



ALSPA P1200NT
A unique view of your application

ALSTOM

ALSPA P1200NT: from single local stations to large-scale systems

ALSPA P1200NT: a supervision system for all industrial applications

The ALSPA P1200NT family of supervisory systems is an excellent solution for supervising small and medium-sized processes in different industrial applications. Flexible architecture means they can be used both as single stations for independent local control and as the basis for large-scale systems.

Providing an extremely attractive cost-performance ratio, ALSPA P1200NT offers :

- simple and easy process supervision from a PC
- communication using standard protocols.

Application specific requirements can easily be integrated into ALSPA P1200NT thanks to its user programs which can be written to create specific solutions for application requirements.

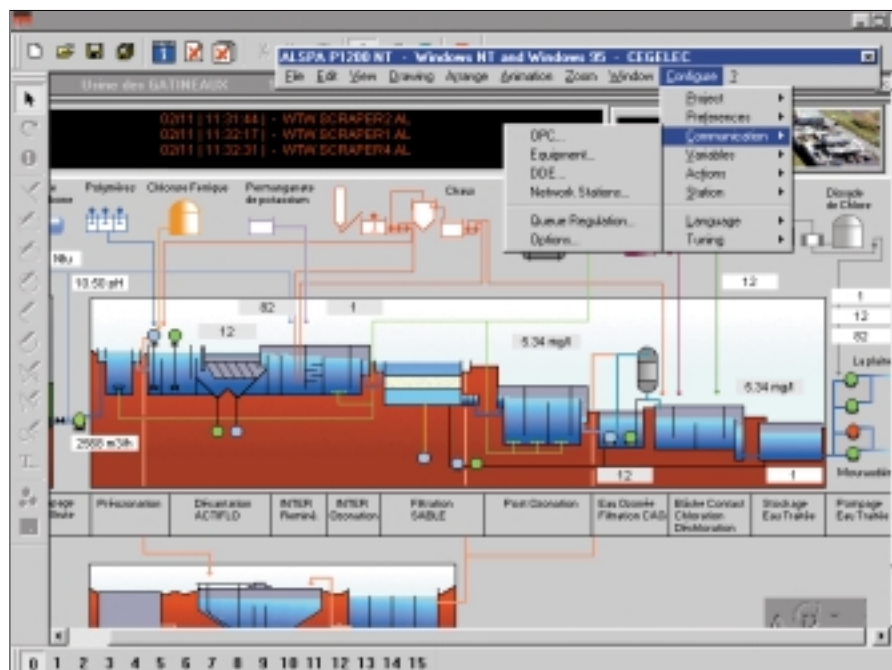
Open to industrial applications

Suitable for supervision of continuous and discontinuous processes, the ALSPA P1200NT can be used in all industrial applications and the service sector:

- aeronautical engineering
- food technology
- chemical industry
- energy
- metallurgy
- water treatment
- transport
- glass industry

ALSPA P1200NT a long-distance supervision system

ALSPA P1200 Web can be used to view plant monitoring screens via an Internet browser connected to either an Intranet or Internet network.



Multiwindowing : monitoring screen, data logging window and trend window.

ALSPA P1200NT is user-friendly

Designed to be operated by users without specialist training, ALSPA P1200NT software requires nothing more than parameter setting in order to use the standard functions. The operator is assisted at each stage by drop-down menus and can therefore make rapid progress, both when creating mimic screens, and when configuring or running the application.

Windows 95® and Windows NT® standards provide a familiar interface and a set of presentation rules to help operators adapt to the machine and their work.

In order to improve ease of use for operators and ensure safe supervisory control, ALSPA P1200NT manages the visibility attributes so that only those actions which are relevant to the current control phase are displayed on-screen.

Windows 95® and Windows NT® are Microsoft Corporation trademarks.

Graphics environment

Simple, high-performance tools are used to create the application graphics with, for example, trend windows and predefined alarm message formats.

