DAME *Assistance for development, data collection, alarms calculation and longterm data archiving*
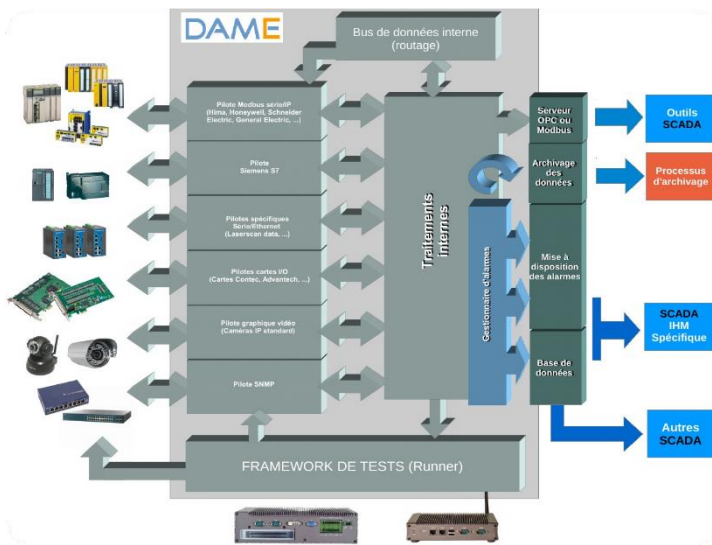
The high-performance data logger from CLEARSY is a software dedicated for real-time supervision of industrial systems dealing with large amount of information, specificaly from programmable logic controller (PLC).

It addresses several requirements through a single plateform :

- **Help in the development part,**
- **Maintenance and operation support of the operational system.**

The application's highly configurable nature dramatically cuts down initial deployment time and costs while delivering an end-user experience tailored to a client's specific needs.

Delivered as a turnkey system, this system combines cutting-edge technology with methods prooven to provide a class-leading feature set essential for the conception and supervision of your complex systems:

- **Collects input data (archiving of all events chronology)** for local heterogeneous interfaces or remote systems (Usually IP or serial interfaces) such as PLC and digital I/O devices
- **Real-time calculation and alarms archiving** freely configurable involving edition of local configuration files

- **Saves the chronology of events** in structured log files time and date stamped.
- **Provides alarms** in a local or remote database or mixed data (input data, local expressions, alarms) in an **OPC server** (ua) or **Modbus** (This allows integration in third party supervision systems, and greater accessibility of all the system variables)

Both functions, data archiving and alarms calculation, are severable.
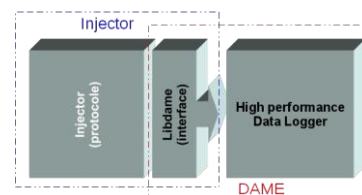
Video recording from **IP camera** as well as **laser sensors devices** (SICK, BEA) is also available.

The system can be only provided as a data logger or together with the alarms calculation and generation.

Since alarms are available from the database, it is also possible to feed an external HMI to display and presents these alarms in a graphical way (perfect to developed loosely coupled architecture).

The real-time alarm generation engine is programmed with powerful algorithms, offering complex links between all data injected from external equipments, thanks to edition of rules and logical expressions by using a simple text editor.

Data are collected per equipment and via software injectors that are used to perform translation of all system events into memory variables (couple of variable, value).

A range of different sort of criteria allows to do the filtering of all collected data. Specificaly, the settings of threshold values, timeout, conditions from others variables...

Performances have been optimized in order to be in a position to respond fully to the requirements of an heavy load. The time interval between two events could be as low as few milliseconds for each equipments family, depending on the underlying protocol and the volume of data to collect, since data are collected per equipment.

Each injector allows to separate the collection protocol implementation from the data extracted in order to make protocols completely transparent from the point of view of the generic architecture of the Dame. There are no limits of any sort of injectors that may be developped.

The CLEARSY high-performance data logger build a memory tree reflecting the status of all external variables available in your system (each variable is relative to a real event). Local expressions (combination of various variables) and then rules are updated if necessary and combined to produce alarms.
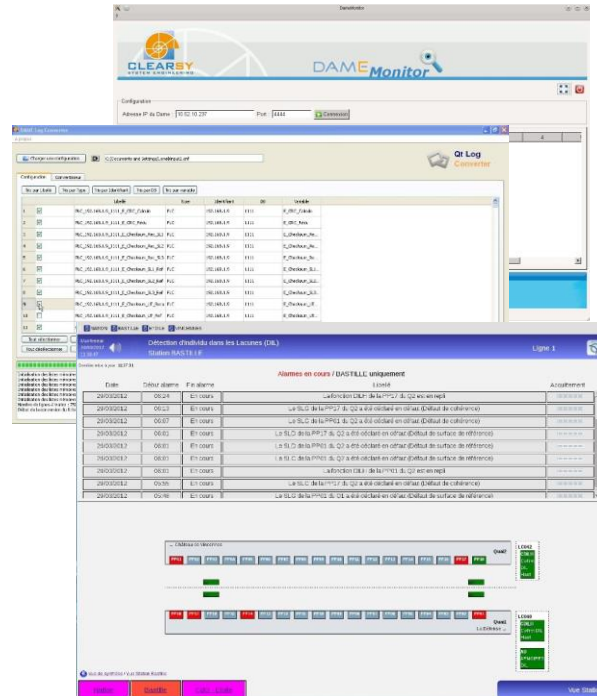
The Dame was designed and developed to respond to the need of scalability and modularity.

The injectors approach allows us to extend easily the range of devices supported by a framework, without needing to modify the core of the application that makes and optimal use of a large range of open technology (text based or xml configuration file, csv format output file, database like SQLite or PostgreSQL, SOAP, Modbus).

The high-performance data logger from CLEARSY is an efficient framework for real-time information on the state of functioning of installed equipment, for archiving of all events chronology and elaboration of operational alarms.

Several tools are available to handle archived data or to know the current status of all internal variables (data extraction, monitoring, statistical calculation and reporting).

Developed by Clearsy, this high-performance data logger is perfect in high availability architectures where the archiving of historical continuity of data is a core issue. Developed under Linux, it was designed to support lower devices such as industrial PC or small PC fanless.

Powerful and efficient, while remaining open and easily extensible, the ClearSy high-performance data logger is the ideal partner to be at your side in your industrial developments.