

Telephonics' AeroTrac<sup>®</sup> NextGen incorporates a reliable and redundant architecture, providing fail-safe backup modes for high system availability and uninterrupted service. All applications operate under Commercial-off-the-Shelf multitasking operating systems using an enhanced Human Machine Interface (HMI) with graphical displays that incorporate Eurocontrol recommendations.



For over 40 years, Telephonics Corporation has been providing the expertise and advanced systems required for safe, efficient Communication, Navigation, Surveillance (CNS) and Air Traffic Management (ATM). From the planning stages to turnkey installation, Telephonics can assist in providing technical support and system solutions to ensure smooth, secure, and effectual air traffic flow at airports and control centers around the world.

### What it Offers

AeroTrac NextGen utilizes a modular design that can be expanded and modified to fulfill new CNS/ATM requirements that emerge as part of the worldwide transformation of air traffic. The system is fully scalable in capacity and control sectors and may be applied to a wide range of applications including:

- Enroute Control
- Approach/Tower Control
- Area Control Centers

Telephonics incorporates field proven functions into AeroTrac NextGen's Air Traffic Control (ATC) automation system, creating an innovative HMI and other supporting tools that adjust easily to customer practices



under International Civil Aviation Organization (ICAO) and Eurocontrol standards. The system follows NextGen and SESAR development and is compliant to the ICAO's Aviation System Block Upgrades approaches.

### Surveillance Data Processing System

Our Surveillance Data Processing (SDP) system includes Telephonics' advanced multi-radar tracking system. The system receives and processes data from multiple sensor components and data links including Primary Surveillance Radar, Secondary Surveillance Radar, Automatic Dependant Surveillance-Broadcast/Contract (ADS-B/C) target reports, Mode S, weather radar, and Wide Area Multilateration (WAM/MLAT). The field-proven SDP can simultaneously process data from multiple sensor systems within large airspaces, optimize radar accuracies, and provide seamless radar tracking, which results in a customized integrated air surveillance picture.

Telephonics' SDP is designed for low maintenance, providing automated sensor registration adjustments, and is scalable to handle the largest sensor and target capacities. The system provides automatic correlation between flight data, sensor data, radar data, and seamless integration of ADS-B/WAM to provide a smooth transition between radar and non-radar coverage areas.

### Flight Data Processing System

The AeroTrac NextGen Flight Data Processing (FDP) system is based on modern, open architecture with client/server design to provide accurate and timely flight data to controllers. With the help of real-time database management technology, the AeroTrac NextGen FDP provides on-line and flexible adaptation data cutover, fast system startup, and prompt flight data recovery.

The AeroTrac NextGen FDP accepts various inputs to generate and maintain an accurate 4D Trajectory Model for enhanced Conflict Prediction, Conflict Probes, and flow management. With built-in search engines, the FDP can readily retrieve and output flight information for analysis, statistics, and/or billing purposes.



## AeroTrac NextGen Features

- Advanced HMI provides the most accurate situational awareness picture available to controllers
- Integrated tower electronic flight strips that reduce operator workload and aircraft taxi time resulting in lower carbon emissions
- Integrated simulator with pseudo pilot and voice recognition capabilities for efficient and effective controller training
- Built-in features that allow for quick system configuration, airspace sectorization, and setup time
- Interoperability for silent coordination among tower, approach, and Air Control Centers with different ATC suppliers
- Seamless integration of collaborative decision making, arrival management, and departure management functions
- Integrated data link server to provide advanced Controller-Pilot Data Link Communications/Departure Clearance communications
- Integrated data and voice recording systems

## Supporting Systems

In addition to the basic subsystems, AeroTrac NextGen provides advanced support tools including the Control Monitoring System, Data Recording Facility, Data Management System, Simulator, and Factory Service Facility to achieve a total ATM solution for customers around the world.

Telephonics' engineering processes are fully compliant with ISO and CMMI standards. We provide long-term and comprehensive after sales support including software, hardware, safety management, and mid-life obsolete equipment handling for the entire product life cycle to reduce risk and cost.

