Product brief: smartTOOLS
Integrated information and control

Automation helps reduce costs, increase efficiency, safety and play a key role for the main users in the ATM industry. The Frequentis integrated information and control system provides a complete portfolio of applications related to weather information, as well as tower and runway control. As the next generation of an ATM-grade IT solution it supports air traffic controllers around the world. smartTOOLS can be tailored to any environment from regional to high capacity towers. Key clients in more than 36 countries all over the world have already chosen smartTOOLS.

Key features

Integrated support information display

Meteorological data, navigational AIDs system status & control, airfield lighting and message handling are visualised on a single working position to increase controller awareness.

High performance (D-) ATIS/VOLMET

Single runway and multi runway handling for complex solutions including multiple channels for arrival and departure. Fully data-link enabled (D-ATIS, D-VOLMET).

Runway management

Control and monitoring of airfield/runway lights, runway direction and status control. Presentation of runway related MET data and NAV systems.

Tower cabin control

Integration of cabin control functions such as lights, shades, access control including CCTV and other 3rd party applications.

Fully flexible HMI

- Role-based access rights
- Highlighting of essential information
- Quick and intuitive data input
- Human factors (HF) and user experience (UX) tested

smartTOOLS at a glance

- Designed by controllers for controllers
- Proven in use in >400 controller working positions worldwide (civil and military operations)
- Multi-level redundancy
- Scalable from regional to high capacity towers
- Extendable and modular solution
- Common hardware platform
- Seamless integration into Frequentis product portfolio
- User-configurable solution
- Supports iCWP concept

FREQUENTIS
FOR A SAFER WORLD
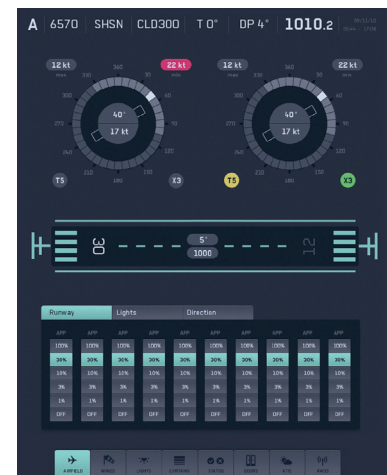
Benefits

Safety

Our development process is based on the Software Safety Standard DO-278A/ED-109A Assurance Level 4 equivalent to ED-153 SWAL-3 and assessed with the Air Navigation System Safety Assessment Methodology. With this we ensure highest safety standards.

Cost reduction

Integrated controller working positions as well as the common hardware platform lower maintenance and life-cycle costs for individual systems.

Configuration

Human-centric approach of smartTOOLS allows controllers at individual facilities to customise their HMI to their individual needs.

Redundancy

In addition to the fully redundant hardware backend, our solution also provides a dedicated broadcast interface which allows the connection of standard radios directly via IP-network according to ED-137B standards. This gateway provides a sophisticated redundancy mechanism that ensures an uninterrupted audio broadcast, even in the unlikely case that the hardware backend fails.

Integration

Open interfaces allow easy integration with airport and airline systems (A-CDM) as well as remote and multi-remote tower systems.

Facts and figures

Redundancy	Main/hot-standby architecture (server/client) in standard or virtual environment (VM cluster with distributed logic), dual network connections, redundant power supplies
Operating system	Red Hat Linux
Interfaces / Protocols	AFTN, AMHS, generic AWOS, ARINC, SITA, Modbus, SNMP, RCSU443, RS-232, NTP, PLC, SIP
Standards	ICAO Annex 3; Annex 5; Annex 10; Annex 11; Annex 15/ICAO DOC 9377; DOC 9694/WMO 306/ARINC 618; 620; 622; 623/ED-89/ED-137B for the broadcast interface/ED-109A (level 4)