

ZooCADATM - Met

Weather Station System

ZooCADA-Met is a software program and hardware system designed to monitor and record the local weather conditions at zoological facilities, either as a standalone system or integrated into a ZooCADA network.

- ★ Automate the collection of local weather data.
- ★ Automatically email staff when severe weather events occur.
- ★ Record weather data to support research and management.
- ★ Enable staff to focus more on animal care and conservation tasks.



ZooCADA-Met Program Features

Data Logging

- Weather parameters logged hourly and daily:
 - - Air temperature and relative humidity average of previous minute.
 - - Air dew point temperature and vapour pressure deficit average of last minute.
 - - Barometric pressure calibrated to mean sea level average of last minute.
 - - Solar radiation, either in kilowatt hours or megajoules, total.
 - - Wind vector direction and speed.
 - - Wind maximum gust and gust direction.
 - - Air temperature maximum and time of maximum.
 - - Air temperature minimum and time of minimum.
 - - Air relative humidity maximum and time of maximum.
 - - Air relative humidity minimum and time of minimum.
 - - Grass minimum and time of minimum.
 - - Lightning strikes total count, average and minimum distance.
- Soil volumetric water content and temperature logged hourly. (Optional)
- Soil volumetric water content and temperature average, maximum and minimum logged daily. (Optional)
- Datalogging memory in excess of 1 year between downloads before memory overwrite.
- Data logged to ring memory so oldest data is overwritten first when memory full.
- Data files downloadable to Windows based PC using Campbell Scientific LoggerNet software.
- Data graphing from Windows based PC using Campbell Scientific LoggerNet software.

Alarms

- Power failure. (The electricity supply to the station has failed)
- Communications failure. (The station can't obtain data from another station)
- Weather sensor failure. (Alerts operators of problems with any of the weather sensors)
- Air temperature too high or too low. (With high and low setpoints for each month)
- High rainfall. (With per hour and per day set points)
- High wind. (With average speed and maximum gust setpoints)

General

- Battery backup of datalogger 12V power so system keeps logging data during power failure.
- Alarm messages sent via email to staff.
- Communications to stations via LAN enables staff to monitor system operation.
- Communications to stations via LAN enables automated or manual collection of logged data.
- System maintenance from Windows based PC using Campbell Scientific LoggerNet software.

ZooCADA-Met is a station of our modular control and data acquisition system. Each station can operate standalone or as an integral part of a fully networked, zoo-wide, system with various stations performing different tasks. Using our modular approach, up to 4000 stations, distributed over any geographic area, can be networked provided that network connectivity (typically the site's IP computer network) is available at each station.

Adena Scientific believes that accuracy and reliability are paramount requirements of any system used in applications that support animal welfare, so we purpose designed our ZooCADA system to meet zoological needs, and built it to run on dataloggers manufactured by Campbell Scientific in the USA and available worldwide.

The logo for Adena Scientific Ltd features the company name in a stylized, italicized yellow font. The letter 'A' is large and features a blue arc with a small blue dot at its end, resembling a stylized animal or a scientific symbol.

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