T800

MODEL

EUROTHERM suite
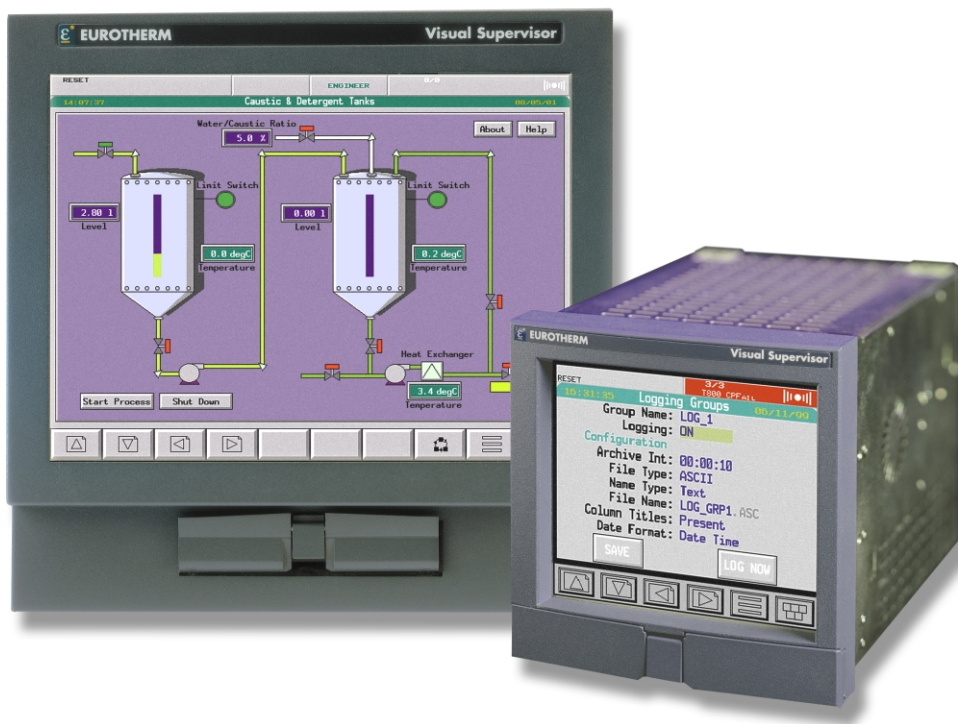VISUALISE · CONTROL · RECORD · AUTOMATE
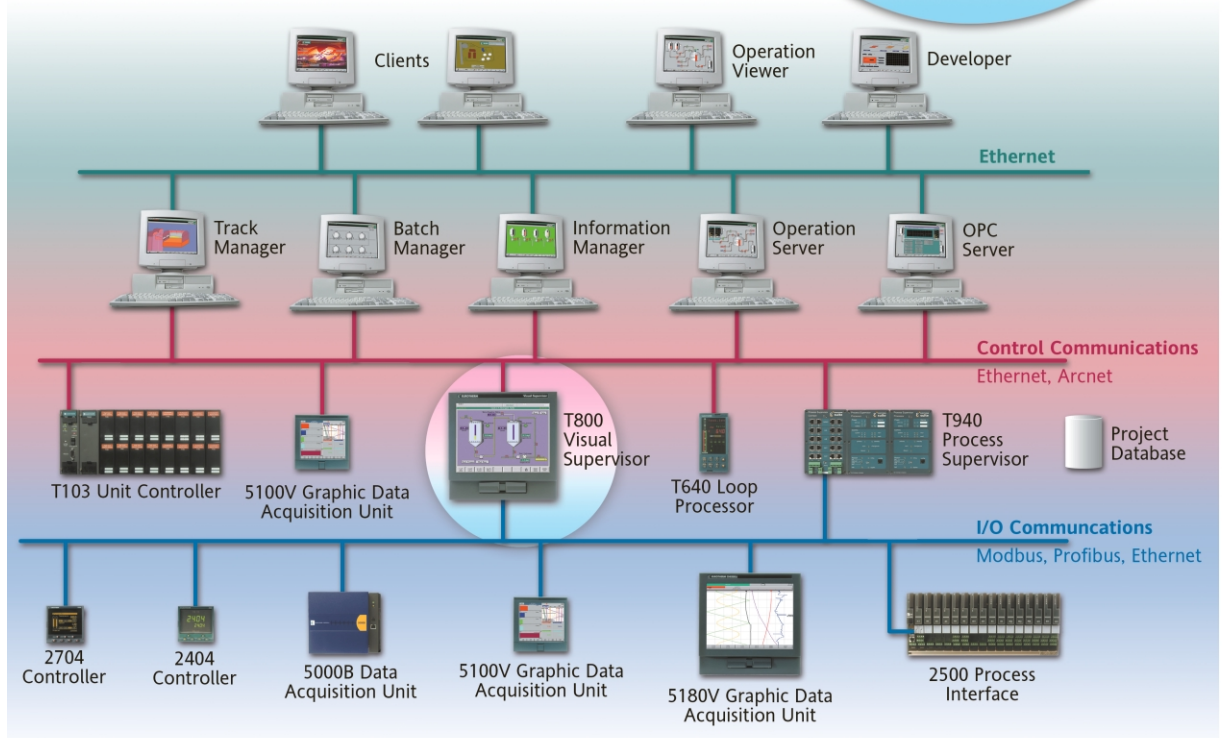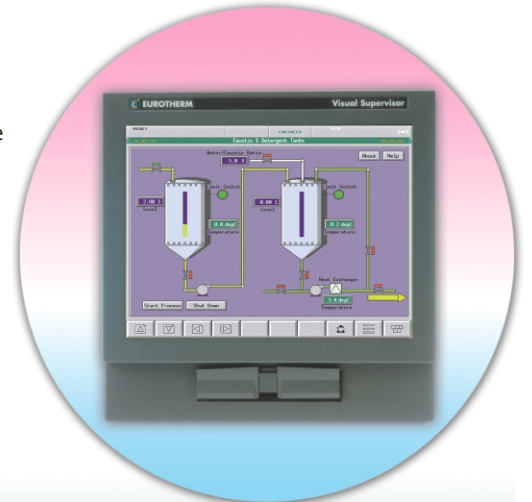
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EUROTHERM

