# ADAL Adaptive Airfield Lighting – Q&A

### 1. What is ADAL and how is it different from traditional airfield lighting?

ADAL (Adaptive Light) is a next-generation airfield lighting solution that delivers real-time, scenario-based visual guidance. Unlike traditional static lights, ADAL dynamically adjusts the signal to operational needs, enhancing safety, efficiency, and compliance while integrating seamlessly with airfield control systems.

### 2. What makes ADAL "adaptive"?

ADAL lights feature intelligent control logic that enables switching between multiple colors and signaling states in response to live operational scenarios, such as Taxiway crossings, service road crossings, or pushback clearance, providing guidance that is always current and unambiguous.

### 3. How does ADAL integrate with the LINC360 ILCMS system?

An ADAL fixture is an EQ light which also includes an integrated LINC360 remote module, enabling direct monitoring and control within the LINC360 Integrated Light Control & Monitoring System (ILCMS).

### 4. What are the main operational benefits of ADAL?

ADAL improves runway and taxiway safety, streamline aircraft and vehicle movements, reduces ground delays, and supports controller workload reduction. Its adaptive signaling also enhances performance in low-visibility conditions and enables compliance with evolving international standards.

### 5. Can ADAL be installed in existing AGL infrastructure?

Yes. ADAL fixtures are designed for straightforward integration into standard AGL circuits with our LINC360 ILCMS system, utilizing existing primary cabling and CCRs. OFDM signals for control and monitoring are superimposed on the primary circuit, ensuring flexible deployment with minimal disruption.

### 6. What use cases does ADAL support?

ADAL will be released with the following listed use cases;

- Service Road Safety System
- Apron Pushback Support
- Dynamic Holding positions
- Follow the Green operations.

We are of course working on expanding these Use Cases and more will follow shortly.

### 8. Is ADAL compliant with ICAO, FAA, and EASA standards?

**ICAO and EASA:** ADAL is fully compliant with the photometric requirements specified in ICAO Annex 14, sections A2-12 (F-green/Yellow and Red), A2-13 (F-green and Yellow), and A2-14 (F-green, Yellow and Red).

**FAA:** Compliant with FAA standards for L-852K and L-852C categories. Please note, however, that ADAL is not currently compliant with FAA L-852A/B/D/J or L-852S requirements.

At present, the ADAL solution is available only with the F-green option; the G-green option is not yet available but is planned for future development through an Engineering Change Request (ECR).

Currently, certification as an adaptive light capable of switching signals is not possible, as this functionality is not covered by existing standards. We are actively engaging with regulatory bodies to advocate for the inclusion of adaptive light capabilities in future standards. Until such updates are made, ADAL can only be certified against individual requirements.

### 10. How is ADAL maintained and serviced?

ADAL fixtures are built for durability and low maintenance, with modular design for rapid replacement and remote diagnostics for proactive servicing. Built on the same platform as our AXON TWY lights and share many spare parts.

### 12. What support is available for implementation and integration?

ADB SAFEGATE's design department offers expertise in implementation planning, primary circuitry design, CCR load calculations, and system integration. Our team partners with you throughout the deployment process to ensure optimal performance and compliance.

### 13. Can ADAL be customized for unique airport requirements?

Absolutely. ADAL scenarios and signaling logic are fully programmable, allowing each airport to tailor the system to its traffic patterns, operational procedures, and safety priorities.

### 14. How does ADAL communicate with the control system?

ADAL uses OFDM (Orthogonal Frequency-Division Multiplexing) signals, superimposed on the primary circuit, for robust and reliable two-way communication.

### 15. How do I get started with an ADAL project?

Contact our team for a tailored operational analysis, live demonstration, or pilot program. We provide technical documentation, design consultation, and full project management support from concept to commissioning.