

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

GLens v7.0 Environmental Monitoring Software

Manufactured by:

Knowledge Lens Pvt. Ltd


Zed Tech Park, Plot 74/A
Electronics City Phase 1
Electronic City
Bengaluru
Karnataka 560 100
India

has been assessed by CSA Group
and for the conditions stated on this certificate complies with:

**MCERTS - Quality and Performance Standards for
Environmental Data Management Software, Environment Agency, Version 4, December 2017
in respect of:**

Part A - Generic Software Quality
Part B - Data Management Application Standard
Part C1 - CEMS Data management applications - Generic Requirements
Part C2 - CEMS Data Management Applications - EN14181 Requirements

Project No.: 80169008
Certificate No: CSA MC180337/01
Initial Certification: 11 May 2018
This Certificate issued: 08 December 2023
Renewal Date: 10 May 2028



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Environmental Team Manager

MCERTS is operated on behalf of the Environment Agency by

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Approved Site Application

Any potential user of the certified software should:

- 1) Ensure that it is suitable for the platform on which it will be installed (if necessary in consultation with the software producer)
- 2) Ensure that the selection and operation of the software is appropriate to the application

Basis of Certification

This certification is based on the following test report(s) and on CSA Group’s assessment and ongoing surveillance of the product and the manufacturing process:

- 195_v1_KL_GLens_MCERTS_Main-assessment_Report, CSA ref. ‘70174314 v1’, dated 26th March 2018
- CSA Group report, ref. R80169008 v1.0, dated 22 Nov 2023

Product Certified

Product	Version	Remarks
GLens environmental monitoring software	v7.0	Version prepared for MCERTS Data Management certification

Later minor changes to the certified version are permitted in accordance with the conditions of the standard. Knowledge Lens shall follow the instructions given in the standard to prepare for the surveillance audit which is required towards the end of the validity period of this certificate.

It should be noted that, as yet, no MCERTS sector standard exists for regulator’s portal applications, therefore only Parts A and B of the standard apply to them.

It has been necessary to grant one minor concession, as follows:

<i>B6.2 Does the application have to synchronise measurements within a time window?</i>	<i>CONCESSION: GLens only operates with instruments (such as a weather station) which performs synchronisation itself. GLens will never handle synchronised measurements of this kind.</i>
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GLens v7.0 Data Acquisition Software composed of the major components identified in the table below and running in the stated software environments.

Deliverable	Function	Software Environment
GLens DAS Client	<ul style="list-style-type: none"> ü Raw Data Acquisition from Analysers of different make and models, OPC, PLCs, Analog to Digital Convertors ü Diagnostic Data Acquisition from Analysers of different make and models ü Automated Data Validation ü Automated Analyser Calibration including Remote Calibration feature ü Remote Configuration Feature ü Secured and Encrypted Data Transmission 	Customer Site PCs running Windows 7 and above, Redhat/CentOS 6 and above, Ubuntu 14 and above
GLens Central Server	<ul style="list-style-type: none"> ü Real Time Trends and Averages ü Standard Reporting and Calculations for various Industry Sectors like LCPD etc. ü Audit Logging and Alerting ü Validation system for QAL 2, QAL 3 and AST ü Regulatory Standards based Alarms and Alerts ü Statistical Process Control Charts with EWMA, Shewhart, CUSUM etc. ü Automated Calibration including Remote Calibration ü High Availability Module 	Customer Site Servers or Regulator Servers running Windows 7 and above, Redhat/CentOS 6 and above, Ubuntu 14 and above
GLens Portal	<ul style="list-style-type: none"> ü Regulatory Alerts and Alarms ü Data Availability and Compliance Reporting ü Workflow and Maintenance management scheduler for Analysers ü SMS and Email Alerting ü Analytical Reporting 	Regulator Servers running Windows 7 and above, Redhat/CentOS 6 and above, Ubuntu 14 and above

Software Modifications

In the event of a major release the developer shall provide brief supporting evidence to the Certification Body who will advise whether recertification is necessary.

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Certified Performance

The application is able to perform the following tasks:

- Direct Communication with analyser (any make or model) using analyser protocols.
- Communication with PLCs (Programmable Logic Controllers) using Modbus, OPC, etc.
- Real Time data trends display and alarms based on the data acquired from the analysers.
- Real Time Dashboards based on monitored stations
- Averages of 1, 5, 10, 15, 30 and 60 minutes periods, X hours, daily, monthly and yearly aggregations
- Raw data normalisation to standard reference
- Validation of data based on defined uncertainty guidelines
- Regulatory control of emission limit values and IED Reporting
- Reporting capabilities for WID, LCPD, etc.,
- Reports available in HTML, PDF, Word, Excel, CSV Formats and destinations (printers, emails, file sharing etc.)
- Ad-hoc and customisation reporting including wind rose and pollution rose
- QAL2 and automatic/manual QAL3 management including control charts and other SPC (statistical process control) techniques,
- Regulatory control of emission limit values, unavailability, trends,
- High Availability of Central Server and Data acquisition modules
- Data Encryption and security/integrity of the data
- Remote calibration, configuration and workflow management
- Advanced Data Analytics features for source identification

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Description

GLens is a real time data acquisition, monitoring, reporting and analytics software for environmental data and adheres to the requirements of EN14181 and MCERTS certified Environmental Data Management Software requirements for Environmental and Continuous Emissions Monitoring reporting systems.

GLens Environment Monitoring Software is developed by Knowledge Lens Pvt. Ltd and it is suitable for Emission, Effluent, Ambient and Noise Monitoring. The GLens software provides modules for monitoring and analytics of Continuous Ambient Air Quality Monitoring Stations (CAAQMS), Continuous Emission Monitoring Systems (CEMS) and Continuous Effluent Quality Monitoring Systems (CEQMS). The main functions include monitoring station configuration (sites, stations and analysers), technical management (data acquisition, normalisation, validation, calibration check, etc.), data processing (data display, reporting) and advanced analytics (time series analytics, forecasting, AQI index etc).

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this certificate. The manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of CSA Group Testing UK Ltd Certificates'.
2. The design of the product certified is defined in the CSA Group design schedule for certificate No. CSA MC180337/01.
3. If a certified product is found not to comply, CSA Group should be notified immediately at the address shown on this certificate.
4. The certification marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of CSA Group Testing UK Ltd Certificates'.
5. This document remains the property of CSA Group and shall be returned when requested by CSA Group.

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