Visual Supervisor
Product Data

- ● **Accurate control** – Improve efficiency and quality

- ● **Cost effective** – Reduced configuration, integration, installation and wiring

- ● **Stand alone** – Single integrated unit

- ● **Easy to use** – Custom displays to match your operation

- ● **21 CFR Part 11** – Electronic Records and Electronic Signatures

VISUAL SUPERVISOR'S features include:

- **Powerful controller:** Continuous and sequential control
- **Comprehensive Batch Control:** Batch control with batch log and report
- **Extensive operator display:** Standard displays plus 99 configurable ones
- **Comprehensive data logging:** Multiple log groups
- **Advance trending:** On-line and Historical trending
- **Powerful recipe package:** Download, Upload with online monitoring
- **Alarm and event management:** Historical and summary plus operator note
- **Powerful Setpoint Programmer:** 4 Setpoint programmes simultaneously
- **Comprehensive security:** User based controlled access
- **Open I/O network:** Supports Profibus Master, Modbus master and slave
- **Local disk drive:** Archive and load Strategy, Recipe, Setpoint Program
- **Rugged display:** IP65, Touch screen available in $1/4$ VGA or full SVGA
- **Multiple language support:** on-line language change
- **Printer support:** Prints alarms & events and Reports on demand

Visual Supervisor is an innovative multi-function control and display product. This product combines the well-established expertise, which Eurotherm has in control, data acquisition and process automation into a single product. It can be used either as a stand-alone system, or as a building block within a larger system. It can be connected to Eurotherm's proprietary ALIN local network, allowing both peer-to-peer and system communications.
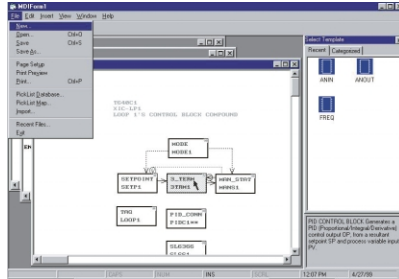
Visual Supervisor is a mini DCS offering several features in a single unit. Its flexible combination of the powerful display and control functions including batch has been recognised as an exceptionally cost-effective solution, offering great versatility for a wide range of control requirements. The Visual Supervisor is being specified for applications as diverse as pharmaceutical/ chemical reactors, food and beverages, glass furnaces, multi-zone and specialist furnaces, injection moulding and extrusion systems, and other multi-loop applications.

