

ANSART

Product line 2026



PRODUCTS

Air Traffic Management

ADS-B Systems

Deployable ADS-B

Airport Surface Awareness

Tower & Radar ATCO Simulator

Voice & Datalink ATIS/VOLMET

Recording & Playback

ATC Personnel Management

Software Development



Air Traffic Management

Air Traffic Management Suite

ANSART's Air Traffic Management Suite is a fully scalable and modular platform designed for building any operational configuration, including GND, TWR, APP, ACC and A-SMGCS environments.



Ideal Customer Profile:

an Air Navigation Service Provider, regional or medium-sized airport, civil or military airfield or air base seeking a cost-effective, high-performance Air Traffic Management (ATM) solution that can be rapidly deployed and seamlessly integrated into existing infrastructure.

Air Traffic Management

Major Components:



Surveillance Data Processing (SDP)

- Real-time data fusion from multiple surveillance sources
 - Redundant architecture that is easy to maintain
 - ASTERIX CAT 034/048/062/021, etc.
- Serverless or server architecture

Controller Working Positions (CWP)

- Ergonomic consoles with flexible screen layout options
- Configurable HMI for TWR/APP/ACC roles



Control and Monitoring System (CMS)

- Centralized configuration, diagnostics, and monitoring
- Visual alerts for system faults and data loss
- Supports SNMP and email notifications for event alerts
- Integrates with third-party systems via APIs

Integrated Safety Nets

- STCA, MSAW, APW, APM, EMG code alerting
- ASMGC-S Safety Nets (RMCA, CMAC, CATC)
- ICAO and EUROCONT-ROL compliant



Flight Data Processing (FDP)

- ICAO DOC 4444 compliant (FPL lifecycle)
- Supports ADEXP & OLDI (CPL, EST, ACT, ABI, etc.)

Electronic Flight Strips (EFS)

- Customizable bays with drag-and-drop/touch interactions
 - Day/night mode & flexible color schemes
- Fully integrated with CWP in real time

ADS-B Systems

ADS-B Systems

We Deliver Solutions

Our in-house-developed ADS-B components enable us to design and deliver customized solutions of any type, profile, or capacity.

Components

- *ADS-B Ground Station*
- *Receive Subsystem*
- *Processor Subsystem with Data Fusion*
- *Control and Monitoring Subsystem*
- *Traffic Situation Display*
- *Recording Subsystem*
- *Performance Assessment Tool*
- *Coverage Simulation Tool*



Solutions

- *ADS-B Ground Station*
- *ADS-B Based Surveillance System*
- *Fully ED-129B Compliant ADS-B Ground System*
- *Airport Traffic Monitoring System*
- *Airspace Monitoring for Military or Border Surveillance*
- *ADS-B Data Aggregator and Forwarding Node*

ADS-B Systems

ANSART ADS-B Ground Station is the foundation for creating and deploying customized ADS-B surveillance solutions.

TECHNICAL SPECIFICATIONS	
Parameter	Value
Power supply: power over Ethernet	Up to 13W, 37-57V
Receive frequency, MHz	1090 ± 1
Successful message reception (SMR) probability for a signal level of -88 dBm at the antenna input, min	90%
Successful message reception (SMR) probability for a signal level of -91 dBm at the antenna input, min	15%
Signal dynamic range at the antenna input with a 99% successful message reception probability, min	-85 dBm to 0 dBm
Compliance	EUROCAE: ED-129A, ED-129B
Downlink format	DF 17, DF 18
Output format	Asterix Cat. 21, 23, 25, 250
Operating conditions:	
Ambient air temperature	-40°C to +60°C
Air humidity	Up to 95% non-condensing at +25°C



Deployable ADS-B

Deployable ADS-B

■ *Enables rapid deployment
(in less than 5 minutes)
and detection of cooperative targets within
line of sight based on ADS-B technology*

■ ***Designed to support:***

- contingency of
ATM operations
- drone flight management
- special and humanitarian missions
- rescue missions



Airport Surface Awareness

Airport Surface Awareness

Enhances safety in the airport environment and provides ground traffic situation awareness for airport stakeholders.

