



AIRFIELD LIGHTING CONTROL MANAGEMENT SYSTEM





Introducing the world's most innovative Airfield Lighting Control Management System

The Federal Aviation Administration (FAA) describes the Airfield Lighting Control Management System (ALCMS) as a system that simplifies the control and monitoring of lighted visual aids on the airfield and enhances airport safety.

It is thus critical that an ALCMS provides an easy interface to Constant Current Regulators (CCRs) in the substation, interacts freely with any system that has a PLC or Modbus interface and above all is safe, easy to use and configure. OCEM Airfield's INFINITE ALCMS does all this and much more.

**Welcome to redefining the world
of control and monitoring.**

How capable is your Airfield Lighting Control Management System?

Most airports manage their lights and assets in the same manner as they did nearly two to three decades ago. It is time to ask yourself these questions:

- ▶ How fast can your airport make adaptations to your ALCMS?
- ▶ Can you easily integrate other airport solutions to work with your ALCMS or can your ALCMS easily be integrated into other airport solutions?
- ▶ Can you change the HMI of your ALCMS to match your airports' needs? Is your system intuitive and can you integrate several different scenarios?

The Connected Airport is our vision for airports of the future. It entails delivering a true end-to-end approach by re-uniting all key airside components and delivering the highest degree of efficiency, sustainability and safety. A future proof ALCMS is the foundation to this vision. It allows for the highest degree of flexibility and safety, easy integration, extra functionalities and is fully redundant.



**Airport Systems should
adapt to your airport and not
the other way around.**

OCEM Airfield's INFINITE ALCMS is the brand new, revolutionary way of managing your airside, letting you manage and control your airfield ground lighting (AGL) in many different ways.

Based on a distributed data management model and a strong web-based architecture platform, it will help prepare your airport for the future, enabling an interconnected, intelligent, and intuitive operation and management of airfield assets, on site or remotely.

It coincides perfectly with new ways of thinking - whether virtual (like the Digital Tower) or fully integrated (part of another set of applications).

	OCEM AIRFIELD'S INFINITE ALCMS	OLDER GENERATION ALCMS*
Security	IT security with access control and OT security based on SDN	In most cases a simple user login
Change Management	Easy to self-manage and change the system configuration while system is operational	External lengthy and risky interventions that require the system to shut down
Hardware	HW & SW are fully independent and compatible. Seamless integration with different HW vendors	Bonded to the HW used and affected by even a small HW malfunction. Additional HW installation requires modification of the entire system
Graphics	Easy to adapt. Tailor made	Based on Windows - very expensive and difficult to introduce modifications
New applications	Can be added on the go without affecting the working system	Requires brand-new development - lengthy and in some cases not possible at all
Interfaces	Fully self-manageable	Need to ask vendor
Redundancy	Fully redundant, both at HW and SW level (hot and cold)	Extremely limited hardware redundancy (only cold)
Replicable	Can set up a new terminal in 5 minutes	Minimum 24 hours needed, can stretch up to several days
Required expertise	IT Engineer and self-configuring system	ALCMS Expert is required
Interfacing	No limitations	Limited to systems only interfaceable with MODBUS and Lonwork

*Systems based on a Monolithic Architecture

OCEM Airfield's INFINITE ALCMS

OCEM Airfield's INFINITE ALCMS is not only revolutionary by concept; it is not like any other ALCMS on the market, thanks to its outstanding graphical design, the highest degree of flexibility in configurations, the most complete management offer of on-field equipment for small to large airports. Designed on the Four S principle by OCEM the system is:



SMART

Enabling intelligent management of all elements on the airfield, loaded with pre-set functionalities that provide automation and collection of data from lights and other assets for preventive maintenance and much more. On top of that it allows airport staff to modify key functionalities on the go without having to spend thousands of euros in development fees or having to wait for months to get modifications done.