CONTROL ENVIRONMENT

The Visual Supervisor is capable of both continuous and sequential control. Its open network architecture allows connection to the Process Interface (2500) I/O modules and other third party devices. Separating the processing from the I/O allows physical distribution of the modules which saves on wiring costs.
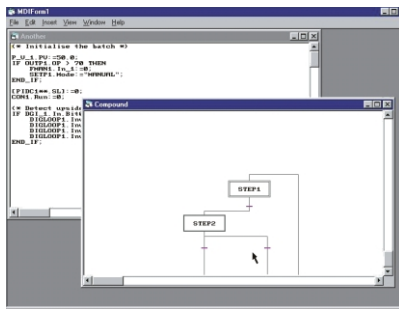
Continuous control

The continuous control strategy is built by interconnecting function blocks selected from an extensive library.

- Advance control

- Easy to use block structured programming

- Function blocks library includes control, timing, logic, math

- ISA-S88 based control modules representing physical plant equipment such as valves, pumps

- User configurable function blocks

Sequential control

Sequential strategies are built using the powerful and intuitive Sequential Flow Chart (SFC) configurator. The sequential control capability of the Process Supervisor allows the configuration of phases for batch process as defined by the ISA-S88 process model.

- Ideal for configuration of phases for a batch process

- Multiple sequences running simultaneously

- Sequences can be loaded and unloaded as required by process

- Easy to use Sequential Flow Chart programming

COMMISSIONING AND DIAGNOSTIC TOOLS

Visual Supervisor's commissioning and diagnostic tools are designed to speed up the commissioning.

- On-line monitoring of function blocks, wires

- Extensive communication/system diagnostic blocks

- Speedy commissioning of sequences using on-line monitoring tools
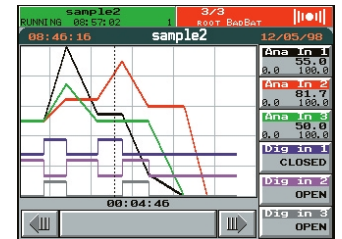
BATCH CONTROL

Batch Manager enables an operator to control (i.e. load, start, hold, restart, abort) a batch, and monitor its progress from standard displays. Each batch being is identified by either a unique number (automatically generated) or a batch ID entered by the operator.

- Configure a batch from Set-up page

    - Unique custom/automatic Batch id

    - Recipe selection

    - Six operator entry fields such as customer name, product type

- Comprehensive batch control including Start, Hold, Abort, Restart, Reset, etc.

- Automatic recipe download

- Automatic batch log and report generation
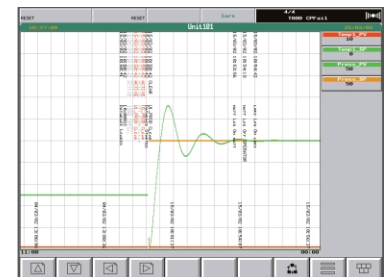
MULTI-SETPOINT PROGRAM

Setpoint Program feature enables the operator to select and run from the list a Setpoint Program. With the Preview facility, operator can view the Program before running it. Once the program is running, the Setpoint and achieved process values are plotted on the screen as trends.

- Upto 16 analogue Setpoint Profiles, 32 Digital output Profiles and 500 segments on a single time base

- Upto 4 Setpoint Programs running simultaneously

- Stores up-to 50 Setpoint Programs

- Comprehensive control: Run, Run from, Hold, Skip, abort, Schedule, etc.

- On-line graphical monitoring

- Local and remote editor

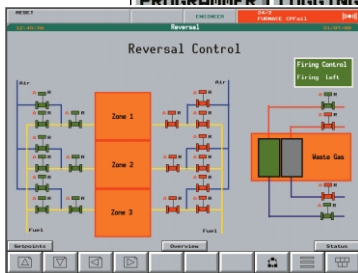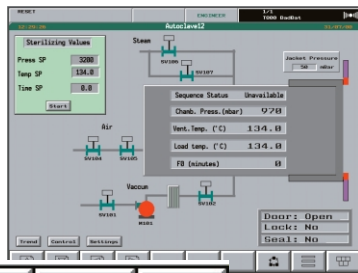- Load Setpoint Program via local disk drive

TRENDING

The Visual Supervisor trending capability allows trending of analogue and digital values

- On-line trending (horizontal, vertical, bar graph and numerical display)

- Historical Trending

- Option to include audit trail (alarms, events) on the trends

- User screen trends

INTEGRATED DISPLAY PANEL

The Visual Supervisor offers an integrated colour LCD display panel. A simple configurable 'pop-up' navigation menu enables the user to access its wide range of functionality.

