

# Allen-Bradley PLC Migrations

## Upgrade your A-B PLC's – Easily and Inexpensively

Continuing to use obsolete or older Allen-Bradley PLC CPU's is costly - not only due to spare parts costs, but also in reduced productivity because of the proprietary networks, memory limits, and programming software used with these systems.

If you have a control system with a PLC (1774 Series), PLC-2, PLC-3, PLC-5 or SLC-500, you can easily retrofit the system to a SoftPLC based system - with minimal re-engineering, re-training or disruption to your business.



SoftPLC is the only company that provides a smooth, inexpensive upgrade path for users of Allen-Bradley PLC equipment.

**Our upgrades are easier and cost less than Rockwell Automation's options.**

SoftPLC Corporation has automated import/conversion utilities that mean you can continue to use your existing logic and documentation virtually unchanged. The converted logic is familiar to any PLC-5/SLC-500 user.

In other cases, based on the age and configuration of the A-B equipment, it may be more cost effective to convert the logic and documentation but replace the A-B hardware. A SoftPLC sales engineer can discuss your existing system and offer options for upgrade.



In most cases, the original I/O racks and modules, field wiring, and HMI's can be left intact or require only minimal changes. Then, over time, you can retrofit these other parts of the system as it makes sense to do so. SoftPLC's open architecture gives you a *lot* of options.



SoftPLC has engineers on staff that have worked for A-B, and others that have years of experience with A-B PLC products. We've migrated hundreds of A-B PLC's to SoftPLC based systems, giving customers feature-rich control systems at low cost, with minimal downtime or re-engineering.

For more information, including a video, visit  
<http://softplc.com/products/migrations/plc/>

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## Overview

Most A-B PLC migrations make use of a Smart SoftPLC<sup>®</sup> controller, which is an open architecture Programmable Automation Controller (PAC) that provides scalable solutions for a wide range of applications in any industry. Priced to meet the needs of small I/O machine control applications, yet with enough capacity and capability for large process control applications, it's the SMART choice!

- ◆ Deterministic, high speed program execution
- ◆ "Unlimited" user logic and data table memory
- ◆ Ladder logic and data table addressing similar to Allen-Bradley PLC-5/SLC-500
- ◆ Fully documented applications - all documentation resides in the controller
- ◆ Supports user functions written in C<sup>++</sup>
- ◆ Specialized functions included, such as data logging, email/text messaging
- ◆ Embedded firewall option with VPN capability for advanced network security
- ◆ Compatible with all HMI/SCADA products
- ◆ Embedded web server option
- ◆ Programmed/maintained with TOPDOC<sup>®</sup> NexGen via Ethernet, available for Windows and Linux

## Communications

Every Smart SoftPLC has a rich set of configurable ports for communication:

- ◆ (4) 10/100MB copper Ethernet ports with (2) interfaces for routing capability
- ◆ (4) RS-232 serial ports
- ◆ (2) factory customizable ports (*RS-485, A-B RIO, A-B DH+, CAN/J1939, modem*)

Industry standard protocols such as ModbusTCP/UDP, A-B Ethernet, DF1, Modbus RTU/ASCII, and others are supported.

## I/O & System Configurations

The base Smart SoftPLC can be combined with different "daughter cards" (*as shown below*) for ultimate flexibility and expandability, tailoring the system to the application requirements, thus lowering cost and complexity.

A Smart SoftPLC can interface to our own Tealware<sup>™</sup> I/O or other vendor I/O systems through the included ethernet and serial ports (eg: Modbus, ModbusTCP), or via factory installed interfaces for

A-B RIO, DH+, DeviceNet, Profibus & more.

Smart SoftPLC Specifications	
<b>Processor</b>	166 MHz ARM9 CPU, 32-bit
<b>User Memory</b>	63 MB RAM
<b>Removable Memory</b>	128MB Compact Flash, expandable to 8GB
<b>Operating Temperature</b>	0 to 60°C, -20 to 70°C available as option (storage -20 to 85°C)
<b>Humidity</b>	0-95%, non-condensing
<b>Input Voltage Range</b>	14-48 VDC or Power Over Ethernet (POE)
<b>Power Requirements</b>	2-5W based on options selected
<b>Real Time Clock</b>	Battery Free ( <i>SuperCap backup for ~ 60 days</i> )
<b>Communication Ports</b>	(4) RS-232 ports ( <i>1 w/ handshake lines</i> ) (4) 10/100BaseT Ethernet ports ( <i>w/ 2 unique host interfaces-MAC ID's</i> )
	<b>COM5 Port Options (<i>factory installed</i>):</b> RS-485, 2 wire (default) A-B RIO Master or Slave A-B Data Hwy Plus
<b>Protocols</b>	<b>Serial</b> Modbus Master/Slave, DF1, ASCII
	<b>Ethernet</b> ModbusTCP/UDP, A-B Ethernet, EthernetIP
<b>Dimensions (HxWxD)</b>	5.75 x 6 x 1.5 in without modules (146.1 x 152.4 x 38.1 mm) 5.75 x 6 x 5.625 in. with Tealware modules (146.1 x 152.4 x 142.88 mm)
<b>Packaging</b>	Fanless/Diskless system, Metal enclosure DIN-rail Mount, optional Panel Mount Bracket
<b>Optional I/O Interfaces</b> ( <i>only one/system</i> )	<b>Backplane3</b> - 3 Tealware <sup>™</sup> modules <b>LocalPorts</b> - 4 connectors, each supports up to 3 Tealware racks <b>PCI-104</b> - up to (3) interface cards <b>Local I/O</b> boards - <i>contact SoftPLC Corp.</i>
<b>Remote I/O</b>	Serial and Ethernet connections
<b>GPS Interface</b>	Embedded NTP Server
<b>Security</b>	Embedded Gatecraft <sup>™</sup> Firewall/VPN SSH server for encrypted data transfer
<b>LED's</b>	(4) System Control, (8) Ethernet



Smart SoftPLC w/ no local I/O interface + optional bracket  
(most popular A-B Migration configuration)



Smart SoftPLC w/ Backplane3 Interface  
(without and with modules installed)



Smart SoftPLC w/ LocalPorts Interface  
(connects to up to 12 racks)



Smart SoftPLC w/ PCI-104 Interface  
(use w/ Fieldbus interface cards)