

Datalogger: Compact Line

Compact, Compact Plus, Plus



A new range of CAEtech dataloggers is born: the **Compact** line is designed to provide a **modular and scalable solution**, both from the hardware and software points of view, and to meet the needs of different types of users.

The **dataloggers** designed by CAE are innovative acquisition units allowing a complete **management of instruments on the field**, such as sensors, probes, cameras, analysers and alarm devices.

The CAEtech dataloggers of the Compact line are designed to **acquire and store data**, making them available and, at the same time, **allowing** implementation of **complex calculation algorithms to regulate the activation of local or remote alarms** when specific events occur.

The **Datalogger Compact** line is designed to create **multi-hazard** systems (**Multi HAZard System - MHAS**). It perfectly meets the need to integrate all elements into a single monitoring network, controlling the various risk factors of a location, such as landslides, fires, storm surges, floods, avalanches, adverse weather conditions, etc.

The **dataloggers** of the **Compact** line boast **next generation technology**, are **scalable and compact** and ensure high standards of **quality, power and reliability** typical of CAEtech products, keeping **consumptions** low.



FLEXIBILITY, SCALABILITY, MODULARITY

The flexibility of the product is defined on different levels:

- **Hardware**
- **Installation**
- **Software**
- **Data management**

Hardware	<i>Acquisition unit</i>	<i>Display</i>	<i>Sensor connectivity and communication equipment</i>
Compact 	Digital	Optional Digital Multi-Touch Screen 4.3" Capacitive	6 x RS232/RS485/SDI-12 2 x USB WiFi/Bluetooth (optional) Ethernet 10/100 micro SD 2 x Digital input, 2 x Digital output
Compact Plus 	Analog and Digital	Optional Digital Multi-Touch Screen 4.3" Capacitive	9 x RS232/RS485/SDI-12 2 x USB WiFi/Bluetooth (optional) Ethernet 10/100 micro SD 20 x Analog input (4 x PT100) 2 x Analog output 8 x Digital input, 8 x Digital output

Furthermore, customized Compact dataloggers can be created, which in a single object can contain a greater number and a different distribution of inputs / outputs.

Accessories:



Plus: expansion for analog and digital sensors. One or more **Plus** modules can be connected to the **Compact and Compact Plus dataloggers**, each allowing further increase of the number of ports. This tool can also be connected wirelessly by means of serial remoting device.

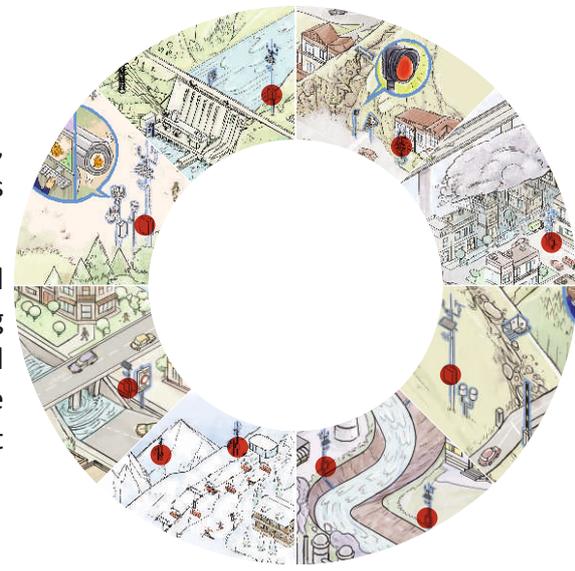
Container with IP65 rating: container protecting the datalogger from dust and water, ensuring performance with IP65 standard under any environmental condition.

Processor	ARM Cortex A7 MPCore@528 MHz
RAM	512 MB
AD converter	24 bit
Software flash memory	2GB
Power supply	12 Vdc

Installation

The products of the Compact line have a variety of sizes and models, allowing high flexibility during installation, adapting to all situations and being easy to integrate into existing infrastructures.

A thorough analysis of the product during the design phase allowed matching a small size with a high number of inputs/outputs, providing very high versatility of use. Additionally, the connectors are all located at the front of the product, allowing easier and more comfortable operations by technicians and, consequently, more efficient installation and maintenance services.



