



Overview

AmbiDS is a client-server application developed by Ambimetric for monitoring and managing data from environmental monitoring systems. AmbiDS runs on a dedicated server, installed on the client or in the cloud, and allows access to the network information from any PC connected to the Internet or intranet, through access credentials.

The application automatically imports data from various automatic stations, in ASCII format, into its database, ensuring compatibility with any station that stores data in ASCII files, properly formatted, through the configuration of an import routine. In the import phase, all the information is validated according to the measurement ranges defined for each sensor in the station.

Data from manual stations, for example limnometric scales, or other information from conventional instrumentation, can be manually introduced by the system operators.

As soon as an automatic station is added, the application starts monitoring the data files associated with the station, in order to update the database whenever new information is transmitted.

The application will store all data in a Microsoft SQL Server database management system, after a first level B validation¹, making it available in the monitoring layer by station, in network or grouped.

The interface provided will depend on the type of user (public, operator or manager). A public profile can be created, if the information is to be made openly available on the internet.

AmbiDS Highlights

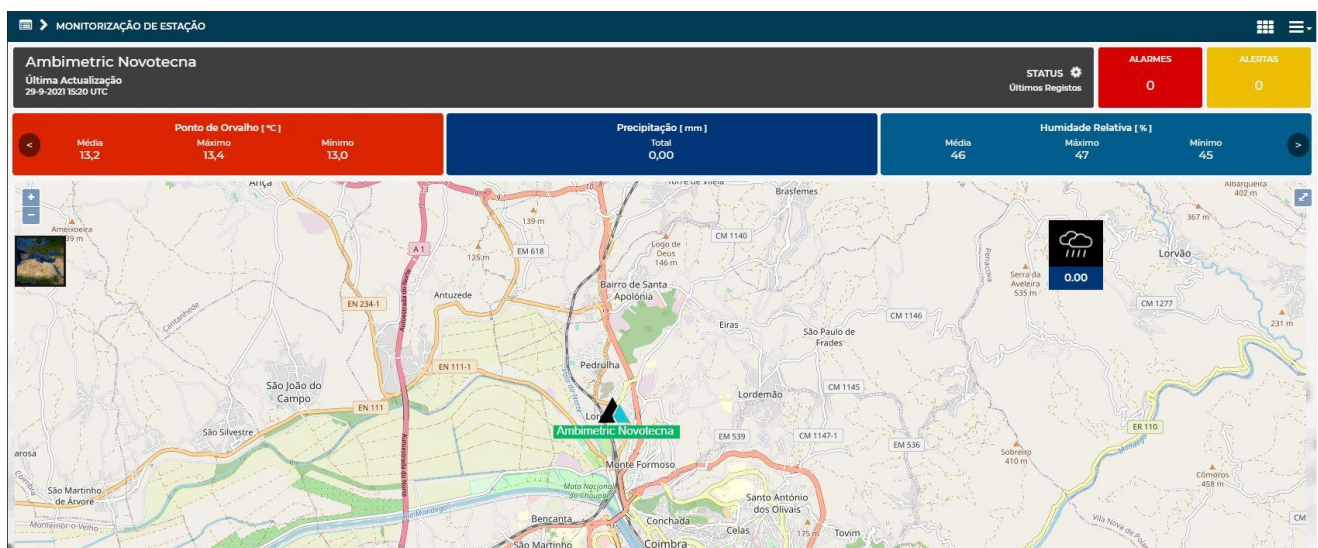
- ▲ Possibility of configuring specific importers for different data sources;
- ▲ Possibility of configuring data exporters for third-party applications;
- ▲ Automation of data import and export;
- ▲ Visualization of data in graphs and tables with adjustable time interval;
- ▲ Station or Station Network monitoring in a GIS (*Geographic Information System*) mapping environment;

¹ *Guidelines on Quality Control Procedures for Data from AWS, WMO, 2004*

- ▲ Grouping of variables;
- ▲ Definition of Alarms and Alerts configurable through the combination of logical conditions with the quantities being monitored;
- ▲ METAR and SYNOP encoding module according to the information available in the database for a given station;
- ▲ Early Warning System Module intended to signal danger levels according to predefined alert thresholds;
- ▲ Creation of customizable reports containing statistical information on the quantities (maximum and minimum values, average and total values if applicable);
- ▲ Data storage in a Microsoft SQL Server database management system;
- ▲ E-mail and SMS notifications;
- ▲ Interface in Portuguese and English.

