

Allen-Bradley Upgrades

from

SoftPLC Corporation

**THE Best Solutions
to upgrade A-B PLC's & HMI's**

Minimizing cost, downtime, training & re-engineering

A-B PLC to SoftPLC Migrations

- Motivations:
 - Product/programming software obsolescence
 - Older technology lacks desired features/capacity/communications
- Why upgrade vs replace?
 - Cost/downtime to replace entire system prohibitive
 - I/O typically not an issue, only the CPU

A-B PLC to SoftPLC Migrations

➤ Models Supported

- PLC-5
- SLC-500
- PLC-2, 1774 PLC
- PLC-3, PLC-5/250, SoftLogix5
- MicroLogix

➤ I/O Types Supported

- A-B Modular I/O (*1771, 1747, Flex, 1778, Block*)
- DeviceNet, Profibus, etc. also supported via interfaces in SoftPLC CPU

A-B PLC to SoftPLC Migrations

- Migration Process
 - SoftPLC Corp converts logic/documentation using automated utilities
 - Replace A-B PLC CPU with SoftPLC Controller
- Existing I/O remains virtually untouched
 - Many options for future upgrades/expansion
- Existing HMI/SCADA remains
- Existing communication networks can remain or be upgraded to Ethernet

A-B PLC to SoftPLC Migrations

SoftPLC CPU Hardware Options

SoftPLC Hardware Options

- Smart SoftPLC with A-B RIO interface
 - Supports up to (2) RIO channels (*32 adapters/channel*)
 - 1 channel can alternatively act as an RIO slave
 - Smart SoftPLC CPU includes Ethernet switch, multiple serial ports for DF1 or other protocols



• RIO “blue hose” connection points

SoftPLC Hardware Options

- Hardbook SoftPLC w/ A-B Interface(s)
 - Interface is via a PCI slot card
 - 1 or 2 port cards available
 - Up to 8 cards are supported by SoftPLC
 - Ports can be A-B RIO or Data Highway Plus protocol



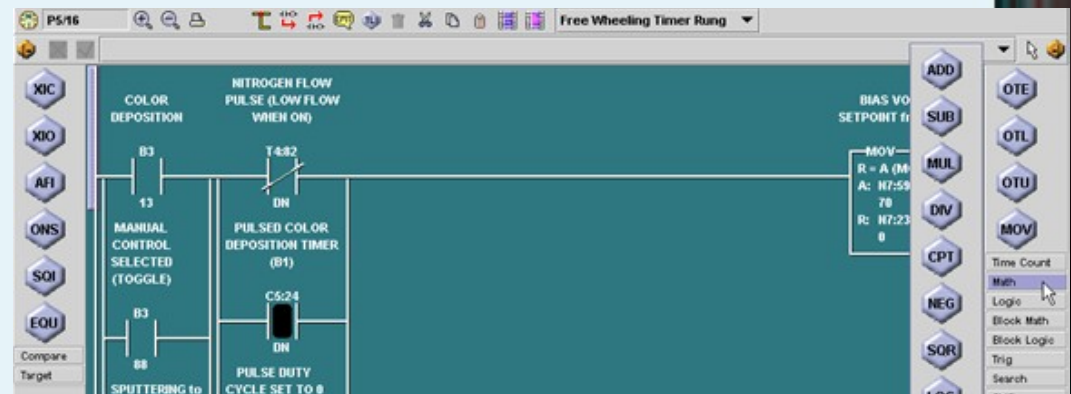
A-B PLC to SoftPLC Migrations

Upgrade Process

A-B PLC-5 Upgrades

- SoftPLC logic/data table is a superset of the PLC-5
 - Automated program conversion utility (*more of an import than a conversion*) normally 98% or better
 - Resulting logic looks nearly identical to users
 - HMI/SCADA does not normally need any changes (*unless network type changes*)

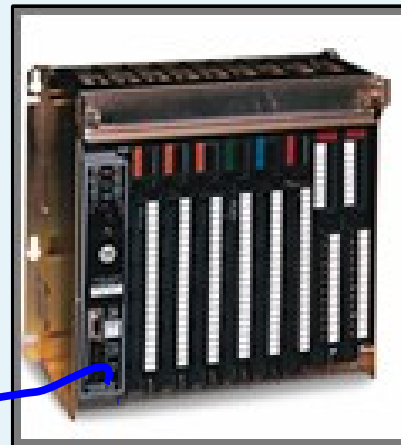
Datable Navigator	
File Manager	Bookmarks
Datable Files	
O:	128
I:	128
S:	32
B0003:	282
T0004:	117
C0005:	101
R0006:	2
N0007:	6854
F0008:	9999
N0009:	48
N0010:	103
N0011:	66
N0012:	47
N0013:	32