Display screens

- multiwindowing
- number of mimic screens : unlimited*
- bitmap and vector formats
- advanced graphics functions
- number of animations : unlimited*
- bitmap component and object library
- use of the cache memory for fast loading
- tracings on 16 levels, displayed in accordance with the operator's access rights

*Depending on the memory available

Status logging

- clock synchronisation on GPS
- time distribution
- event dating at source, with a **precision of 10 ms**
- logging on hard disk and printer
- unlimited size and number of files
- user configuration
- archiving
- sorting in chronological order
- filtering by domain and type

Dynamic configuration

The graphic interface, hierarchical database and object library can be modified while process supervision is in progress. All types of modification of the application are permitted so that alarm detection and log management in particular can be performed without adversely affecting operation.

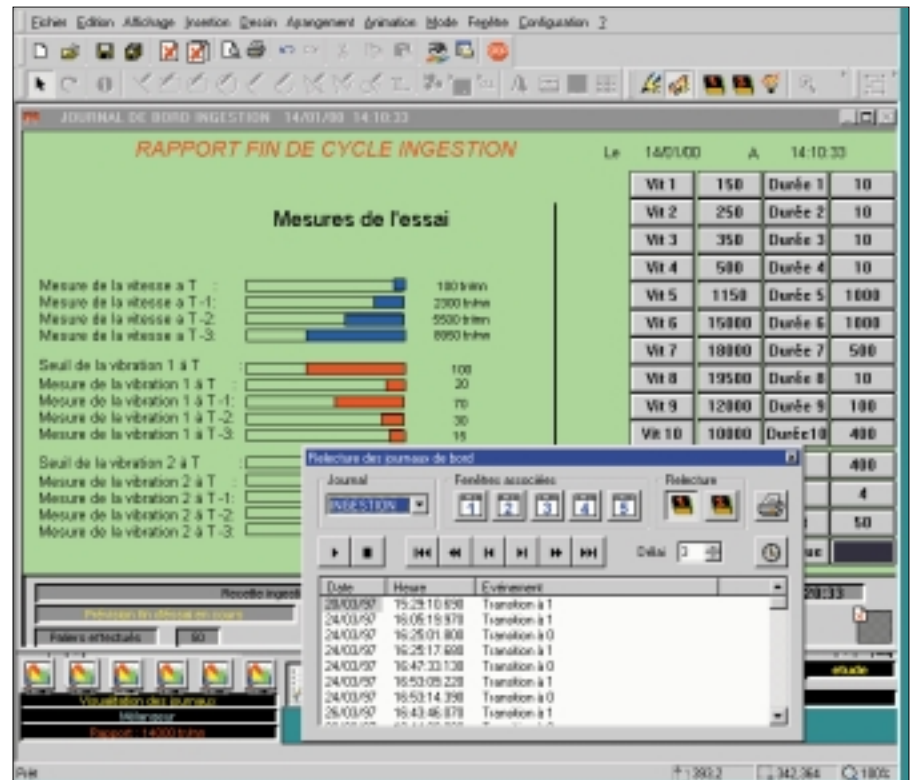
Alarm management

- multiple alarm windows
- thirty alarm levels
- 8 alarm states
- 8 user-definable colours
- logging on disk
- printing
- filtering by domain and type
- direct access to the associated mimic screen