- IP65, touch screen display
- Available in ¼ VGA (144 x 144mm) or
  Full SVGA (288 x 288mm)
- Auto configured displays
- Standard displays for various features
- Up to 99 configurable process displays
- Configurable panel messages with optional actions and responses
- Support for external keyboard
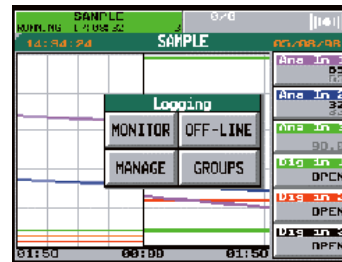
ALARM AND EVENT MANAGEMENT

The alarm and event management feature of the Visual Supervisor time stamps all alarms and event messages and provides a comprehensive audit trail as required by 21 CFR Part 11. For alarms, the alarm history log displays the "activated", "acknowledged", and "de-activated" times in a single line.

- Alarm and event logging with date and time stamp
- Tamper proof audit trail
- Standard Historical and summary displays
- Single or multiple alarm acknowledge
- Ability to add notes to the alarm history log
- Option of including alarm and events in the log/batch logs
- Archive on demand

HISTORICAL DATA LOGGING

The data logging feature of Visual Supervisor logs the selected data periodically to files. Log files are available in either ASCII or "tamper proof" format.

- Multiple log groups
- Batch, hourly, daily or on demand logging
- Log one group or several groups simultaneously at different rates
- Optional addition of alarms, events and operator messages to the log file
- Possible addition of Reports to the log file

21 CFR PART 11 VALIDATABLE

Auditor features on the Visual Supervisor has been specifically designed to meet the requirements of the FDA 21 CFR Part 11 for Electronic Recorders and Electronic Signatures. Tamper proof Electronic data can be viewed, analysed and printed off-line using the secure eReview package.

Tamperproof Electronic Records

- Process Values and Audit Trails (Alarms, Events, Electronic Signature)
- Data and Time stamped
- Time Synchronisation
- Viewable in human readable format
- Export conversion facility to Excel

Electronic Signature

- User actions with signing and authorisation
- Unique signatures required
- Automatic Log-off
- Minimum length password
- Access control according to authority level
- Automatic password expiry

RECIPE

The Recipe feature of the Visual Supervisor allows recipes to be created, maintained and downloaded from the front panel. The order of execution of a recipe is the order of the values in the file in a top-down manner.

- On-line and off-line recipe editor
- Upto 250 parameters per recipe
- Automatic version control
- Ability to store multiple recipes, with download and capture facilities
- Advance recipe monitor with diagnostic information
- Optional multiple recipes in a single file, easy to maintain

PRINTER SUPPORT

A parallel/serial printer support package is now available. An application running in Visual Supervisor can be configured to:

- Send alarm and event messages to the printer
- Send report files to the printer
- Supports special control sequences for formatting the printed alarms and events
- Can be connected to any printer which supports ASCII code

SECURITY/AUTHORISATION

The Visual Supervisor offers a comprehensive security, which controls access to various features and to individual parameters on the mimics as required by 21CFR11 Part 11.
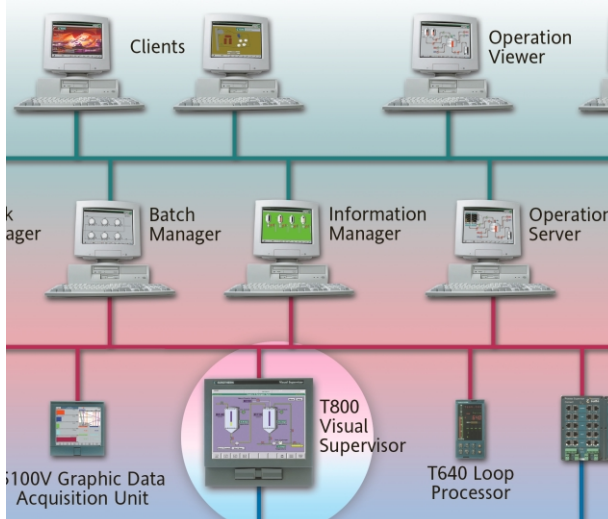

- Controlled Access
- Each user with a unique ID and password
- Offers five level of access: Admin, Engineer, Commission Engineer, Operator and Locked
- Electronic signature with "Reason" and "Authorisation"

REPORT

Reporting feature of the Visual Supervisor allows reports to be created and sent to the printer or log files on demand.