- *Runway occupancy monitor*
- *Runway Monitoring and Conflict Alerting (RMCA) system based on ADS-B surveillance*
- *Alerts for Vehicle Drivers (AVDR)*
- *Situational Awareness in a non-A-SMGCS environment, in poor visibility and at night*
- *Safety management of ground operations*
- *Prevention of collisions between aircraft and between aircraft and vehicles*

Ideal Customer Profile:

Airport Operations and Safety Departments seeking to establish effective ground traffic management, enhance safety of airside operations, and support incident investigation and performance analysis, providing regional and medium-sized airports with advanced situational awareness without the complexity or cost of a full A-SMGCS.



Airport Surface Awareness

Cloud-based system to enhance safety in the airport environment and provide ground traffic situation awareness for airport stakeholders.



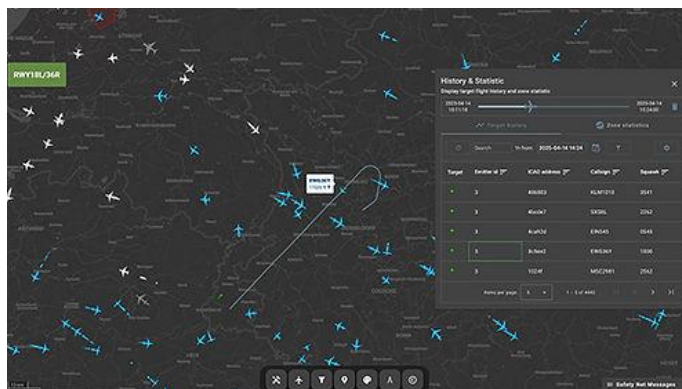
Real-Time ADS-B Surveillance



Enhanced Coordination and Communication



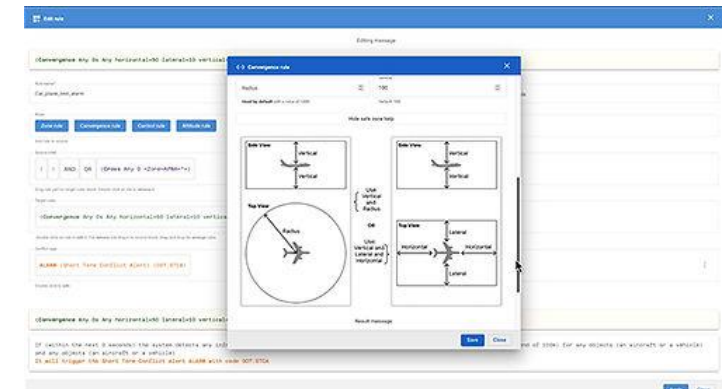
Simulation and Training



Event and Conflict Detection



Historical Data and Trend Analysis



User-Friendly Interface

Tower & Radar ATCO Simulator

Tower & Radar ATCO Simulator

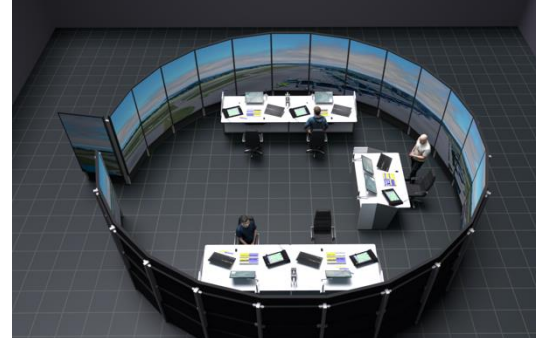
AI-driven Tower and Radar Simulator offering the ideal balance of performance, quality, and price for small- to mid-sized ATC training centres.