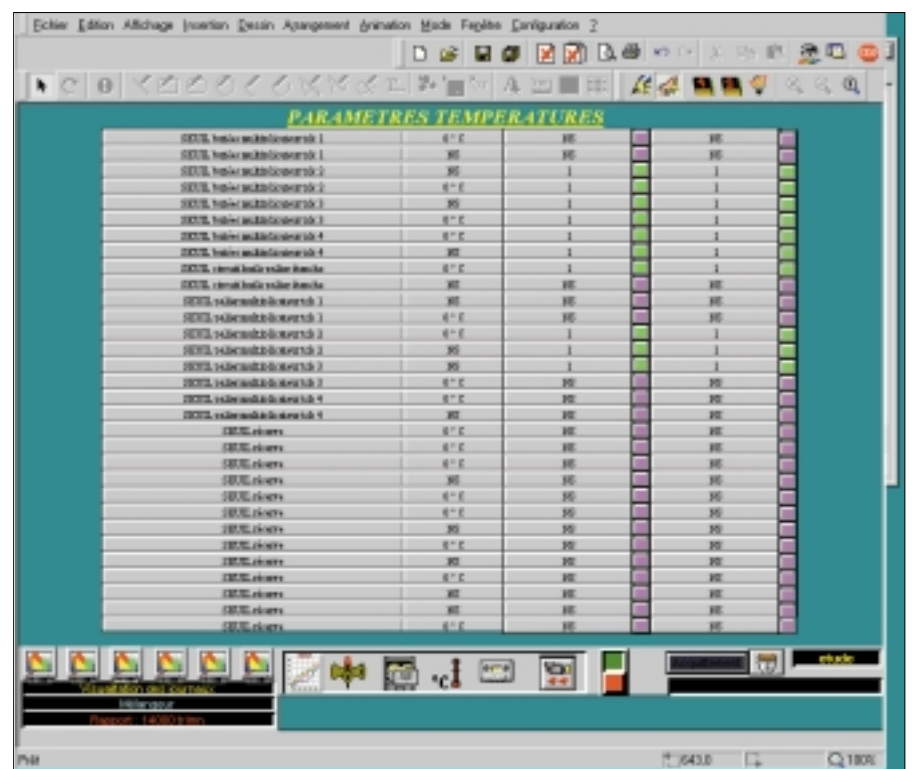
Journals and video recorder

A journal is made up of the same components as a mimic screen. Journals can be printed or archived on a cyclic or event-triggered basis, or at the request of the operator.

The video recorder function is used to display journals which have been logged. Since these journals have the same format as a mimic screen, the archived plant activity can be replayed using the «forward», «back» and «stop» buttons in the same displays as the real time activity.

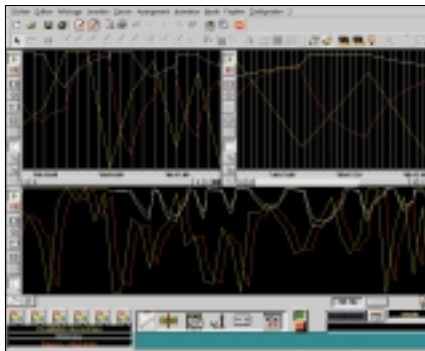


Video recorder



Print-out of a log

ALSPA P1200NT: easily adapted to your specific applications



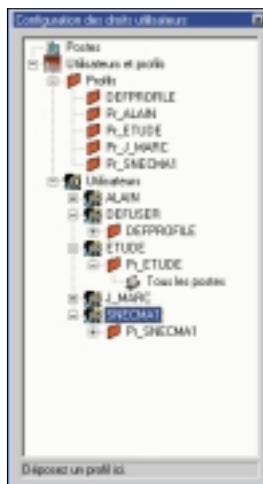
Trend charts

Trends

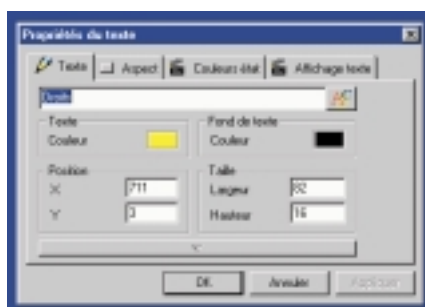
- historic and real time trending, in ASCII format for data export or binary format for speed, on a change of state or periodic basis
- multiple trend windows
- up to eight curves per window
- zoom and panorama views
- cursor to read selected values

Access rights

A set of priorities is assigned to each user, allowing access tailored to each operator.



Access rights



Object properties

An application-specific approach

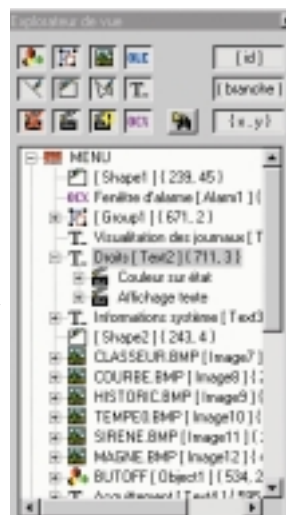
Hierarchical database

With the hierarchical database, data is organised so that it follows the structure of the process as closely as possible. This facilitates operation and the creation of links between variables and animated objects from the library.

An application-specific approach allows the system integrator to create models using a standard representation, saving time during configuration and maintenance phases. It also ensures total homogeneity of representations for users.

Object library

ALSPA P1200NT has a preconfigured graphic object library which can be modified or entirely redrawn and animated using different colour, text display and window sequencing effects. Any modification of objects is automatically applied throughout the application.



