

Polyvalent high precision Automatic Weather Station



CimAWS-500 is an automatic weather station designed for synoptic and climatological observation networks, which supports all necessary sensors, including wind measurements at 10 m height in compliance with WMO's recommendations in terms of measurement quality and sensors disposal.

Cimel's exclusive **MicroAmps®** technology guarantees exceptional performances under all climatic conditions even harshest ones.

CimAWS-500 operates without any human attendance using various communication means and performs data highly reliable process



APPLICATIONS

Thanks to its versatility and robustness, CimAWS-500 meets the needs of many demanding applications:

- Synoptic meteorology
- Emission of aeronautical messages (METAR, SPECI...)
- Climatology
- Hydrometeorology
- Agro-meteorology
- Civil security

USER'S BENEFITS

High quality of the data

- Sensors arrangement in compliance with WMO standards
- Data process in compliance with WMO recommendations
- Data availability high rate
- Sensor self-monitoring

Flexible and versatile

- Autonomous station powered by miniature solar generator
- The multi support transmission system gives a great flexibility of implementation (remote locations)
- 20 sensors capacity provides versatility without programming (plug-&-play connectors)
- Easy and quick installation

Robustness

- Extremely reliable and stable sensors
- Withstanding to all types of difficult weather condition
- Reinforced protection against lightning
- Tamper-resistant built-in miniature solar panel

Very low total maintenance costs

- No systematic technical maintenance
- Visual inspection and cleaning by non-specialized staff
- Remote maintenance eliminates unnecessary field work
- Exceptional use of spare parts inventory

TECHNOLOGY

For field equipment, Cimel has developed a unique specific MicroAmps® technologies that result in meeting several very demanding yet complementary specifications:

- Minimize electrical power consumption
- Use secure, highly redundant communications protocols
- Give priority to wireless transmissions
- Maximize the versatility of printed circuit boards
- Minimize the number of connectors

Thanks to these technologies fulfillment, CimAWS-500 provides exceptional performance widely field-tested under any type of climate

- Metrological data high reliability
- Low-power solar energy
- Light and easy-to-handle infrastructure
- Excellent protection against corrosion and lightning

This innovative system ensures a high reliable operating process with very low preventive and curative maintenance operations in the long run, even in very hostile environments

COMPOSITION**Sensors**

All types of sensors can be added smoothly and progressively

Sensor name	Sale reference
Opto-electronic anemometer	CES155
Opto-electronic wind vane	CES157
Automatic rain gauge	CES189
Pyranometer	CES180
Fiber-optics automatic heliograph	CES181
Air temperature and humidity under cover	CES600
Digital atmospheric pressure sensor (1 transducer)	CES711
Digital atmospheric pressure sensor (3 transducers)	CES713
Water height / snow depth sensor	CES190
Automatic evaporation sensor	CES188
UVA radiation sensor	CES167
UVB radiation sensor	CES168
Bilanmeter (2 radiation sensors in the range 0.3 to 100 µ)	CES166
Albedometer (2 pyranometers face inverted)	CES170
Pyranometer PAR	CES165

Actinometric index sensor	CES185I
Soil temperature	CES185S
Wetness sensor	CES187

CEA520 Acquisition Unit

CEA520 acquisition unit is designed to simplify the sensors connection by plug-&-play clearly labeled connectors

- Housed in a single leak-resistant, dehydrated metallic box
- Includes all functionalities (data acquisition, data processing according to WMO standards, storage, transmission)
- Plug-in block with plug-&-play connectors
- Factory pre-configured for instant commissioning

Infrastructure

The main infrastructure is modular, easy-to-handle, light and robust in compliance with WMO recommendations (sensors disposal). It ensures the protection of sensitive equipment (Tamper-resistant built-in miniature solar panel, fully

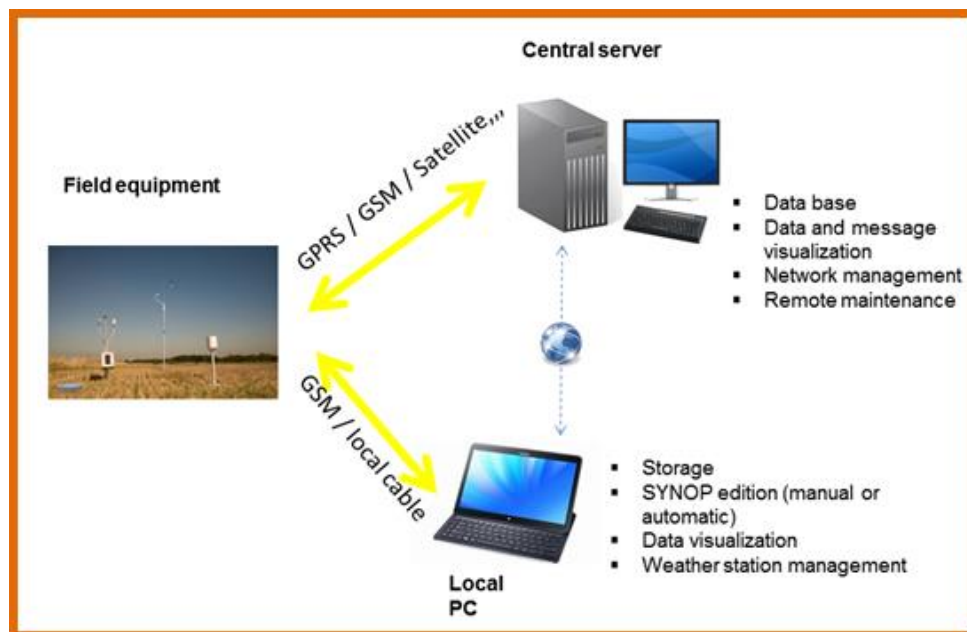
protected cables by running all wiring through internal tubing)

A 10 m height mast for Wind speed and direction can be raised separately in addition to the main

Communication means

The automatic weather station communicates with the central information system by various communication means: Internet, RTC telephone, GSM "data", GPRS, satellite

(via a beacon CET410)... The architecture flexibility enables the central PC to communicate with the acquisition unit and /or with the local PC.



DATA PROCESSING

Software ensure the data automated collection and present all features needful to users (storage, consultations, messages edition, alarms...) and to the network manager (remote maintenance, user's rights management...).

Cimel provides software or full IT systems to manage data both on local PC and on central server.

CimOBS software is suitable to both local PC and central server. It runs under Windows.

CimNET software collects data in near real time (via GPRS) and is reachable from the Web to an unlimited number of users. It runs on a central server with Linux.

CimWEB service is suitable to station number-limited networks or for managers that do not want to drive a web server on their own, Cimel proposes

CimWEB service: with a simple subscription, Cimel makes available a website dedicated to their network management. This service is based upon CimNET application running on a central server. This server is driven by Cimel and hosted by a professional web host (continuous operating with high availability).

DEPLOYMENT

CimAWS automatic weather station offers two key features

Quick and easy installation

- The various modules are light, with small overall size. They are designed for easy assembly: no special tools required.
- The modular anchorage system facilitates the setting up in any types of soil, with a simple installation procedure avoiding civil works
- No on-site cabling required: all cables are provided with pre-wired polarized connectors.
- On-site configuration possible via the acquisition unit interface

Minimal systematic technical maintenance

- No preventive maintenance for electronics due to the integrated design of the acquisition unit (corrosion-free)
- No impact in case of lightning strike around: full metallic protection for all circuits and cables
- Maintenance-free infrastructure (noble materials)
- Maintenance-free cables (fully protected cables by running all wiring through internal tubing)