

# A-B Migrations : Equivalent SoftPLC Products

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## Overview

Many SoftPLC products are equivalent in functionality (*usually with more features/lower cost*) to Rockwell Automation/Allen-Bradley or Encompass partner product(s). This document provides a cross-reference of SoftPLC products to Rockwell/Allen-Bradley ("A-B") or Encompass Partner products.

For example:

- If you want to take advantage of our [migration](#) path from an A-B PLC to SoftPLC and leave the existing I/O in place, the [PLC/PAC CPUs](#) section can help you select the right SoftPLC controller.
- As part of an upgrade or if you need to add/replace I/O in an existing system, the [I/O Modules](#) section is the place to go.
- For partial migrations, such as upgrading Drives or PanelView HMI's on Remote I/O or Data Highway Plus, use the [Communication Interfaces](#) section.
- If your A-B PLC system uses a now obsolete special communication, coprocessor or specialty module, the [Communication Interfaces](#) section can help.
- For "drop-in" [PanelView HMI replacements](#), select the [HMIs](#) section.

Of course, every product from any vendor is unique and will include a different set of detailed specifications and capabilities. You will need to research the details if your application has strict requirements. [Contact us](#) if you have specific questions about the suitability of one of our products for your needs.

# Communication Interfaces

The table below lists SoftPLC products to interface to A-B network protocols for use in system upgrades/migrations or in place of obsolete interfaces. [Contact us](#) if you need assistance in choosing a communications Gateway Bridge or Protocol Converter for your particular application.

Protocol	SoftPLC Option(s)
DF1	All SoftPLC models
DH+	Smart SoftPLC w/ SPO-BH interface
	NeoPAC SoftPLC w/ SPO-BH interface
	Any SoftPLC w/ external GC-EQ7EDHPLUS interface
	Hardbook SoftPLC w/ SPO-PKTX/-PKTXD interface card
RIO Master / Scanner	Smart SoftPLC w/ SPO-BH interface
	NeoPAC SoftPLC w/ SPO-BH
RIO Adapter / Slave	Smart SoftPLC w/ SPO-BH interface
	NeoPAC SoftPLC w/ SPO-BH interface
DH485	Any SoftPLC w/ external GC-EQ7EDH485 interface
PCCC Ethernet (PLC-5/SLC-500 Ethernet)	All SoftPLC models
Ethernet/IP	All SoftPLC models
ControlNet	All SoftPLC models w/ external 3rd party gateway

## Other Modules

A-B co-processor modules (*eg: Basic or C language*) can usually be replaced using SoftPLC's existing loadable functions, or the same functions can be created using the [SoftPLC Toolkit](#).

Third-party and specialty modules are often available as stand-alone products that can connect by ethernet or serial, or other solutions are available. [Contact us](#) if you need assistance in discussing alternative(s) for your particular application.

# PLC/PAC CPUs

The table below should be used only as a rough guide to help choose a SoftPLC CPU to replace or be used in lieu of an Allen-Bradley controller. Any SoftPLC has more memory and computing capacity than the largest A-B controller. Most SoftPLC's have more built-in ports than any A-B controller.

Choice of a SoftPLC controller is very application dependent, taking into consideration factors such as quantity/type of I/O, communication requirements, environment, physical space and cost.

[Contact us](#) if you need assistance in choosing a SoftPLC CPU for your particular application.

MicroLogix	Compact or + ControlLogix	SLC-500	PLC-5 PLC-2 PLC-3	SoftPLC
x				<a href="#">MLX MN1</a>
x	x	x	x	<a href="#">Smart</a>
x	x	x	x	<a href="#">NeoPAC</a>
	x			<a href="#">HB-M0QA</a>
	x			<a href="#">HB-MMQAx</a>
	x			<a href="#">HB2-MILEHx</a>
	x			<a href="#">HB-H0QAx</a>
	x	x	x	<a href="#">HB2-HPQAx</a>



*All Handbook models can be used to migrate any A-B CPU. Those excluded in the table above are due to cost or lack of expansion slots for the A-B RIO interface card. If the system does not require A-B RIO (blue-hose), Handbooks can be used to upgrade SLC-500, PLC-5, PLC-2, or PLC-3 systems.*

# I/O Modules

SoftPLC's Tealware I/O can be used locally with a Smart SoftPLC, or as remote Ethernet ModbusTCP I/O with any controller. The table below indicates which Tealware module can be used in lieu of Allen-Bradley I/O module for the same signal type and approximate number of channels. Note that the Tealware modules are not a hardware replacement to fit into an existing A-B system, the crossover reference is for use in determining the closest functional match that you would purchase as an alternative to A-B products for a SoftPLC system using Tealware I/O.

