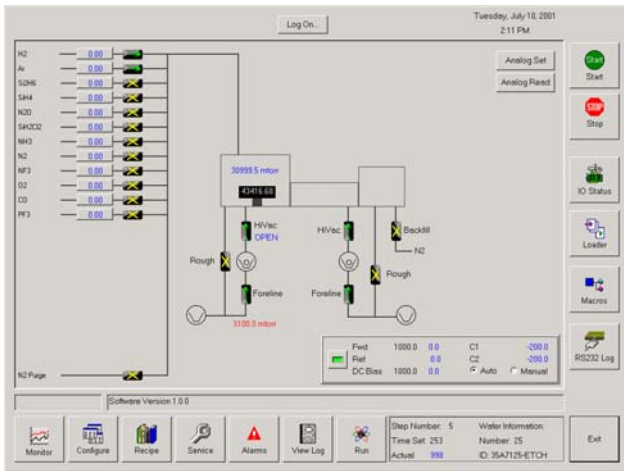
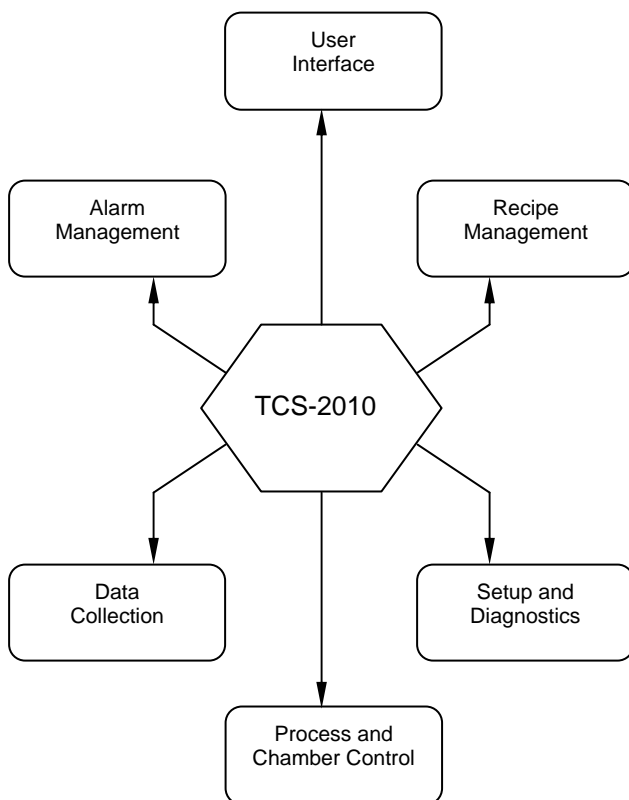


# PlasmaQuest / PlasmaTherm Control System Retrofit



## Software Architecture



## Features and Benefits

- Improves system reliability
- Expands life of the system by replacing the deteriorating control system
- Non-proprietary control system hardware
- Friendly graphical user interface uses a light pen and keyboard for entry of system commands
- Takes advantage of the latest Windows® XP features to provide real-time control capabilities
- Industry standard SEMI compliant interface
- Reduced risk – source code included for archival purposes or future customer developed enhancements

## Description

The Qualtx TCS-2010 control system upgrade for the PlasmaTherm and PlasmaQuest process equipment is intended to prolong the life of the equipment while improving system reliability.

By utilizing non-proprietary hardware and supplying the source code for the system Qualtx provides a solution path to the future that can be enhanced as control system technologies evolve.

The control system software includes a graphical representation of system components. Relationships between components are easily determined thereby reducing errors caused by operators. For example: If the operator wants to vent the chamber manually he can see that the valve between the pump and chamber needs to be closed and the backfill valve needs to be opened.

The TCS-2010 software offers manual or fully automatic operation of the process system. The software includes system configuration to set configuration parameters, an Excel-style recipe editor for storing process parameters, a data collection engine that stores process data for archival and analysis, and an alarms manager for monitoring set points and actual readings.



Features are subject to change without notice.

## Controller Features

- Drop-In replacement for existing controller
- Pentium class processor
- 256 Meg RAM, FDD, HDD, CD-ROM, Ethernet
- Analog Outputs (D/A converter) - 16 bit resolution
- Analog Inputs (A/D converter) - 16 bit resolution
- Digital Outputs - isolated with SPDT form C relays
- Digital Inputs - optically isolated with LED to indicate input status
- Controls: Gas, Pressure, Temperature, Microwave, RF, and DC Sources

### Included as part of the turn-key system upgrade:

<b>Equipment</b>	All control system hardware and software to complete the upgrade.
<b>Labor</b>	On-site labor for removal of old controller and installation of new controller.
<b>Wiring</b>	Harness provided to connect components to the non-proprietary I/O boards.
<b>Test</b>	Verification of complete system operation with the new control system.
<b>Documentation</b>	Control system user's manual with wiring diagrams.
<b>Training</b>	Training in the use of the new control system and software.
<b>Warranty</b>	One year against manufacture defects.

