

1-Page SLC 500 Migration Reference Sheet

Allen-Bradley 1747 processors & 1746 I/O → CompactLogix 5380 / 5370 · Updated 2026-09-15

MACHIES AUTOMATION

<https://www.machiesautomation.com/resources/allen-bradley-slc-500-migration-guide>

PROCESSOR CROSS-REFERENCE

SLC CPU	Platform & comms	CompactLogix 5380	CompactLogix 5370	Bridge / rack retention	Effort
1747-L511	SLC 5/01 · 1K words DH-485 (programming / slave)	5069-L306ER	1769-L16ER-BB1B	1747-AENTR keeps the 1746 I/O. DH-485 peers, if any, need a DH-485 to EtherNet/IP gateway.	Low
1747-L524	SLC 5/02 · 4K words DH-485	5069-L306ER	1769-L18ER-BB1B	1747-AENTR keeps the 1746 I/O. DH-485 peers need a DH-485 to EtherNet/IP gateway.	Low
1747-L532	SLC 5/03 · 16K words RS-232 DF1 (ch 0) + DH-485 (ch 1)	5069-L310ER	1769-L30ER	1761-NET-ENI puts existing DF1 serial devices on EtherNet/IP during a phased cut-over; 1747-AENTR keeps the I/O.	Medium
1747-L541	SLC 5/04 · 16K words DH+ (ch 1) + RS-232 DF1 (ch 0)	5069-L320ER	1769-L33ER	1756-DHRIO in a ControlLogix gateway chassis (or a standalone DH+ gateway) keeps DH+ peers online; 1747-AENTR keeps the I/O.	High
1747-L551	SLC 5/05 · 16K words Ethernet (ch 1) + RS-232 DF1 (ch 0)	5069-L320ER	1769-L33ER	No network bridge needed — re-point HMI and MSG paths at the new controller's IP address; 1747-AENTR keeps the I/O.	Medium

1746 I/O CONVERSION

1746 module	Function	5380	5370	Watch out for
1746-IB16	16-point 24 V DC sinking digital input	5069-IB16	1769-IQ16	1769-IQ16 is sink/source — confirm the field device type and common wiring before reuse.
1746-OB16	16-point 10–50 V DC sourcing (transistor) output	5069-OB16	1769-OB16	Replacement outputs are 24 V DC class. Loads switched above ~30 V DC need interposing relays.
1746-OW16	16-point relay output (AC/DC)	5069-OW16	1769-OW16	Match per-point and per-common current ratings and the commons grouping before landing wires.
1746-NI8	8-channel analog input, voltage or current per channel	5069-IF8	1769-IF8	Scaling changes: SLC raw/proportional counts don't match Logix module data. Re-scale and loop-test every channel.
1746-NO4I	4-channel analog current output	5069-OF4	1769-OF4CI	Set the new module's fault and program-mode output states to match what the process expects.

Keep the rack: a 1747-AENTR in slot 0 lets CompactLogix scan existing 1746 I/O over EtherNet/IP — replace the CPU now, the I/O in later shutdowns. Check every module against the AENTR supported-module list.

MODERNIZATION SEQUENCE

- Back up the running system.** Capture exactly what's in the processor before touching hardware. Go online with RSLogix 500, upload the program and save the .RSS file together with its documentation (symbols, rung and address comments).
- Audit I/O, networks and messaging.** Know every device the SLC talks to before choosing the controller. List every 1746 module and check each against the 1747-AENTR supported-module list — most standard digital and analog modules are supported, some specialty and communication modules are not.
- Convert the .RSS program to Studio 5000.** Automated conversion, then a line-by-line review. Use Rockwell's PLC-5/SLC migration tooling in Studio 5000 Logix Designer (Project Migrator; older versions used Translate PLC-5/SLC) to turn the .RSS into a Logix project.
- Bridge DH+ and DH-485 to EtherNet/IP.** Keep legacy peers online so the line can migrate in phases. DH+ (SLC 5/04): a 1756-DHRIO module in a ControlLogix chassis, or a standalone DH+ gateway, bridges DH+ nodes to EtherNet/IP.
- Retain the rack with a 1747-AENTR.** Swap the processor, keep the chassis, power supply, I/O and field wiring. Remove the SLC processor and install the 1747-AENTR EtherNet/IP adapter in slot 0 of the local 1746 chassis.
- Commission, then replace I/O in later shutdowns.** Prove the new controller first; modernise the I/O on your schedule. Point-to-point check every discrete I/O, and loop-test every analog channel against the new scaling.

Need 1747 / 1746 spares or CompactLogix hardware? sales@machiesautomation.com · +91-83560-35690 (WhatsApp) · Quote in 24–36 h

Full interactive guide: <https://www.machiesautomation.com/resources/allen-bradley-slc-500-migration-guide>

General engineering guidance — verify module compatibility, firmware and lifecycle status against current Rockwell Automation documentation. Allen-Bradley, SLC, CompactLogix, RSLogix and Studio 5000 are trademarks of Rockwell Automation, Inc. Machies Automation is an independent supplier, not affiliated with Rockwell Automation.