Station Monitoring

- ▲ Station monitoring displays a station pictogram in a GIS (*Geographic Information System*) mapping environment. This monitoring allows:
 - ▲ Visualization of quantity in graph or table, in time intervals parameterizable in hours, days or weeks;
 - ▲ Statistical information (average values, minimum, standard deviation, or other relevant statistical treatments);
 - ▲ Consultation of alarms and alerts;
 - ▲ Manual data import;
 - ▲ Data export to Excel, CSV or PDF formats;
 - ▲ Creation of reports by interval of interest (daily, weekly, monthly, annual);
 - ▲ Validation of information.



Novo Registo

10 registos por página



Pesquisar...

	Data Hora	Humidade Relativa [Média] [%]	Humidade Relativa [Máximo] [%]	Humidade Relativa [Mínimo] [%]
1	2021-9-29 15:20	46	47	45
2	2021-9-29 15:10	45	46	44
3	2021-9-29 15:00	44	46	43
4	2021-9-29 14:50	45	46	43
5	2021-9-29 14:40	42	44	41
6	2021-9-29 14:30	41	43	40
7	2021-9-29 14:20	42	44	41
8	2021-9-29 14:10	42	44	41
9	2021-9-29 14:00	43	44	40
10	2021-9-29 13:50	42	43	41

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Anterior 1 2 3 4 5 ... 15 Próxima