As an open architecture platform, SoftPLC controllers support I/O from hundreds of vendors, we only list our own Tealware brand in this chart. If an A-B module is not listed, the functionality you need may be obtained using another vendor's I/O or firmware function within SoftPLC. [Contact us](#) if you need assistance in choosing a SoftPLC CPU and/or I/O for your particular application.

## Digital Modules

<b>Flex (1794)</b>	<b>Micro Logix (1762)</b>	<b>Compact Logix (1769)</b>	<b>Control Logix (1756)</b>	<b>SLC-500 (1746)</b>	<b>PLC-5/-2/-3 (1771)</b>	<b>Tealware</b>
IB8,IB16 IV16	IQ8,IQ16	IQ16	IB16 IV16	IB8,IB16 IV8,IV16	IB,IBD IV *IQ,*IQ16	<a href="#">SXDC10</a>
---	IQ32T	IQ32,IQ32T	IB32 IV32	IB32 IV32	IBN IVN	<a href="#">SXDC20</a>
IG16	---	IG16	IG16	IG16	IGD	<a href="#">SXTTL10</a>
IA8,IA16	IA8	IA16	IA16 *IA32	IA4, IA8, IA16	IA,IAD IM	<a href="#">SXAC10</a>
---	---	---	IN16	IN16	IN,IND	<a href="#">SXAC24</a>
OV16	---	OV16	*OV8I, *OV16I	OV8,OV16	---	<a href="#">SYDC10</a>
OB8,OB16	OB8,OB16	OB8,OB16	*OB8I, *OB16I	OB8,OB16	OBD	<a href="#">SYDC20</a>
OV32	OV32T	OV32T	*OV32E	OV32	OVN	<a href="#">SYDC30</a>
OB32P	OB32T	OB32,OB32T	OB32	OB32	OBN	<a href="#">SYDC40</a>
---	---	---	---	OVP16	---	<a href="#">SYRY10</a>
---	---	---	OB8	OBP8,OBP16	---	<a href="#">SYRY10</a>
OA8,OA16 OM8,OM16	OA8	OA8,OA16	OA16	OA8,OA16	OA,OAD OM,OMD	<a href="#">SYAC10</a>
OW8	OW8,OW16	OW8,OW16	---	OW4,OW8, OW16	OW,OW16	<a href="#">SYRY10</a>
---	---	---	OW16I	---	OWNA	<a href="#">SYRY20</a>
---	OX6I	OW8I	OX8I	OX8	---	<a href="#">SYRY21</a>

\* The Tealware module may not have all the characteristics required as an alternative to this A-B module. Check the specifications of both before assuming you can use the Tealware module as an equivalent.

### Analog Modules

Flex (1794)	Micro Logix (1762)	Compact Logix (1769)	Control Logix (1756)	SLC-500 (1746)	PLC-5/-2/-3 (1771)	Tealware
---	IF4	IF4	IF8, *IF6I	NI4	NIVI	<a href="#">AD020</a>
IE8, *IF4I	---	IF8	IF8	NI8	IFE,IFF NIV	<a href="#">AD030A</a>
IE8, *IF4I	---	IF8	IF8	NI8	IFE,IFF NIS	<a href="#">AD031A</a>
IE12	---	IF16V	IF16,IF6I	NI16V	IL	<a href="#">AD046</a>
IE12	---	IF16C	IF16,IF6I	NI16I	IL	<a href="#">AD047</a>
IE4XOE2	IF2OF2	IF4XOF2 IF4FXOF2F	IF4FXOF2F	NIO4V FIO4V	NBV1	<a href="#">AD020</a> & <a href="#">DA020</a>
IE4XOE2	IF2OF2	IF4XOF2 IF4FXOF2F	IF4FXOF2F	NIO4V FIO4V	NBV1	<a href="#">AD020</a> & <a href="#">DA020</a>
IE4XOE2	IF2OF2	IF4XOF2 IF4FXOF2F	IF4FXOF2F	NIO4I FIO4I	NBSC, NBVC, NB4S	<a href="#">AD020</a> & <a href="#">DA020</a>
IE4XOE2	IF2OF2	IF4XOF2 IF4FXOF2F	IF4FXOF2F	NIO4I FIO4I	NBSC, NBVC, NB4S	<a href="#">AD020</a> & <a href="#">DA020</a>
OE4	OF4	OF2,OF4	OF4	NO4I, NO4V	OFE1,OFE2, OFE3	<a href="#">DA020</a>
OE12	---	OF8V	OF8	NO8V	NOV	<a href="#">DA030</a>
OE12	---	OF8C	OF8	NO8I	NOC	<a href="#">DA031</a>
IR8	IR4	IR6	*IR6I	NR4,NR8	IR,NR	<a href="#">RTD10</a>
IT8	IT4	IT6	*IT6I	NT8,INT4	IXE,NT1	<a href="#">THM10</a>

\* The Tealware module may not have all the characteristics required as an alternative to this A-B module. Check the specifications of both before assuming you can use the Tealware module as an equivalent.