Object explorer

Object-oriented graphics save time during creation stages and simplify the implementation of characteristics which are directly associated with the equipment rather than with the elementary variables.

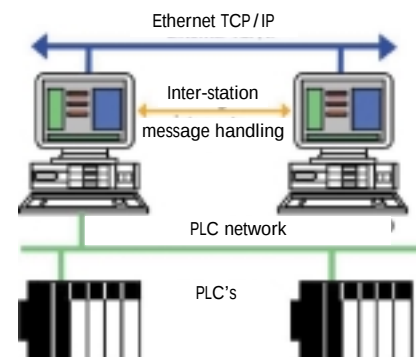
Extended communication

ALSPA networks

- ALSPA N80 : a token network; an ideal compromise between cost and performance for manufacturing applications
- ALSPA E80 : Ethernet TCP/IP, the communication standard for production cells
- ALSPA F8000 : the reference for field networks for time critical control in high-speed industrial applications
- ALSPA S8000 : the power and openness of Ethernet TCP/IP for client-server architectures

Multi Station operation

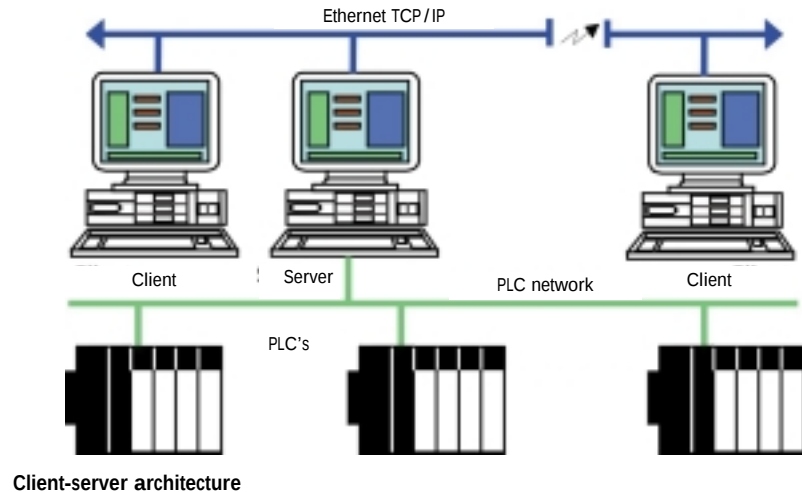
Multi Station operation is most suitable for applications where a number of semi-independent processes are linked. In a Multi Station configuration, ALSPA P1200NT uses a distributed database system. The P1200NT message handling system exchanges variable values in real time between the stations and authorises broadcasting of alarm acknowledgements and operator actions.



Multistation operation

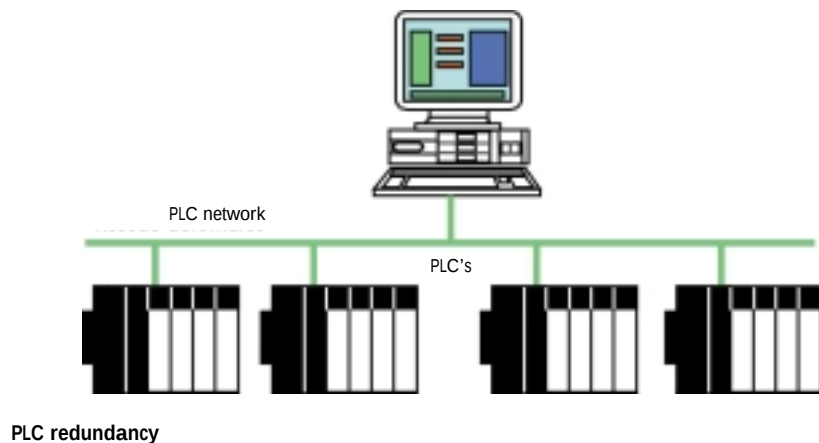
Client-server architecture

This architecture is suitable for applications where multiple operators require access to an integrated process. The server is a data producer which communicates with the PLCs and broadcasts data to the operator stations and their mimic screens. It acts as a front-end communication interface. This structure guarantees total compatibility of the data presented to the different operators. The client operator stations can be located on another site, accessing the server via an STN network or any other telecommunication method.



