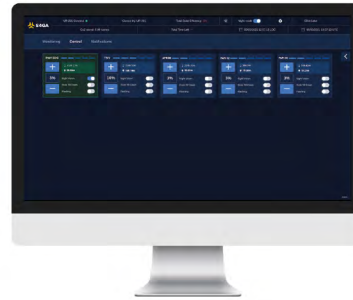


ALCMS BASIC

AIRFIELD LIGHTING CONTROL & MONITORING SYSTEM



+ HARDWARE

SYSTEM OVERVIEW

S4GA ALCMS is an Airfield Lighting Control and Monitoring System designed to provide full remote control and monitoring of solar LED runway lighting from the TWR or maintenance center. S4GA ALCMS consists of Computer Interface integrated with UR-201 Control and Monitoring Unit. It features open interface for integrating with existing conventional AGL control system.

FEATURES

- Individual Light Status Display
- 1-6 Groups/Circuits Control (optionally up to 12)
- Up to 6-step Light Intensity Setup (optionally 6-steps)
- Operating Mode Setup (Visible/NVG/Remote/Autonomus)

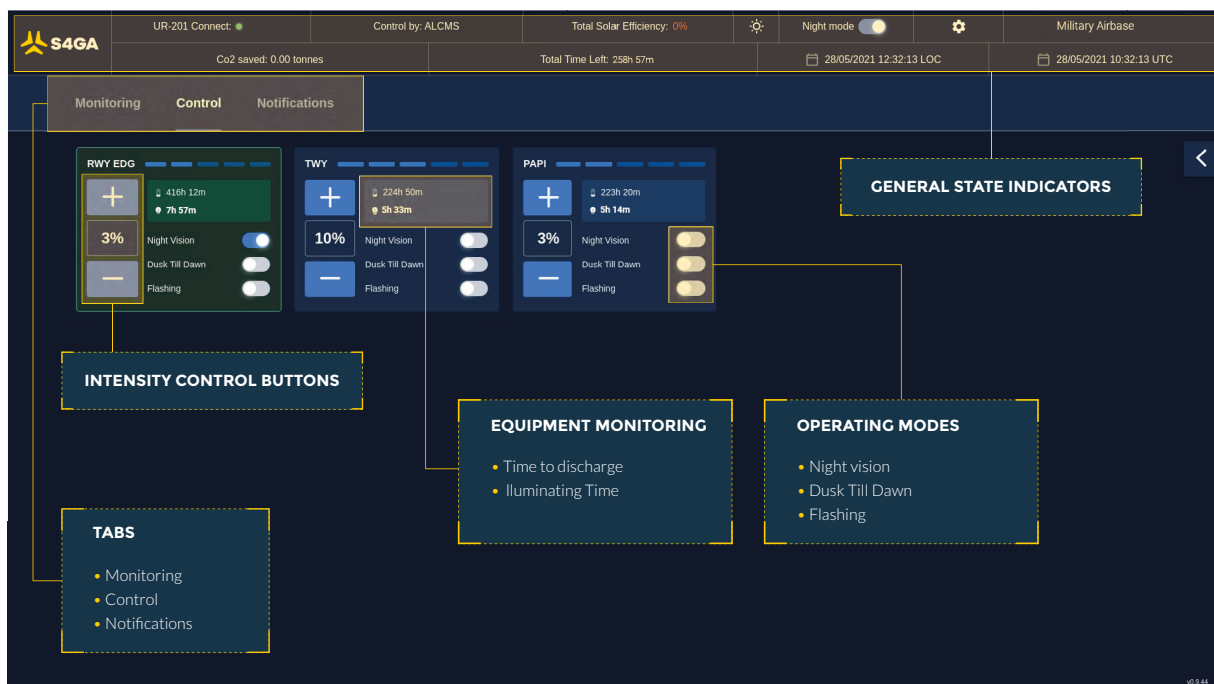
CONTROL

- Grouping of entire airfield lighting in 3 major groups
- Control of entire lighting system and groups of lights
- 5-step intensity level setup for a particular group of runway lights and PAPI (5 step: 3, 5, 10, 30, 100%)
- Operating modes setup: Visible, NVG, Remote, Autonomus)
- Timer setup (for VHF-activated and GSM-activated modes)

ALCMS Basic is designed for airports with simple runway lighting system configuration. ALCMS Basic allows to control entire system and groups of lights separately (e.g. runway, threshold and taxiway lights) as well as report about individual light statuses.

• Real-time monitoring	YES
• Automatic failure alarm	YES
• Operating mode setup	YES
• Individual light status indication	YES
• Grouping of airfield lights	up to 12
• Light intensity, steps	up to 6
• Separate taxiways control	YES
• Airfield layout	N/A

For airports with more advanced AGL system (including few taxiways, approach lighting, temporarily closed areas), S4GA offers **ALCMS Advanced**.