SIMPLER

Fully intuitive by design and with an easy to adapt HMI, it provides a smooth, hassle-free interface that makes it extremely user-friendly and intuitive so that airport staff can make better use of all functionalities it provides as well as easily add new functionalities they require.



SCALABLE

Suitable for any size of airport and any airport configuration. Easily and quickly upgradable and reconfigurable with other third-party systems, enabling different levels of integration in a plug and play approach.



(MOST) SECURE

The most secure ALCMS approach adapted to current and future cybersecurity needs. Identifying and protecting against a wide series of external risks and errors by internal users.



OCEM Airfield's INFINITE ALCMS provides new and endless future proof possibilities.



Mobile Device/
Tablet

Tower Workstations



The Internet



Possible internet
connection

Substation Workstation /
Maintenance Workstation

Smart and broker-less data management framework

Optical Fiber Ring

Substation

Substation Workstation /
Maintenance Workstation

Substation Workstation /
Maintenance Workstation

MODBUS Tcp /
Lonwork connection

APPROACH Lights

RUNWAY Lights

TAXIWAY & other Lights



CCRs



CCRs



CCRs



LERA LEFL LIFL/LIRA



LERE LEMIRL LIRC/LIRD



LIRE/LIRL/LIRZ



LETE/LETP LETG



LITE LITC



LIMS/
LIGS

Physical
Lights

KEY ADVANTAGES OF OCEM'S INFINITE ALCMS

The Four S approach provides the solid building blocks of a next-gen solution that translate to some key advantages for airports:

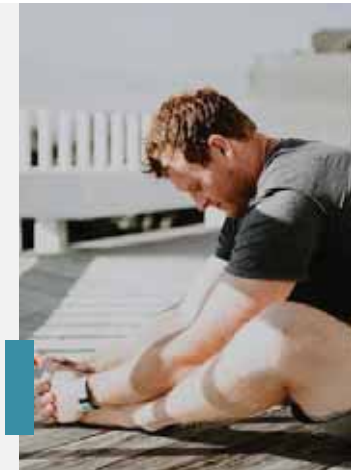
RELIABILITY MADE EASY.

OCEM Airfield's INFINITE ALCMS leverages the best of the latest generation of IT architectures - both centralized and distributed - to create a highly redundant, secure and fault tolerant system. Even if two or more nodes are down, the solution continues to function.



FLEXIBILITY MADE EASY.

OCEM Airfield's INFINITE ALCMS is operating system independent, easily integrating with other systems and not posing any rigid, lock-in scenarios. Additionally, since the solution is based on web-based architecture platform, it allows for quick and easy customization for different users on different devices.



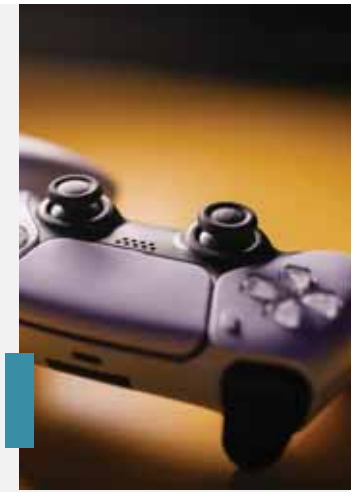
ADAPTATION MADE EASY.

OCEM Airfield's INFINITE ALCMS is scalable by design and airports can add new functionalities, simply and quickly by deploying expansion modules. Since the various components are not bound by a monolith architecture, but rather a microservices led platform, selection and deployment of new features is better and faster. Changes do not take months, but days to implement.



CONTROL MADE EASY.

OCEM Airfield's INFINITE ALCMS' access control and monitoring features allow for easy management of all elements on the airside as well as monitoring on the go. This enables an ecosystem of advanced services such as preventive services and connected devices to easily be integrated into any set-up





The unique differentiator of OCEM Airfield's INFINITE ALCMS is the technology on which it is built. It has been built using the same proven technology as used by Internet giants like Amazon and Microsoft.