Software

The dataloggers of the Compact line can implement several **application packages** designed to best meet the different needs of the users, making the product extremely scalable.

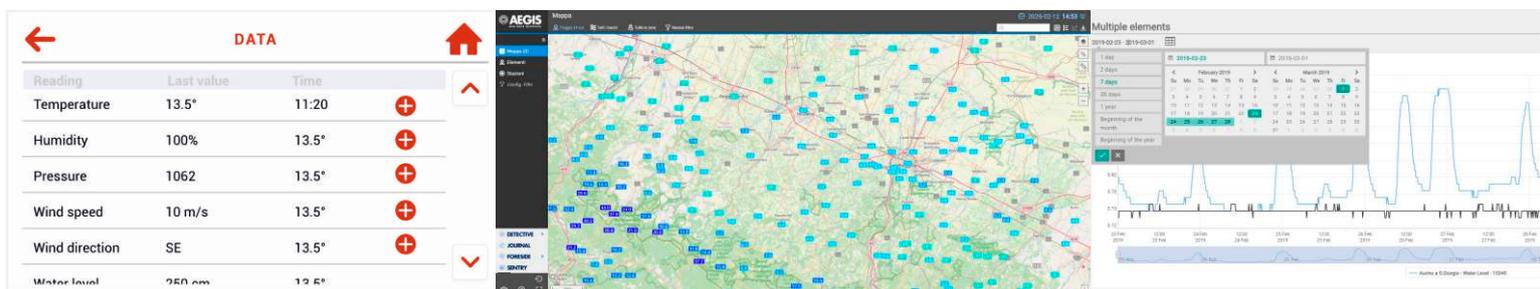
For example, the user can choose to use only the operating system provided by the datalogger, personally adding his own programs to the system, or he can opt to use applications specific for monitoring or add other applications implementing also alerting functions.

Data management

Data logged by the station can be downloaded directly from the datalogger or by means of a web service. At the same time, data can be sent to a control center due to the capacity of the datalogger to interface with various transmission instruments such as UHF radio, 3G modules, satellites and microwave networks.

Therefore the customer is free to choose his stations and display the collected data as he prefers, even without an operating central, by using:

- the website provided for the station, without the need to install any type of software;
- the web service built in the station, to collect and display data on a proprietary software or on a management system;
- the web and desktop software supplied by CAE.



POWER, OPENNESS AND CUSTOMISATION

In order to best perform all required functions, the Compact datalogger is manufactured on a powerful hardware based on a **Linux embedded (kernel 4)** operating system that ensures broad flexibility.

The high calculation capacity provided by the Compact line dataloggers allows performing multiple operations at the same time and using different communication methods, due to the full implementation of the **TCP/IP stack** and the advanced **Web-based services**. The standard protocols implemented in the datalogger are varied: aside the most common ones such as FTP, HTTP, NTP, DDNS, etc., CAE has added protocols that are specifically optimised for the monitoring field, which are commonly used in the **IoT** world, such as **CoAP** and **MQTT**. All this while maintaining an absolute level of security compliant with the latest standards, implementing the most secure encryption protocols: **HTTPS, FTPS, SFTP, CoAPs, SSH, OpenVPn**, etc.

The customer can customise the Compact and Compact Plus dataloggers at will, e.g. creating customised processing or drivers for specific devices, due to the implementation of common coding languages such as **Python, C, Shell Script**.

EASE OF USE



The local interface between the operator and the Compact and Compact Plus dataloggers is simple and intuitive, comprising a 4.3" **DTS (Display Touch Screen)**, **capacitive** and **multi-touch** terminal. The display allows **full control over the tasks of the datalogger**: internal operation status, data acquisition, display of charts and tables, connection with external modules. **Furthermore, it allows running a wizard to configure the station, maintaining its integrity.**

Through the DTS virtual keyboard, the operator, after accessing the datalogger, can enter a password, through which the datalogger will be able to recognize the type of operator and therefore allowing to automatically perform only the tasks the operator is authorized for.

This display, which is optional, can always be viewed remotely via browser on PC, tablet or smartphone. This operation is also possible via Bluetooth, without opening the external container.



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