Management of redundant PLCs

ALSPA P1200NT includes ALSPA PLC redundancy management, thus simplifying station configuration and PLC programming.

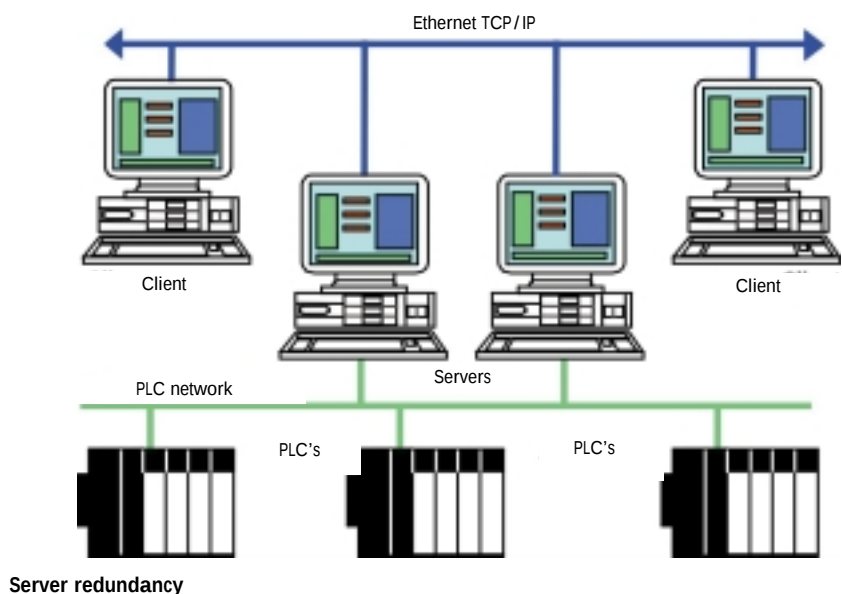


Server redundancy

Two redundant servers operating in parallel are assigned to communicate with the PLCs. Each client is linked to a main server and a secondary server. It is automatically switched to the secondary if the main server is unavailable.

Third-party connections

ALSPA P1200NT supports multiprotocol interface cards and can therefore be connected to any type of controller.



ALSPA P1200NT: gateway to the future

ODBC interface

Using an ODBC* interface, now the industry standard for databases, all or part of the archives (trends, logs, journals) can be recorded in a relational database.

In addition, recipes can be created in an external database and read by an ALSPA P1200NT supervision station.

* Open DataBase Connectivity

DDE and DLL dynamic links

Openness is built in to ALSPA P1200NT at several levels through the use of standard communication protocols. Data is exchanged with external applications using DLL* interfaces to call up external functions or DDE* interfaces to exchange data.

DDE*: Dynamic Data Exchange

DLL*: Dynamic Link Library

SCADA BASIC user program

Designed for customising industrial applications, this structured language is used to access a wide range of functions, such as logic processing sequences, animations and external DLL-managed programs. It allows manipulation of all the ALSPA P1200NT control station components via a special, user defined program.

OLE 2 links

ALSPA P1200NT has an OLE* 2 interface which means that windows animated in realtime by any other Windows application, such as a spreadsheet or database, can be included in the runtime screens.

OLE*: Object Linking and Embedding

Active X

ALSPA P1200NT is an Active X container.

Any Active X component can be integrated into mimic screens and animated in realtime.

ALSPA P1200 Web

ALSPA P1200NT includes a web server for the Internet (called ALSPA P1200 Web). Any mimic screen, alarm view or trend can be accessed via an Internet browser such as Internet Explorer® or Netscape. Secure management of access to the Web server allows both Intranet and Internet operation.

With Intranet, any connection point to the Ethernet network on the site becomes a possible control point.

With the Internet, remote maintenance is possible from anywhere in the world.

The secure access system of ALSPA P1200 Web allows both display and control options, depending on the user's rights.