A-B PLC-5 Upgrades

➤ Hardware Changes

- Re-configure PLC-5 CPU as Remote I/O Adapter or exchange it with a 1771-ASB
- Add SoftPLC Controller w/ A-B RIO interface



A-B SoftLogic5, PLC-5/250

- Similar to PLC-5 in terms of hardware, but often text output from RS-Logix5 needs to be “tweaked” before import
- Add-on functions often need manual intervention, but can usually be supported with existing SoftPLC TLM's (*loadable functions*)

A-B PLC-2 Upgrades

- Automated conversion from PLC-2 logic to SoftPLC logic
 - Program conversion normally 95% or better
 - Converts from TOPDOC PLC-2 format
 - Conversion cost includes loan of TOPDOC PLC-2 to upload program
 - Documentation conversions available from most PLC-2 software programs
- HMI/SCADA: SoftPLC has a PLC-2 compatibility mode to minimize changes required

A-B PLC-2 Upgrades

➤ Hardware Changes

- PLC-2/30, -2/20, -2
 - Replace PLC-2 CPU with SoftPLC Controller w/ A-B RIO interface
 - If remote I/O, no changes required
 - If local I/O, replace adapters with remote adapters (1771-ASB/ASC)
- Mini PLC-2's
 - Replace PLC-2 CPU with remote I/O adapter
 - Add SoftPLC Controller w/ A-B RIO interface

A-B SLC-500 Upgrades

- Automated conversion utility normally 95% or better
 - Converts logic & documentation
 - Provides text file identifying what conversion process did & any areas of concern
 - Also provides equivalent Tealware I/O modules
 - HMI/SCADA does not normally need any changes *(unless network type changes)*
 - Resulting logic looks nearly identical to users *(except for I and O addresses)*

A-B SLC-500 Upgrades



- **Hardware Changes** *(if keeping A-B I/O desired)*
 - Replace SLC-500 CPU with 1747-ASB remote I/O adapter
 - Add SoftPLC Controller w/ A-B RIO interface
- **Or, replace entire system** *(if retaining application engineering & reducing on-going cost, or cost of replicated systems the main desire)*



A-B PLC-3 Upgrades

- **Semi-Automated Conversion Utility**
 - Standard logic/documentation converts 90% or better
 - Pointers, GA Basic, etc. must be manually converted (*by user or SoftPLC can quote on per program basis*)
 - HMI/SCADA does not normally need any changes (*if PLC-2 compatibility mode was originally used*)
- **Hardware: Replace PLC-3 CPU w/ SoftPLC Controller w/ A-B RIO Interface**

A-B PLC to SoftPLC Migrations

**Why SoftPLC
instead of an A-B
Upgrade Solution?**

Why SoftPLC vs A-B

- A-B document on PLC-5 logic conversion is 80 pages
 - 53 pages discuss conversion issues, items that need to be manually reviewed, etc.
 - 27 pages are index, TOC, instructions on export/import of logic and running the conversion
- SoftPLC list of issues is 1 page

Why SoftPLC vs A-B

- Resulting system more similar to old system
 - Little or no maintenance personnel or operator re-training
 - Less risk of problems after conversion
 - HMI doesn't need to change
- Advanced features at no cost
 - Ethernet/routing is standard feature
 - Minimum user memory per SoftPLC is 64MB
 - PAC functions standard (*logging, email, internal database, Modbus/other drivers, more*)

Why SoftPLC vs A-B

➤ Hardware Cost Savings

- Smart SoftPLC w/ A-B RIO interface \$1100-\$2500
- ControlLogix CPU, rack, P/S plus 1756-RIO minimum \$7000

➤ Common Solution for all applications

- Same SoftPLC products can range from smallest to largest applications (*reduces inventory, training, software, etc cost*)
- A-B has different product levels (*MicroLogix, CompactLogix, ControlLogix*)

Why SoftPLC vs A-B

- Freedom! Many options for future
 - SoftPLC is open architecture, lots of vendor choices for I/O, networks, drives, etc.
 - Rockwell solutions drive customer to all Rockwell products long term
- Reduce automation costs long term



Thanks for your time!

Contact SoftPLC for more information at

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<http://softplc.com>