- Triggered/ controlled from the strategy
- Configurable Reports using a "form" file
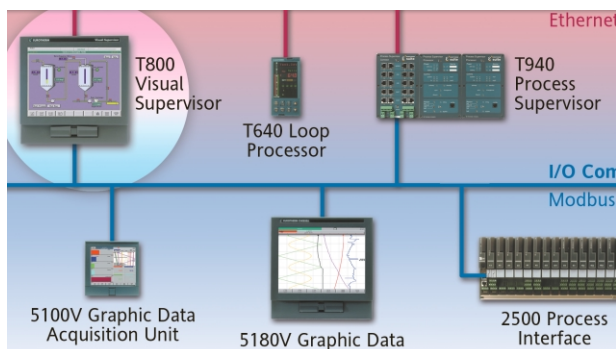- Supports multiple reports
- Supports Fixed text

CONTROL NETWORK

Visual Supervisor's control network provides peer-to-peer LIN communications with other control nodes such as Process Supervisors and additional Visual Supervisors. This communication is provided using ARCnet or Ethernet and is the method of connecting to Supervisory systems. Visual Supervisor can also be used to communicate with any third party device that supports Profibus DP and Modbus RTU protocol.

- Peer-to-peer communication between nodes using LIN protocol
- Available on ARCnet or Ethernet cabling
- Profibus DP master
- Modbus RTU master and slave
- Simultaneous support for Profibus, Modbus, and ARCnet or Ethernet

OPEN I/O NETWORK

Visual Supervisor is designed to use Eurotherm's 2500 for its distributed I/O system. It can also communicate with any third party device that supports Profibus DP or Modbus RTU protocol.

- Connectivity to 2500 distributed I/O via Profibus DPV1
- Available as Profibus DP master
- Supports Modbus RTU master and slave
- Simultaneous support for Profibus and Modbus

EXTERNAL DEVICES

Visual Supervisor is capable of supporting Barcode Readers or Scanners. The information entered from Barcode readers and Credit Card Scanners card could be used in a variety of ways including

- Automatically login

- Load appropriate recipes/recipe parameters

- Ability to write to database

- Cause actions in the database: acknowledge alarms, change displays, etc.

- Provide product information (part/order number, customer info etc) for batch logs
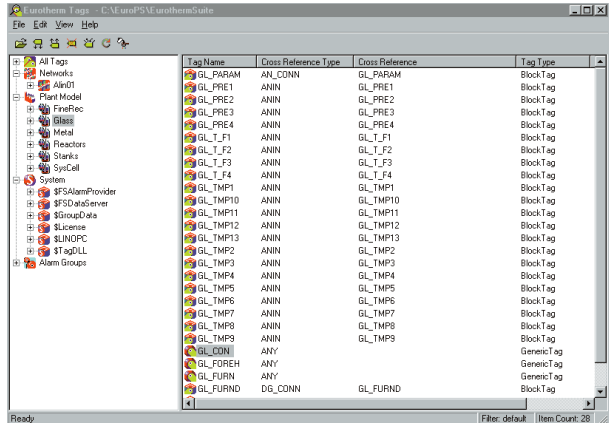
Visual Supervisor can be configured to provide "Pattern Match" on the text input from the barcode readers/ scanners and initiate appropriate actions in the database.

LOCAL DISK DRIVE

A standard 3.5" floppy disk is fitted behind an IP65 standard door. The Floppy disk can be used for various functions including:

- Data logging

- Alarm archive

- Cloning for back-up and replicating strategies

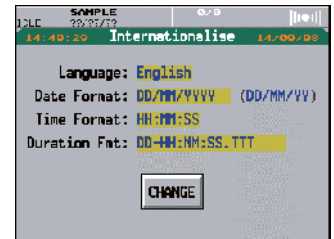- Load Strategy, Mimics, Recipe, and Setpoint Programs

CONFIGURATION

Eurotherm Project Studio 2000 contains the LINtools that is used to build both continuous and sequential control strategies and user screens. Eurotherm network explorer is also available to download files, and stop/start each individual Visual Supervisor node.

MULTIPLE LANGUAGE SUPPORT

The working language of the Visual Supervisor can be changed on-line by simply selecting the required language from the display panel.

- On-line language change

- Currently supported languages include English, French, German, Spanish, Italian

- European, US, or Japanese date and time format available

- Multiple language mimics support using dictionary files

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