of the State on the terrestrial border strip, which encompasses ten states and 27% of the nation's territory. An important mission with which Embraer was entrusted by the Brazilian Army, becoming responsible for SISFRON's deployment and integration. This challenging program showcases Embraer's strength and capacity to act in the protection and defense of an entire country.



**6,500+**

REQUIREMENTS CONTRACTED,  
INTEGRATION AND SAFETY



# SEA



Embraer develops a complete product suite specialized for embedded solutions, enabling different tactical missions at sea through full integration of vessel systems and sensors, providing broad situational awareness of the tactical scenario and efficient decision-making. Our solutions allow the Armed Forces to evolve their physical and logical infrastructure, adding new elements such as radars, cameras and legacy systems. They also enable the efficient and timely process of a large volume of data with the highest level of cybersecurity. Atech, a subsidiary of Embraer, is responsible for developing the sea systems offered by the company.

# ARKHE INTEGRATED SYSTEMS



## **ARKHE INTELLIGENCE SYSTEMS**

### ***INTELLIGENCE EMPOWERING***

Arkhe Intelligence solutions were developed to address one of the significant challenges in current Armed Forces operations: the efficient and timely processing of large volumes of data. Arkhe Intelligence solutions make ingestion, processing, analysis and presentation of data, transforming information into knowledge.

## **ARKHE COMMAND & CONTROL**

### ***INTEGRATED PLANNING, SURVEILLANCE AND ACTION WITHIN THE CHAIN OF COMMAND***

In order to enhance the user's decision-making capability, Arkhe Command & Control offers a range of solutions for planning, surveillance and monitoring the execution of a diverse set of missions. Acting in an integrated way, these solutions bring different sources of information to be used to compose situational awareness. With a flexible and scalable structure, it allows customers to evolve their physical and logical infrastructure, adding to the system new elements such as radars, cameras and legacy systems.

## **ARKHE MISSION & COMBAT**

### ***TOTAL CONTROL OF AIR AND SEA TACTICAL MISSIONS***

Arkhe Mission & Combat is the product suite specialized for embedded solutions, effectively enabling different tactical missions in the air and at sea through complete integration with aircraft and vessel systems and sensors. The solutions provide a set of functionalities that allow the operator to conduct missions considering all its states: Planning, Execution and Debriefing. The integration of systems and sensors provides ample situational awareness of the tactical scenario, enabling effective and efficient decision-making.

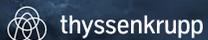
# ÁGUAS AZUIS

## NAVAL TECHNOLOGY



Embraer and its subsidiary Atech are partners of the Águas Azuis, responsible for building the most modern and innovative naval project ever carried out in Latin America, the Tamandaré Class Frigates. The four vessels have the latest technology available in global shipbuilding to help the Brazilian Navy guarantee the national territory's sovereignty and protect the country's natural wealth.

### TECHNOLOGY & DEVELOPMENT



Navigation tests of the Frigate Tamandaré - F200, in Itajaí (Santa Catarina - Brazil).



# ÁGUAS AZUIS

## NAVAL TECHNOLOGY

**TAMANDARÉ F200**  
FRIGATE



**Start**  
September 2022

**Launch**  
August 2024

**JERÔNIMO DE ALBUQUERQUE**  
F201 FRIGATE



**Start**  
September 2023

**Launch**  
August 2025

**CUNHA MOREIRA F202**  
FRIGATE



**Start**  
September 2024

**Launch**  
August 2026

**MARIZ E BARROS F203**  
FRIGATE



**Start**  
March 2026

**Launch**  
November 2027



107.2m length



15.95m  
maximum beam

4m  
draft



3.500 tons of  
displacement

# SPACE



Embraer integrates space systems and develops satellites, remote sensing products and services, satellite telecommunications and SAR aerial surveys in the X and P Bands. The company operates in this segment through its subsidiary company Visiona Space Technology.

# INTEGRATED SPACE SYSTEMS



## VCUB

VCUB1 is the first Earth Observation and Data Collection satellite fully designed in Brazil and demonstrates Visona's ability to create high-performance space systems.

VCUB1 has a scalable architecture that makes it capable of carrying out missions from 3U to 27U+, and its dual payload capability will be able to collect images and communication data simultaneously.



## SGDC

The Geostationary Defense and Strategic Communications Satellite (SGDC, Satélite Geoestacionário de Defesa e Comunicações Estratégicas) is a program by the Brazilian Federal Government with the goal of promoting internet service coverage across 100% of Brazilian territory as part of the National Broadband Plan, providing digital inclusion to all Brazilians long with secure, sovereign means for the Brazilian government to maintain its strategic communications.

## AIRBORNE REMOTE SENSING

The interferometric synthetic aperture radar in the X and P Bands guarantees the delivery of geographic information of high added value and high cost-benefit for different applications.



# INTEGRATED SPACE SYSTEMS



## ORBITAL REMOTE SENSING

Working as a space system integrator, we are the official distributor of some of the world's key satellite operators, with access to a virtual constellation of Earth observation sensors and digital elevation models with different precision levels, as well as the best application technologies. Comprised of 22 optic sensors and 7 radar sensors, the constellation can offer integrated remote sensor products with high revisiting and image generation rates. These sensors with complementary characteristics represent the global state-of-the-art, capable of achieving 30-cm resolutions and making up Brazil's most comprehensive collection of high-resolution images.



## WEBVIS PLATFORM

The WebVis Platform provides users with access to on-demand remote sensor images, including the most recent satellite images with the highest spatial resolutions in the world. By subscribing to this service, users will have access to images collected by a variety of sensors with different resolutions and from different providers. Users may also choose between streaming and downloading images according to their needs.

# CYBER



Embraer operates in cybersecurity through its subsidiary Atech, a leading company in Latin America with decades of experience. Atech has high capabilities in systems' life cycles, applying leading-edge knowledge in developing solutions of different sizes and segments, helping companies to promote the transformation of their businesses worldwide.

# CYBER

## ADVANCED CYBER SERVICES

HIGH TECHNOLOGY INVESTIGATION, CYBER INTELLIGENCE MONITORING AND DEFENSE

## INFRASTRUCTURE AND APPLICATIONS MONITORING & PROTECTION

PERIMETER / NETWORK / DEVICE / DATA / APPLICATION PROTECTION, RESILIENCE, SPECIALIZED SERVICES AND TRAINING



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