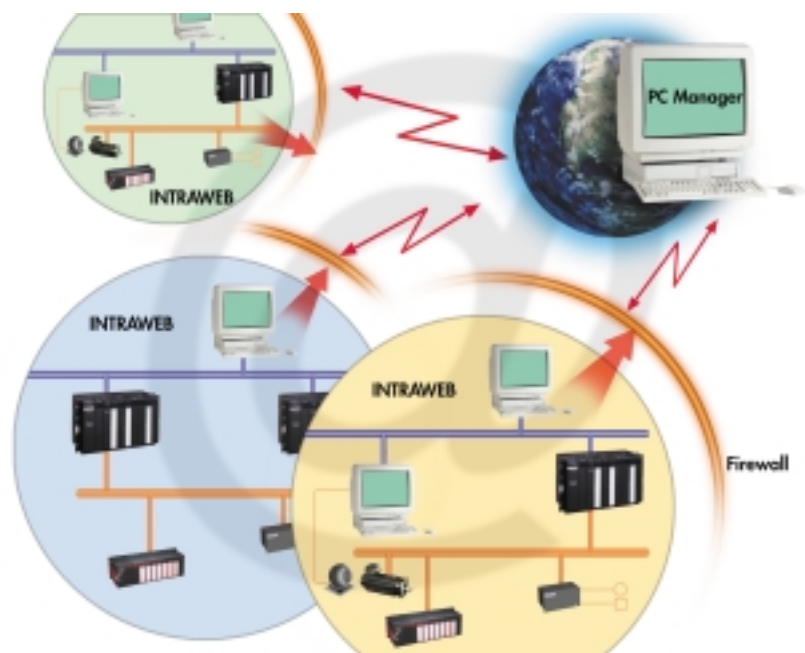
Visual BASIC®

All graphics components can be accessed using the Visual BASIC program to enhance the operator interface.

The benefits of ALSPA P1200NT

ALSPA P1200NT is a 32-bit application written for a Windows NT environment. The multithread structure of the software means it can be used on multiprocessor hardware architectures.

Internet Explorer®, Visual BASIC®, are trademarks of Microsoft Corporation.



ALSPA P1200 Web

Technical specifications

Maximum value			Maximum value		
Alarms	Alarms	32000	Trend charts	Realtime buffer size	32000
	Logged alarms	unlimited*		Logging period	0 à 32000 s
Logging	Events	unlimited*	Recipes	Number of recipes	2000
	Operator actions	unlimited*		Variables per recipe	5000
Logs	Archiving unit	512	Actions	Event-triggered	32000
	Unit size	2000 Mb		Function keys	32000
Windows	Animation per window	unlimited*		Sequences	512
	Windows on disk	unlimited*		Formulae	32000
	Windows in cache	99			

* only limited by the memory available or hard disk size.

Product references

The different models are distinguished by the number of variables supported. The figures below correspond to the total number of external, equipment or DDE variables. The number of internal variables is unlimited in all software versions

Model	maxi (MX)	senior (SR)	mini (MN)	junior (JR)	micro (MR)
Max. no. of variables	unlimited	5000	1000	250	75

Stand alone ALSPA P1200NT

Maxi model, including protocol, serial link or Applicom card as standard

Reference P1200NT	Description
P1200NT/MX/C	Maxi P1200NT software, complete version.
P1200NT/MX/DV	Maxi P1200NT software, development version.
P1200NT/MX/RT	Maxi P1200NT software, run-time version only

Senior, mini, junior and micromodels have exactly the same versions as the maxi model.

Client-server ALSPA P1200NT

Client maxi model

CLI/W/MX/C	CLI/NT/MX/C	Variables consumer (client), complete version
CLI/W/MX/RT	CLI/NT/MX/RT	Variables consumer (client), run time version

Client senior and client mini models have exactly the same versions as the client maxi model.

Server maxi model

SERV/W/MX/C	SERV/NT/MX/C	Variables producer (server), complete version
SERV/W/MX/RT	SERV/NT/MX/RT	Variables producer (server), run-time version

Server senior and server mini models have exactly the same versions as the server maxi model.

Protocol options for :		Stand alone P1200NT	Server P1200NT	Client P1200NT
P1200NT/E80	E80 protocol	yes	yes	no
P1200NT/S8000	S8000 protocol	yes	yes	no
P1200NT/DRV	Additional third-party protocol	yes	yes	no
P1200NT/MES	Inter-station message handling	yes	yes	no

ALSTOM Power Conversion

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