

## Automotive Control System/Upgrade/Retrofit

### Original Automotive Control System

Since its inception in 1971, Glasstech has utilized Motorola control technology, initially the 6800 series and later the 6809 series. Many 6809 systems are still in use today, but the technology has been overtaken and components are difficult to replace or service. New and improved control systems are now available and Glasstech has partnered with Rockwell Automation to offer the state-of-the-art Allen-Bradley ControlLogix™ based solution.

### The new control system is a complete solution featuring:

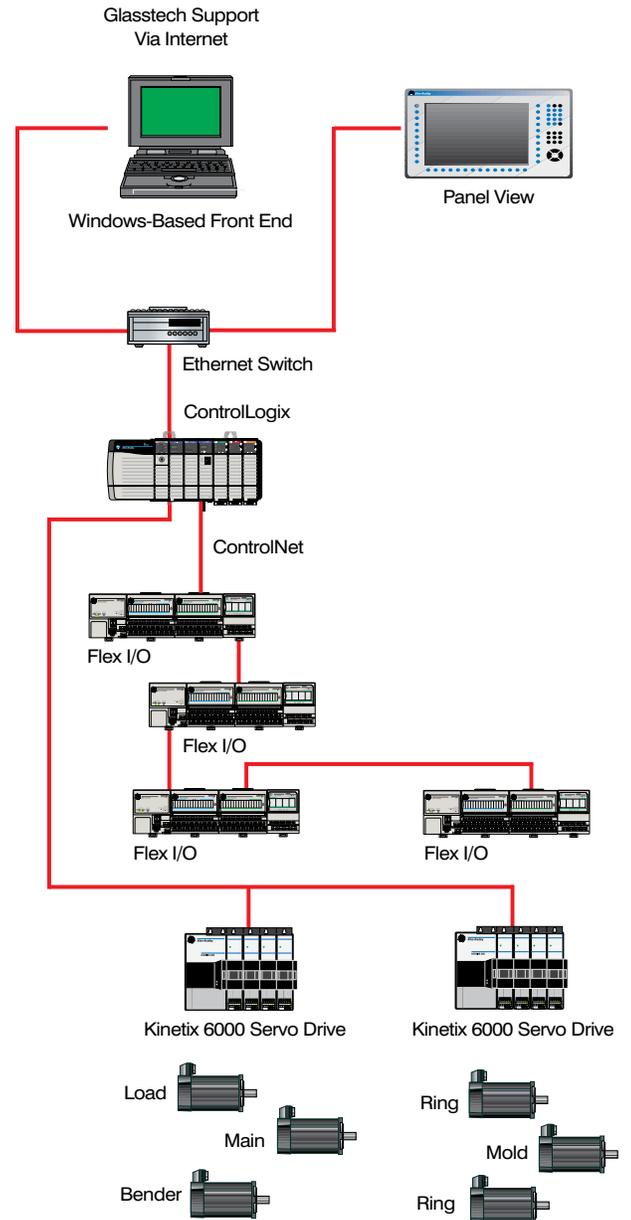
- ControlLogix™ 5561 processor
- Flex I/O on ControlNet
- Kinetix 6000 integrated motion
- Powerflex drives
- RSLogix5000 programming software
- Panelview™ Plus operator interface

### Why Upgrade?

With the new control system, Glasstech's customers will have:

- Improved cycle time/increased production
- A single automation solution with widely accepted standard
- Long-term, stable solution
- Minimized spare parts inventory
- Local support and worldwide spare parts availability through Rockwell Automation distributors
- Minimized production downtime during retrofit with Glasstech streamlined retrofit process
- Standard PLC solution
  - Additional diagnostics for less downtime while troubleshooting
  - Supports Rockwell Automation integrated architecture/Factory Talk strategy
  - Simplified process modifications
  - Process and quality data available from additional packages like PlantMetrix/Historian

### Automotive Retrofit System Diagram



# Automotive Control System/Upgrade/Retrofit Technical Features

## ControlLogix™ Upgrade

| New Allen-Bradley System   | Old 6809 System   |
|--|---|
| <b>Software</b>  | <b>Software</b>   |
| <ul style="list-style-type: none"> <li>• Modem and extra Ethernet port and software included as standard for remote diagnostics and program downloads</li> <li>• All programs downloadable from WBFE</li> <li>• Closed loop servo control</li> <li>• Improved mold and shuttle sequence for faster cycles</li> </ul>   | <ul style="list-style-type: none"> <li>• Not available</li> <li>• Programs stored on chips or need to be downloaded from external computer</li> <li>• Typically open loop control</li> <li>• Not available</li> </ul>   |
| <b>Hardware</b>  | <b>Hardware</b>   |
| <ul style="list-style-type: none"> <li>• Standard off-the-shelf Allen-Bradley hardware</li> <li>• Fiber optic sercos communications to servo drive for noise immune communications to drives</li> </ul>  | <ul style="list-style-type: none"> <li>• Custom hardware from Glasstech</li> <li>• Only analog drives available</li> </ul>  |
| <b>Operator Interface</b>  | <b>Operator Interface</b>   |
| <ul style="list-style-type: none"> <li>• Color Graphics HMI</li> <li>• Recipes stored on hard drive; contains more description information</li> <li>• Historical information can be printed or saved on hard drive for later review</li> <li>• Production monitor standard – includes number of loads in, loads out, quench cycles, time in cycle, time out of cycle, time in don't load, and part starved time</li> </ul> | <ul style="list-style-type: none"> <li>• Text-based system</li> <li>• Recipes stored on 6809 boards; allows for only one field of information</li> <li>• Typically information is either logged to printer or lost</li> <li>• Production monitor typically not available</li> </ul> |

## Sample Panelview Screen

The Side Exit Bender individual axes maintenance screen is used to:

- Setup Jog control parameters and Jog command functions
- Display speed, position and torque feedback, sercos ring and drive status

The screen also provides access to the axis tuning and safety screens.



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