### SPECIAL PURPOSE MODULES

Flex (1794)	Micro Logix (1762)	Compact Logix (1769)	Control Logix (1756)	SLC-500 (1746)	PLC-5/-2/-3 (1771)	Tealware
VHSC, IJ2	---	HSC	HSC	HSCE,HSCE2	VHSC,CFM	<a href="#">HSC11</a>
---	---	---	N2	N2	---	<a href="#">DUM10</a>

*\* The Tealware module may not have all the characteristics required as an alternative to this A-B module. Check the specifications of both before assuming you can use the Tealware module as an equivalent.*

# I/O Racks & Power Supplies

The tables below list the components which are used with modules to create complete I/O systems. Note that Tealware bases can hold as many I/O modules as the number of slots, whereas A-B racks hold fewer modules due to slots reserved for CPU's, adapters, and power supplies.

The Tealware components are **not** a hardware replacement to fit into an existing A-B system, the crossover reference is for use in determining the closest functional match that you would purchase as an alternative to A-B products for a SoftPLC system using Tealware I/O.

[Contact us](#) if you need assistance in choosing a SoftPLC CPU and/or I/O for your particular application.

## BASES

<b>ControlLogix (1756)</b>	<b>SLC-500 (1746)</b>	<b>PLC-5,-2,-3 (1771)</b>	<b>Tealware</b>
A4,A7	A4,A7	A1B,A2B	IOBASE06
A10	A10	A2B,A3B	IOBASE08

## POWER SUPPLIES

<b>CompactLogix (1769)</b>	<b>ControlLogix (1756)</b>	<b>SLC-500 (1746)</b>	<b>PLC-5,-2,-3 (1771)</b>	<b>Tealware</b>
PA2,PA4	PA72,PA75	P1,P2, P4	P4S, P7,PS7	PWS11
PB2,PB4	PB72,PB75	P3,P7	P5	PWS20C

# HMIs

This [PanelView crossover chart](#) lists SoftPLC Web Studio HMI "drop-in" crossover replacements for obsolete PanelView models. The first chart includes cutout comparisons, while the second compares network protocols.

Combined with Web Studio's automated [HMI application conversion utility](#), upgrading old PanelView's, FactoryTalk or PanelMate HMIs becomes easy.



By "drop-in" we mean that the Web Studio HMI will fit into the existing panel cut-out. In almost all cases, the Web Studio HMI is slightly larger than the PanelView, so no coverplate would be required, just minor filing/cutting. Where the Web Studio HMI is smaller than the PanelView, the difference is usually minor.

[Contact us](#) if you need assistance in choosing product(s) for your [PanelView upgrade](#), [Web Studio HMI](#) product options and details.



# Resources

## Data Sheets

### [A-B PLC Migrations Data Sheet](#)

Overview of PLC CPU Migrations using a Smart SoftPLC.

### [Smart SoftPLC Data Sheet](#)

Smart SoftPLC features/specifications overview.

### [SoftPLC NeoPAC Data Sheet](#)

NeoPAC SoftPLC features/specifications overview.

### [Tealware Datasheet](#)

Overview features/specifications of the Tealware I/O family of products.

### [Tealware I/O System Configurations](#)

Configurations and required products for the Tealware I/O system.

### [PanelView Replacement Chart](#)

Chart of SoftPLC Web Studio equivalent to PanelView models with cutout dimensions comparison. Also includes available drivers, cables for various communication network protocols.

### [Web Studio HMI Overview](#)

Generic description of Web Studio HMI products.

### [Web Studio HMI Datasheet](#)

Product options, details and specifications.

## Videos/Presentations

### [A-B Control System Migrations](#)

Describes how SoftPLC Gateways provide great solutions for customers with A-B PLC's to do partial and phased migrations of automation systems to modern technology.

### [AB Upgrades](#)

Slide show highlighting features and benefits of of SoftPLC upgrades/migration of older A-B PLC systems.

### [SoftPLC Gateways](#)

Slide show highlighting features of SoftPLC Gateway products.