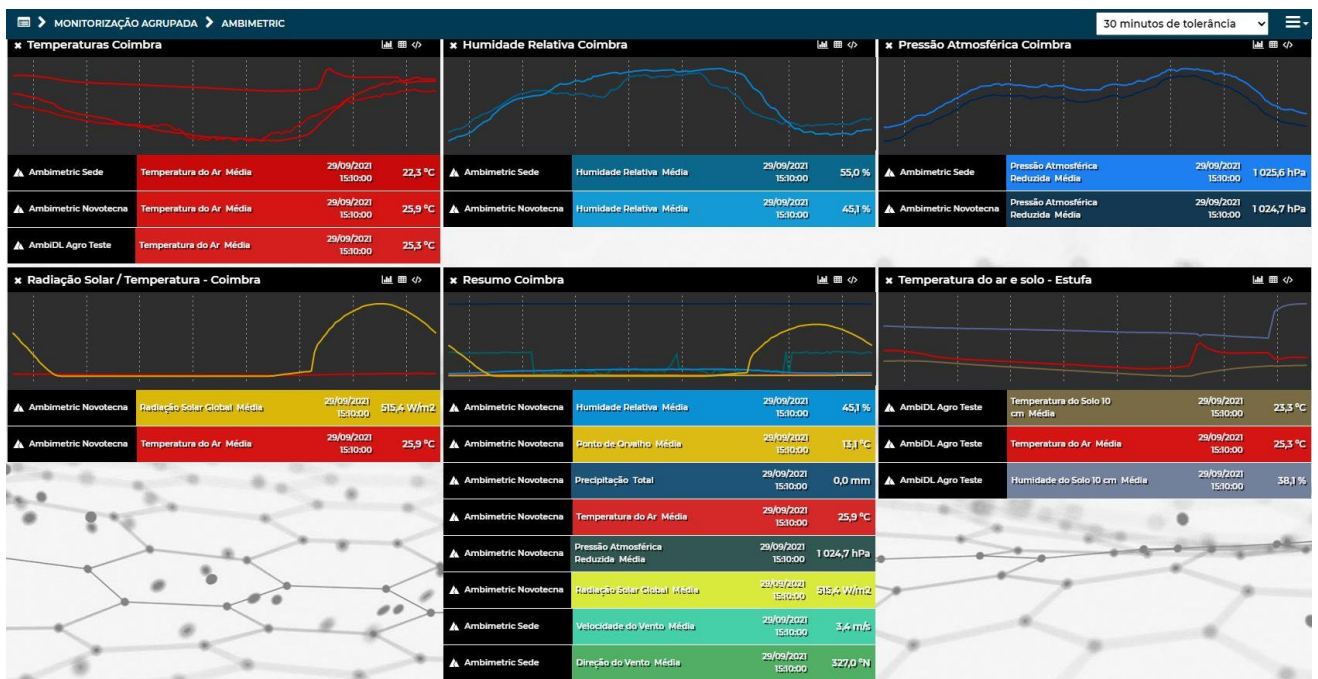
Network Monitoring

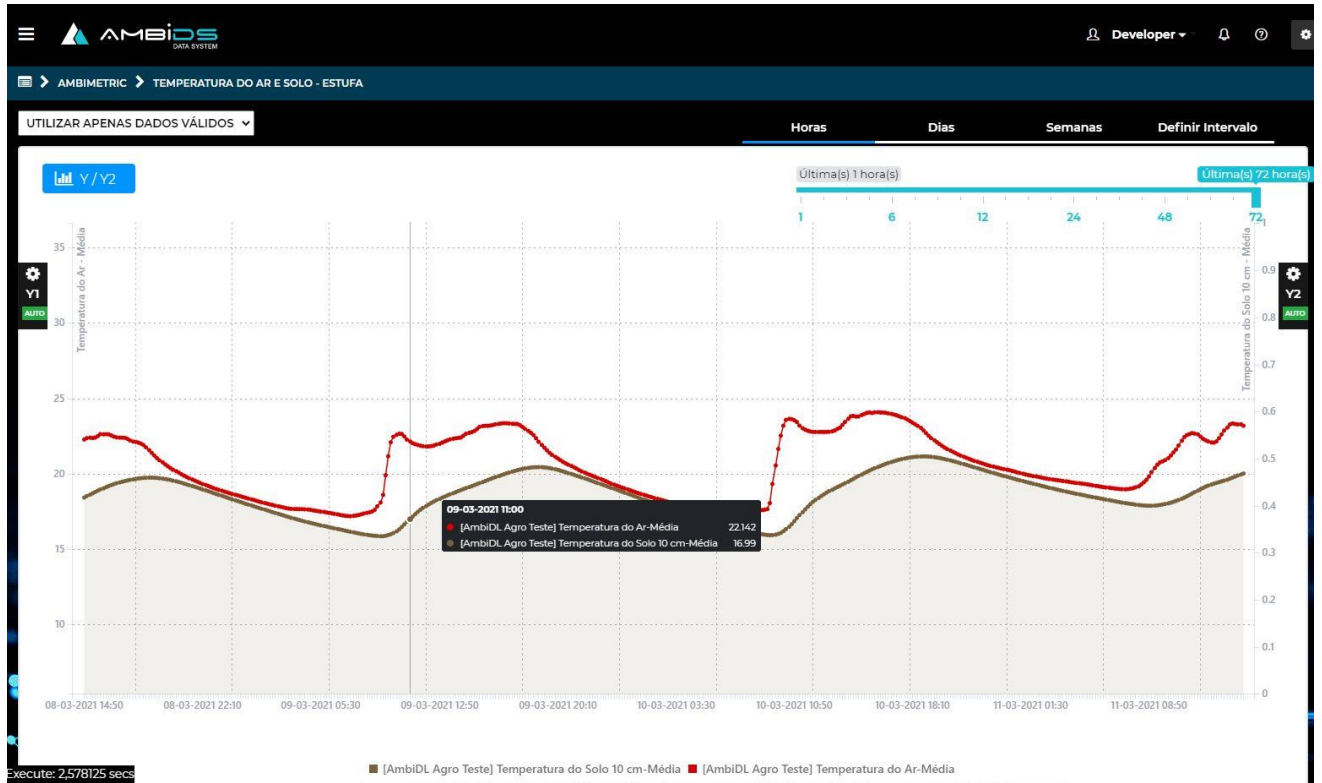
- ▲ Station network monitoring allows the visualization of the stations by pictogram in a GIS mapping environment. In this way it is possible to have an overview of the status of the stations in real time by colour code.
- ▲ From the information presented in the network monitoring, the following stand out:
 - ▲ Presentation of the network stations on a map (aerial photography or tactical map);
 - ▲ Synchronous visualization of the last data generated by the stations (separately or together);
 - ▲ Selection of stations by type (meteorological, udometric, hydrometric, etc.);
 - ▲ Visualization of alarms and alerts;
 - ▲ Information on the number of active stations;
 - ▲ Status of the system's essential services.



Groupings

- ▲ Monitoring grouped information consists of grouping relevant variables in order to verify correlations between data from the same station or from several stations in a network. This functionality allows:
 - ▲ Visualization, graphically or in a table, in time intervals parameterizable in hours, days or weeks, of several quantities simultaneously and their evolution in real time;
 - ▲ Groupings of variables generated by the same station and by different stations;
 - ▲ Consultation of grouping history by interval of interest;
 - ▲ Data export;
 - ▲ Creation of reports by interval of interest (daily, weekly, monthly, annual).