MONITORING

- Individual light Status Monitoring - includes such parameters of light as: battery level, charging speed, temperature, operating status, etc.
- Monitoring of UR-201 Control unit status
- Preventive Maintenance function allowing for planning maintenance works for individual equipment items (ie. battery replacement, solar panel cleaning etc.)

The dashboard displays the following components:

- CONNECTION STATUS:** UR-201 Connect: ●
- SOLAR EFFICIENCY:** Total Solar Efficiency: 0%
- SYSTEM STATUS INDICATORS:**
 - CMS Data Drive: OK
 - CMS Unit Back-Up Battery: OK
 - CMS Mains Power Supply: OK
 - CMS Radio Transmit Unit: OK
 - VHF Remote Activation: Not Activated
 - CMS System Devices: 100%
- GROUP OF LIGHTS:** Equipment List table with columns: NameID, Solar Generated Wh, Batt. Cycles, Start Date, Total Days in Operation, More Details.
- INDIVIDUAL LIGHT STATUS:** Detailed view for Lamp 1 showing parameters like Status, Battery Level, Charging Source, Max. Cycle Limit, Last Update, Charge Time Left (CAL), Device Temp., Emergency Status, Days to Recharge Battery, Batt. Cycles Left, Total Up Time, Solar Generated Wh, Batt. Cycles Used, Last Recharge Time, Total Installation Time.

NOTIFICATIONS

- Automatic Failure reporting via email
- Customization of reporting limits

The interface shows the following notification-related elements:

- CRITICAL NOTIFICATIONS:** A list of alerts such as "Lamp(s) with high temperature more then 13 celsius : WDI" and "Lamp(s) with low battery level less then 30%".
- CUSTOMIZATION OF AUTOMATIC REPORTING BY USER:** A settings panel for "Notification Settings" with adjustable thresholds:
 - Online Devices less than [%]: 30
 - Battery cycles used more than [cycles qty]: 1
 - Temperature higher than [°C]: 13
 - Days to replace battery less than [days qty]: 700
 - Group Battery Level less than [%]: 80
 - Solar charging efficiency less than [%]: 3
 - Last update more than [min]: 7
 - Operation time left less than [h]: 150
 - Battery level less than [%]: 30
 - Emergency mode activation [ON/OFF]: [ON/OFF]
 - Notification on System Check [ON/OFF]: [ON/OFF]
 - UR-201 Connect [ON/OFF]: [ON/OFF]
 - No internet connection [ON/OFF]: [ON/OFF]
 - VHF Failure [ON/OFF]: [ON/OFF]
 - Individual Device Offline [ON/OFF]: [ON/OFF]
 - CMS Unit Back-up Battery State [ON/OFF]: [ON/OFF]
 - CMS Main Power Supply State [ON/OFF]: [ON/OFF]

ACCESSORIES INCLUDED

Compliance of ALCMS Computer Interface

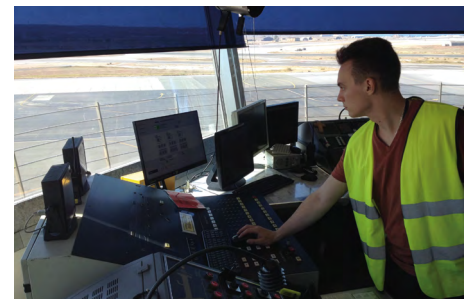
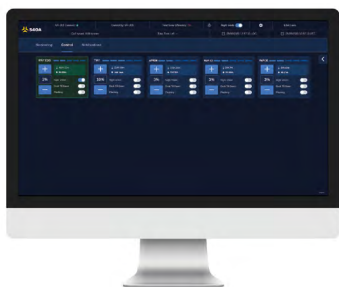


Compliance	
ICAO Aerodrome Design Manual	Part 5 Electrical Systems / Chapter 10, clauses 10.1 - 10.12 & clause 10.14
ICAO Annex 14, Volume I	Electrical Systems Chapter 8, clauses 8.3.1 - 8.3.5
EASA CS ADR-DSN.S.890	CS ADR-DSN.S.890 Monitoring, clauses (a), (b) & (d)
FAA AC 150/5345-56B	Specification for L-890 Airport Lighting Control and Monitoring System (ALCMS), clauses 3-7 & 9

Compliance of ALCMS Hardware - UR-201 Control & Monitoring Unit



Compliance	
RED Directive	RED DIRECTIVE 2014/53/EU on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC, clauses 3.1a, 3.1b & 3.2
RoHS Directive	ROHS DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment, clause 4.1
FAA AC 150/5345-56B	Par. 4.3 Hardware Requirements, clauses 4.3.1 & 4.3.2



**ALCMS ADVANCED OBLIGATORY
REQUIRES UR-201 TO BE SUPPLIED.
AND HMI COMPUTER**

+ HARDWARE

ACCESSORIES INCLUDED



24" TV Monitor for TWR



Wireless set: keyboard + mouse



Power cable
LAN cables



HMI Computer



LAN Router



Tablet PC (optional)

SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
ALCMS Set (24" screen, cables, keyboard, mouse)	600 mm x 400 mm x 360 mm	10 kg