### Source Code:

Source code is provided with a signed license agreement that it will be used for archival or modification purposes for one system only. The software may not be transferred and or duplicated for use on any other system. The source code may not be given to a third party.

### Additional Products and Services

In addition to the PlasmaTherm control system upgrade, Qualtx Technology offers a family of replacement control products, as well as a complete range of engineering, wiring, installation, programming, and training services.

Qualtx Technology can design a new or replacement control solution to meet specific application requirements.

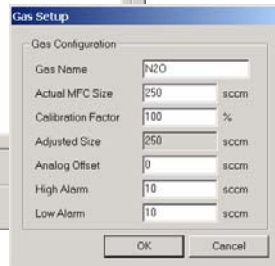
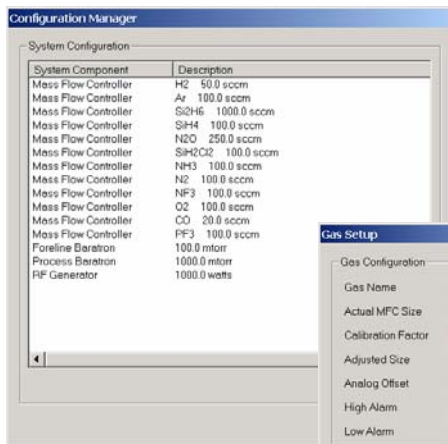
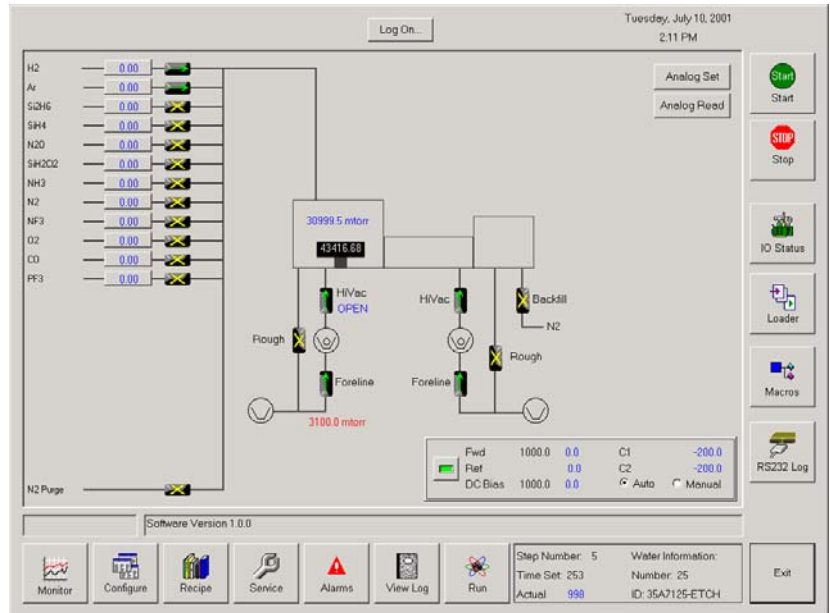
Contact Qualtx Technology or an authorized representative to receive more information about the complete line of Qualtx Technology control system solutions.

# SysView Software

The SysView user interface includes a graphical representation of system components.

Relationships between components are easily determined thereby reducing errors caused by operators.

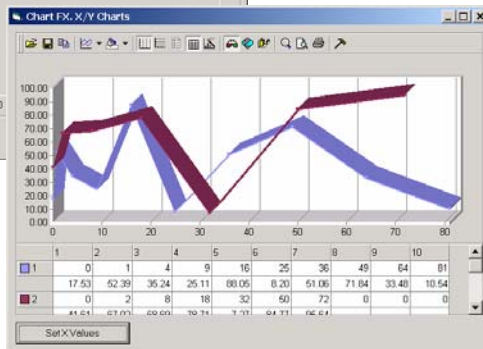
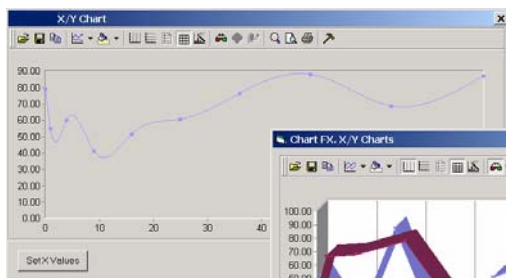
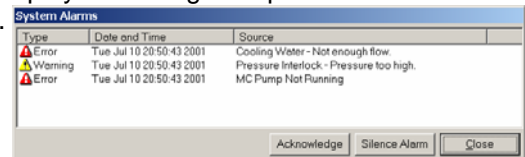
For example: If the operator wants to vent the chamber manually he can see that the valve between the pump and chamber needs to be closed and the backfill valve needs to be opened.