Multifunctional working position:
Pseudo-Pilot / Controller /
Instructor / Exercise Designer



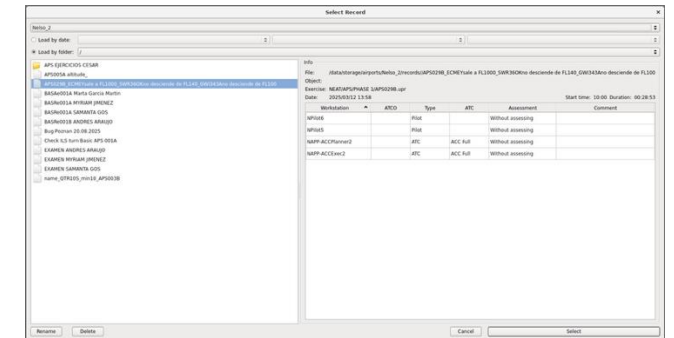
Supports both electronic and
traditional paper flight strips for
flexible training scenarios



High-fidelity 360° 3D
environment that provides a
realistic tower simulation



Integrated VCS: a realistic voice communication
environment for controllers and pseudo-pilots



Integrated recording system that enables
efficient playback of training sessions for
performance analysis and debriefing

Tower & Radar ATCO Simulator



Simulation of diverse weather conditions with realistic cloud formations and weather phenomena such as rain, snow, thunderstorms, etc.



A comprehensive AC library contains over 1,700 civil and state aircraft, including more than 1,000 realistic airline liveries and military markings



Offers a set of 17 pre-configured airport visualizations that can be tailored to specific customer needs, and the option to create new airfields



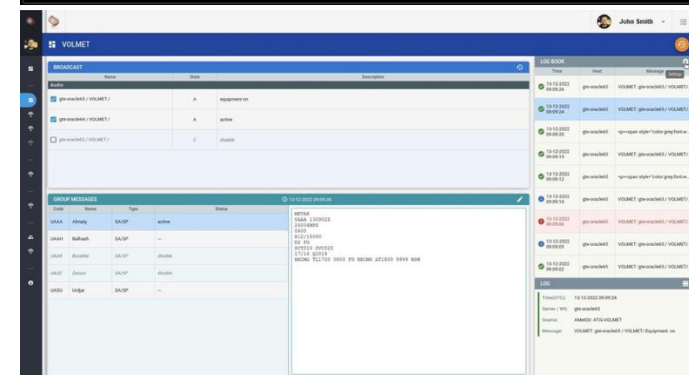
Fully supports Ground-Controlled Interception (GCI) training



ANSART Simulator is the ideal choice for ATC training centers, academies, and ANSPs seeking a cost-effective, quickly deployable simulation platform that delivers high-quality training performance without the complexity or expense.

Voice & Datalink ATIS/VOLMET

- Automated and manual generation of ATIS and VOLMET voice and datalink messages
- Voice broadcast via radio interfaces (ED-137 and E&M) and telephone lines
- Datalink transmission compliant with ED-89A for D-ATIS and D-VOLMET (ARINC 623 format)
- Automated data input: AWOS, AFTN, and AMHS, including full IWXXM format support
- Comprehensive MET data processing, including METAR, SPECI, MET REPORT, SPECIAL, SIGMET (VA/TC), TAF, SNOWTAM, and Global Reporting Format (GRF)
- Single- or multi-channel broadcasting for arrival and departure traffic, supporting one or multiple runways
- Continuous system health monitoring with proactive alerts and diagnostics
- Integrated system scheduler that enables fully automated operation cycles
- User applications available in both desktop and web-based versions



Recording & Playback

Recording & Playback System

Flexible and scalable software/hardware platform that enables the creation of customized recording systems, available as both a turnkey solution and a DIY configuration for integrators.

- Scalable from a single-unit setup to a fully redundant server architecture
- Flexible configuration for small installations or mission-critical ATC centers
- Ensures continuous recording, data protection, and high availability
- Full operational reconstruction with synchronized playback of radar, audio, video, and data streams for accurate incident analysis and investigation
- Data retention for at least 30 days in compliance with the ICAO and CAA requirements
- Data export to standard audio and video formats (WAV, AVI, etc.) for training, review, and reporting purposes

Ideal for:

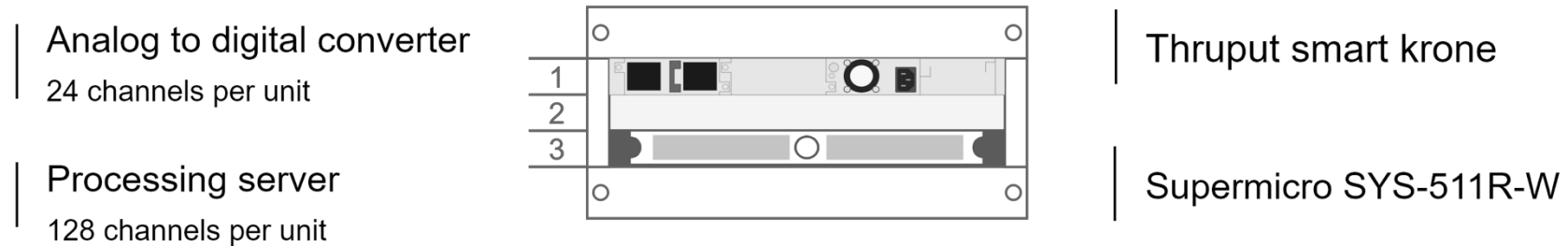
- *System Integrators & Solution Providers*
Designed for companies that aim to develop complete recording solutions based on the ANSART Recording Platform.
- *End Users*
Suitable for operational facilities that require a flexible and upgradeable recording system.

Delivers a cost-effective platform with a short deployment time, supporting future expansion to redundant or multi-channel configurations without the need for a system redesign.

Recording & Playback System

The base of the solution is a Recording Unit:

- **One 19-inch 1U computer:** the core system component for data capture and storage
- **One Smart Krone analog/digital converter** with an integrated cable patch panel
- **One 19-inch 1U 48-port network switch**



One Recording Unit supports:

- 24 analog physical channels
- 48 digital physical channels
- Up to 128 ED-137/SIP channels
- Up to 5 CCTV channels
- Up to 5 radars ASTERIX family channels

The Recording Unit captures the following ATC feeds:

- Surveillance: PSR, SSR Mode A/C/S, MLAT, ADS-B, and DF
- Voice communications: radio, telephone, and VoIP (SIP and ED-137)
- Data link messages: CPDLC, AIDC, OLDI, and coordination messages
- Flight plans (FPL) and updates (CPL, ACT, EST, ABI, etc.)
- Meteorological data
- Additional sources: CCTV video, screen captures, and ambient microphones

ATC Personnel Management

ATC Personnel Management

The purpose of the system is to enable the ATC unit's managerial staff to effectively manage ATC personnel.

The system is composed of three modules

1. Personnel Management:

- *ATCO database and extensions*
- *Event tracking and notifications*
- *Documents and reports*

2. Scheduling/Rostering:

- ATCO shift planning
- Shifts and individual roster
- Roster tracking and notifications

3. Briefing Room:

- Employee Personal Cabinet
- Group and individual briefing/training blocks
- Awareness monitoring

*ANSTAFF is a tool designed to help ATC units **simplify and digitize** their personnel management, rostering, and briefing processes. It is a perfect fit for organizations aiming to enhance operational efficiency, ensure compliance, and keep their ATCO teams informed, coordinated, and ready for duty.*

The screenshot displays the 'Personnel Management' application interface. The top navigation bar includes 'Settings', 'Filter', 'Columns', and 'Restrictions'. The main table shows a shift schedule for March 2022, with columns for dates and employees. A context menu is open over the 'ATCC A' row, showing options like 'Clean out', 'Work shifts', 'Absence', and 'Alternating shifts'. A second context menu is open over the 'March' header, showing options like 'Day', 'Long Day', 'Long Morning', 'Night', and 'Office work'. The bottom of the screen shows a summary of shifts for the month.

Software Development

Software Development

At ANSART, we bridge the gap between aviation expertise and cutting-edge software engineering.

We provide software engineering services and ready-to-integrate ATM components for faster deployment and cost-efficient upgrades.



Domain Expertise

Understanding of ICAO, EUROCONTROL, and SESAR frameworks

Advanced software development skills and knowledge of best engineering practices

Engineering Strength

Development in modern languages: C++, C#, Java, Python

Agile methodology, DevOps integration, and automated testing pipelines

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