Alarms and Alerts

- The Alarms and Alerts module is configurable through the combination of logical conditions with the quantities being monitored in order to detect events in the timeline. These alerts can be defined locally, based on a single station or a local set, or globally for a network of stations.

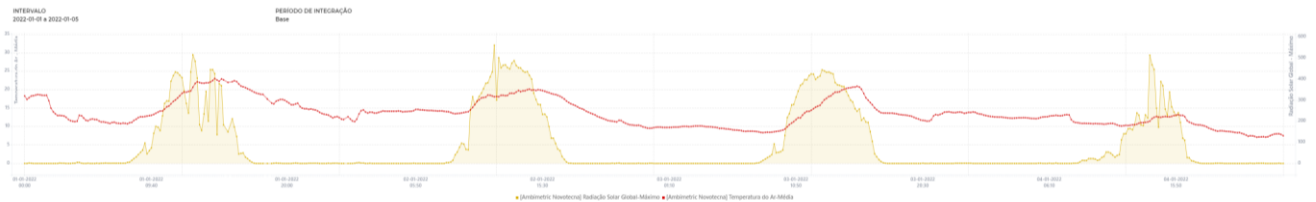
- The application monitors the situation, activates individual alerts, checks the status of communication channels and automatically notifies those responsible and institutions if the alarm or alert is activated.

Reports

A report is a compilation of a graphical history of a variable or a grouping of data, with a certain integration period, for a certain time interval, complemented with some extra information defined by the user. The report also processes statistical information on the quantities in question (maximum and minimum values, average and total values if applicable).



Relatório Analítico
Data: 6-1-2022
Horário: 09:58

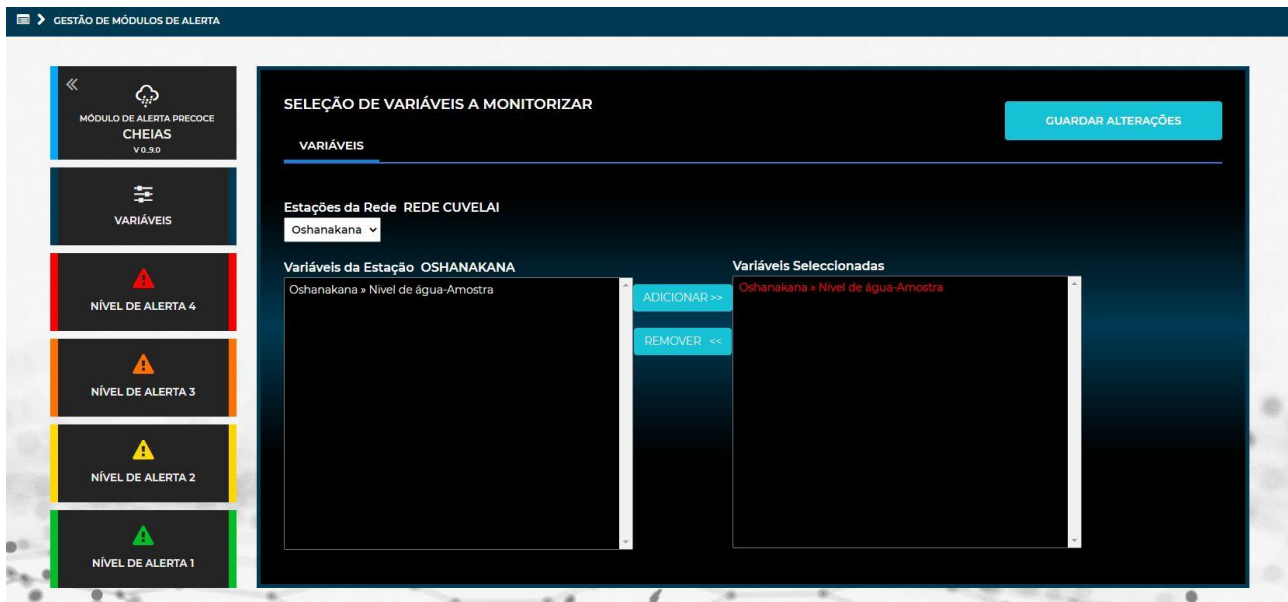


EST.º	ESTACIÃO	VARIÁVEL	MÁXIMO	MÍNIMO	MÉDIA	TOTAL	MÉDIA VECTORES
1235	Ambimetric Novoterra	Temperatura do Ar Média	23.5 °C	12 °C	18.1 °C	---	---
1230	Ambimetric Novoterra	Radiação Solar Global Máxima	841 kWh/m²	---	85 kWh/m²	---	---