The configuration editor allows the user to edit system components. The component size, offset, high, and low alarm parameters can be configured.

A high and low alarm setting provides a valid operating range for each component. If a component drifts out of range the reading on the main screen will turn from blue to red to alert the user that the component is out of range.

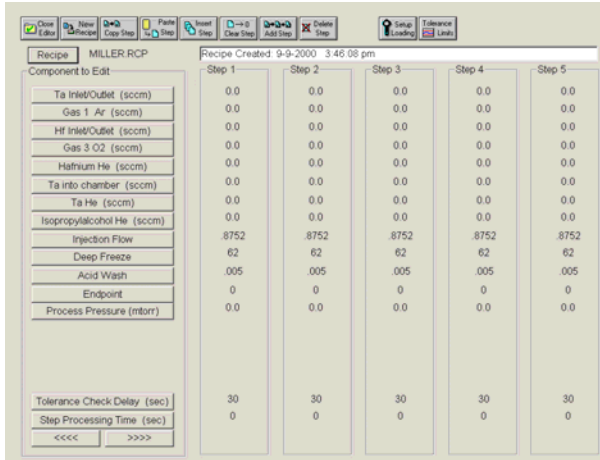
When operating in automatic run mode the System Alarms window will be displayed alerting the operator of the out of range condition.



\*Graphs allow the user to view the data run on the system. Data can be viewed live at run-time or used for analysis after the run.

Chart Types Include:

- Line
- Bar
- Area
- Pie
- Scatter
- Surface



The recipe editor allows the user to create and edit multiple step recipes.

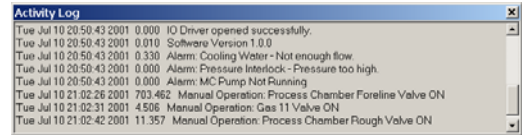
The recipes are then used in the automatic processing mode.

The recipe editor allows all system components to be programmed to run automatically.

A log on dialog that requires the user name and password limits user access.

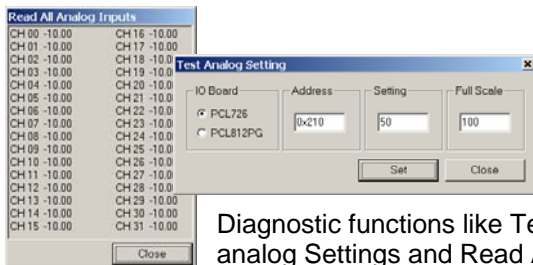


The Activity Log window displays events that are occurring on the system. Each message is logged with a date and time stamp. The log window logs the actions the operator makes when the system is in manual operation mode.

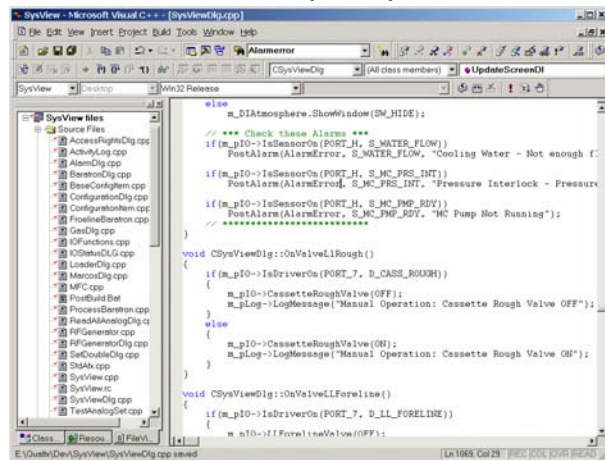


The system administrator assigns rights to the system so that users only have the access to the system that is required to perform their job.

System source code is included with the system for archival or modification purposes. The customer can modify the system as desired.



Diagnostic functions like Test analog Settings and Read All Analog Inputs allow maintenance personnel to quickly troubleshoot the system.



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\*Graphics module is an additional charge because the graphics module is provided by a 3<sup>rd</sup> party product and there is a cost for the 3<sup>rd</sup> party license. Source code for graphics module not included.