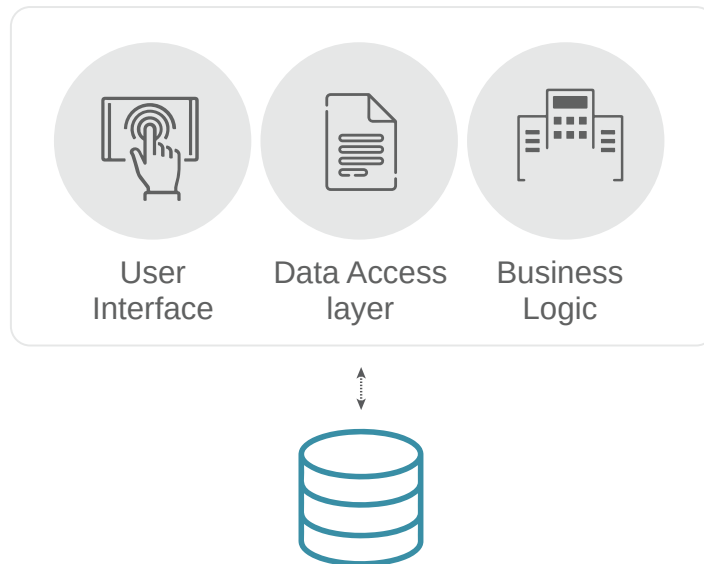
OCEM Airfield's INFINITE ALCMS makes it economically viable for airports to implement, customize and scale the system as per changing requirements. No need for expensive interventions, no need for lengthy discussions.

INFINITE allows airports to manage changes themselves, allowing the system to evolve and adapt to how the airport set up changes without limitation.

OCEM Airfield's INFINITE ALCMS: One Platform. Infinite Possibilities.

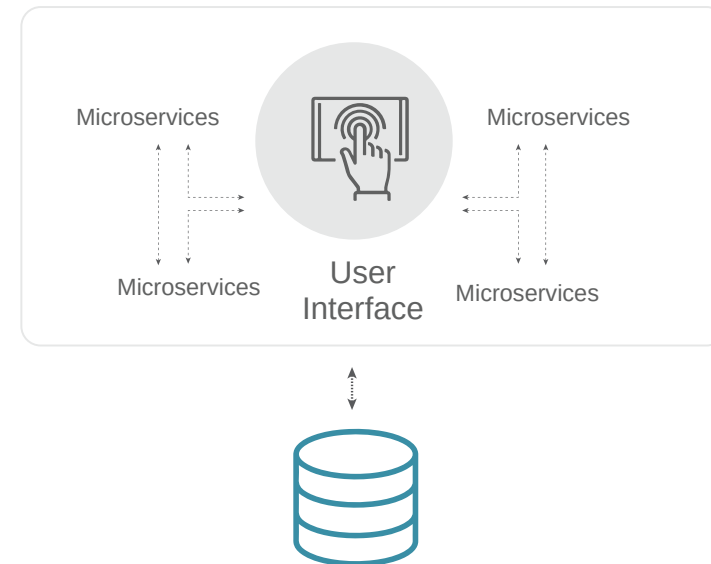
OLD THINKING

Monolithic Architecture



NEW THINKING

Microservices Architecture



PREPARE FOR THE FUTURE...TODAY!

The days of the old generation proprietary ALCMS' are over. Welcome to flexibility, integrability and security in a full plug & play approach, where you are in control.

The OCEM Airfield INFINITE ALCMS is a solution that can be easily integrated with other key airport systems such that access and management is fluid and can be exercised remotely.

Prepare for evolving scenarios of the future and no longer be tied down to proprietary systems that don't offer any flexibility and lock you in to specific vendors. Start with OCEM's INFINITE ALCMS – delivering highest reliability, biggest flexibility, and ease of use.

Lead your airport into a new future.

Email us at marketing@ocem.com for a solution demo today!



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