

ALPHA ATC system is a high-technology general system that enables receipt and processing of air traffic data, flight data, weather and air navigation information, its integration and display at air traffic control workstations.

FUNCTIONALITY

- Processing of surveillance data and flight plans, multi-sensor processing, surveillance data association with FPL data, 4D trajectory development
- Display of air traffic surveillance data, flight plan data, weather information, and other data in a single user interface
- Safety Nets:
 - Separation thresholds alert (CA)
 - Short-term and medium-term conflicts alerts (STCA, MTCD)
 - Predicted and actual minimum safe altitude warning (MSAW)
 - Predicted and actual restricted areas approach alert and hazardous weather warning (APW)
 - Emergency warning (EMG)
 - Display of dynamic restricted areas
 - Display of aircraft safety areas
 - Route Accuracy Monitoring (RAM)
 - Cleared Level Adherence Monitoring (CLAM)
 - Approach Pathway Monitoring (APM)
 - RNAV support alerts
 - RVSM support alerts
 - SYSCO warning
 - Additional warnings of potential conflicts (MONA)
 - Advanced data representation for predicted medium-term conflict (CORA)
- ATC controller functions (coordination, control handover, route change, etc.)

- **Decision making support functions:**
 - Display of vertical profile for routes and maneuvering areas (VAW)
 - Course and glideslope windows
 - A set of tactical controller tools such as calculation of occupied and conflict flight levels (TCT)
- **Flight data management**

- Electronic Flight Strips (EFS)
- SYSCO procedures (AIDC, OLDI)
- Arrival/departure management (AMAN/DMAN)
- VDL support (CPDLC, ADS-C, DCL, D-TAXI)
- Ground traffic control and monitoring (A-SMGCS)
- Bypass and DARD modes

- Servers
- LAN equipment
- Automatic workstations including:
 - unified radar and non-radar control workstations
 - ground traffic display workstation (TWR WS)
 - arrival/departure management workstation (AMAN/DMAN)
 - standby surveillance data processing and display workstation (by-pass WS)
 - reference information display workstation
- Technical control and monitoring:
 - control and monitoring workstation
 - multi-sensor processing quality control workstation
 - air traffic situation surveillance workstation

ALPHA ATC system is operated in more than 130 ATC units together with other systems of airspace and air traffic management, and is used as the main subsystem for air traffic situation display and processing in ATM systems of consolidated ATM centers.

Maximum implemented configuration of the system includes more than 160 workstations.



NITA is one of the leading suppliers of air traffic management solutions in Russia. For more than 35 years, our company has been implementing advanced and innovative technologies in the field of air navigation industry.

We have several thousand projects in our portfolio, ranging in complexity from equipping small airfields to ATM solutions for consolidated ATM centers under the Federal Task Program of Unified Air Traffic Management System Modernization in Russia. The hardware and software systems produced by NITA are operated in more than 380 aviation companies in Russia and other countries; 60% of airspace of the Russian Federation is controlled by the systems manufactured by NITA.

The equipment design complies with the requirements of the ATM regulatory documents of the Russian Federation, and with ICAO and Eurocontrol standards and recommendations, and conforms to the highest level of ATM system automation.



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