

ATRICS TowerPad

Operational performance through automation

Since 2008, TowerPad has been in active and mature service at several major airports using artificial intelligence to provide advanced human-centred automation services for air traffic controllers. The system has been proven to reduce costs for airlines, airports and ANSPs. It also improves safety, and reduces taxi times, and consequently the environmental impact of airport traffic. TowerPad integrates all tower applications into one screen, showing controllers everything they need to see, when they need to see it, and automating low-value manual tasks. The classic working position mix of mismatched proprietary HMIs in the control tower belongs to the past. Controllers benefit from TowerPad's intuitive touchscreen approach, known from modern mobile devices.

Key features

Surveillance service

Combined air and ground situational display with advanced post-tracking mechanisms

Airport safety support service

Detection of traffic conflicts, alerting and warning function for deviations or unintended patterns

Routing service

Automatic individual taxi route proposal for all aircraft and vehicles, consideration of routing preferences and physical constraints

Guidance service

Automatic switching of centre-line lights and unambiguous indication of assigned taxi route to pilots; automatic transition sequences and indication of clearance limits

Electronic clearance input

Input of clearances directly to aircraft concerned, usable with and without EFS; ATCO workload reduction – focus on traffic control planning, automation of manual tasks



TowerPad at a glance

- Designed for controller comfort and efficiency
- Compliant with the full range of functions recommended by relevant ICAO and Eurocontrol publications
- Integration of all formerly separate ATC systems
- Adaptable automation levels
- In operational service since 2008
- Key enabler for "Follow-the-Greens"
- Integrates with Frequentis digital tower solutions
- Award-winning technology



Benefits

Safety

Elimination of more than 75% of all causes of runway incursions (disorientation, incorrect phraseology, misleading information signs). The full airport safety net improves air traffic controller's situational awareness and reduces workload.

Efficiency and sustainability

The reduction of taxi times maintains the timely flow of traffic, significant reductions in fuel burn and toxic emissions.

Capacity and resilience

TowerPad doubles the movement rate in adverse conditions while reducing the longitudinal spacing required for safe separation during low visibility. This means faster recovery after LVO or other capacity reduction.

Cost-effectiveness and controller productivity

The integration of TowerPad improves situational awareness, reduces controller workload, and enables a higher movement-to-controller ratio.

Technical specifications

Redundancy	Reversion to alternative working positions; graceful failover to backup systems
Operating system	Linux
Interfaces	Ground surveillance system, airfield lighting system, electronic flight processing system, ACC system, CDM, weather observation system, video docking guidance system, instrument landing system, video surveillance system, airport operations database, SWIM, ASTERIX surveillance CAT010, 011, 020, 021, 062
Standards	ICAO Doc. 9830 and EUROCAE ED 87-D, Eurocontrol A-SMGCS service specification, ICAO air navigation plan, European ATM masterplan, ICAO 9870 manual on the prevention of runway incursions, ED-109 AL4