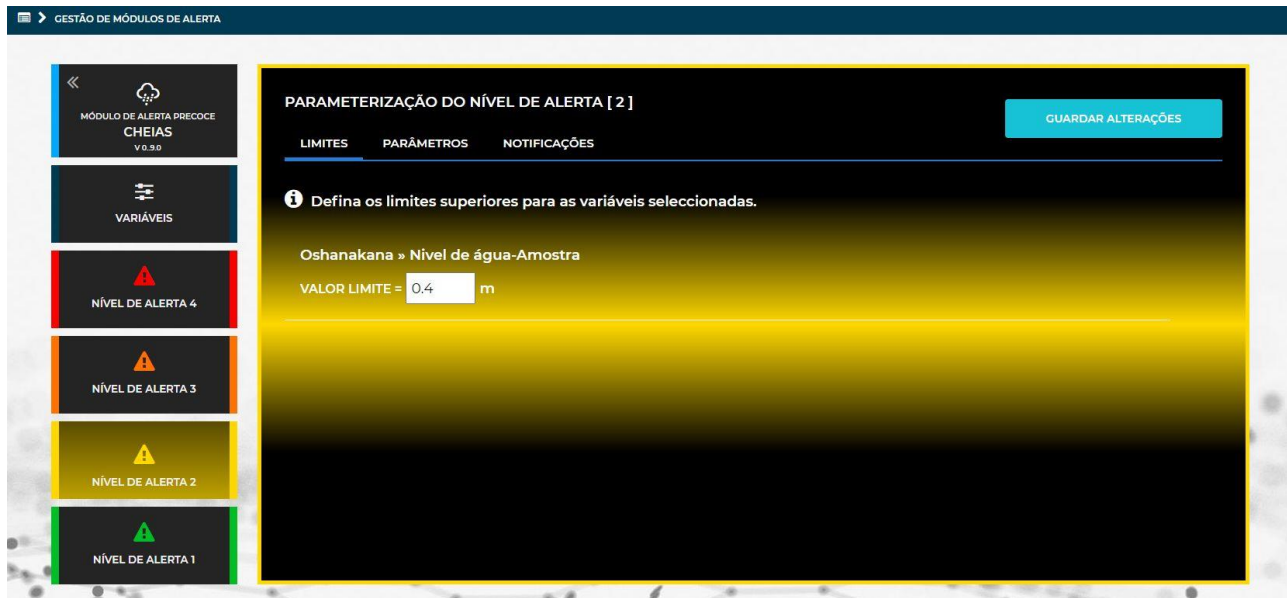
EST.º	ESTACIÃO	VARIÁVEL	OCCORRÊNCIA DO VALOR MÁXIMO	OCCORRÊNCIA DO VALOR MÍNIMO
1235	Ambimetric Novoterra	Temperatura do Ar Média	2022-1-1 14:30	2022-1-4 23:00
1230	Ambimetric Novoterra	Radiação Solar Global Máxima	2022-1-2 13:50	2022-1-1 00:40

Module - Early Warning System

The Early Warning System module is intended to signal danger levels according to predefined alert thresholds. Hydrological levels, or water impact levels, are defined by a set of thresholds for each of the variables considered critical. For example, precipitation levels, flow rates and water heights in the courses being monitored. These definitions may be adjusted or calibrated at any time depending on the response of the hydrographic basin to the monitored variables.



Four (4) alert levels (Green, Yellow, Orange and Red) are available. In each station it is possible to define its hydrometric Alert levels, according to a model that defines that the alert classification for a station is equal to the most severe level of the set of critical variables. The same principle is applied to the network, the network alert classification is equal to the most severe level of the alerts of all the stations.



Module - Export

- ▲ This module allows exporting data to third-party applications, with parameterizable formatting according to the specifics of the importers. This data may come from one or several stations. It is also possible to automate export processes. This function is very useful when you want, for example, to transfer data to be assimilated by forecast models.

Module - Encoding

- ▲ This module allows METAR and SYNOP encoding according to the information available in the database of a given station.