Allen-Bradley 1771-DXPS

01 Product role and installation boundary

What this product does

The 1771-DXPS extends a compatible 1771-DMC family control coprocessor rather than processing the control application on its own. Its two added channels, COMM 2 and COMM 3, give the installed application separate serial routes to external equipment.

This is a two-slot assembly in a 1771 chassis. The adjacent main module holds the program and determines how each serial channel is used. Before replacement, trace each port to its connected device and keep the approved chassis map, cable pinout and serial configuration together.

A successful hardware power-up is only the first acceptance step. Both channels must exchange the expected messages with their actual endpoints, and the configured timeout or fault behavior must be observed before the application is returned to service.

Installed-system path

1. **1771 chassis**
2. **DMC main module**
3. **DXPS serial expander**
4. **COMM 2 / COMM 3**

Selection and pre-work reference

Module role	Serial expander
Main-module companions	1771-DMC, 1771-DMC1 or 1771-DMC4
Added serial ports	2
Assembly width	2 chassis slots with main module
Backplane current load	1.50 A at 5 V DC, expander

Where this configuration is applied

Serial field-device integration:

Use the extra channels where the installed control-coprocessor application exchanges data with serial devices.

Protocol conversion:

Support a programmed control-coprocessor application that bridges a controller and configured serial equipment.

The published interface facts apply to the 1771-DXPS expander in an approved 1771 control-coprocessor assembly.

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02 Parameters and controlled replacement

Verified technical data

Fault relay contact	500 mA at 30 V AC/DC, resistive
Serial interface	COMM 2 and COMM 3; 25-pin
Serial signalling compatibility	RS-232-C, RS-423, RS-485 and RS-422A
Serial rates	110 through 38,400 bit/s, published selections
Front-panel display	4-digit alphanumeric
Reinitialization control	Keyswitch
Operating temperature	0 to +60 °C
Storage temperature	-40 to +85 °C
Relative humidity	5–95%, noncondensing

How to apply the published ratings

The 1.50 A backplane load belongs to the expander and must be included when checking the 5 VDC chassis power budget. The fault-relay contact has its own resistive-load limit; it is not a substitute for the power-supply rating.

A selected serial rate is only one part of a working link. For COMM 2 and COMM 3, preserve signalling mode, pin assignment, parity, protocol timing and remote-device address as a matched set. Compare both ports separately during acceptance.

Installation and commissioning sequence

01 Record cable assignments

Label COMM 2 and COMM 3 before removal.

02 Confirm host identity

Match the main module catalog number and chassis location.

03 Preserve serial settings

Save baud rate, parity, protocol and node address from the installed application.

04 Inspect connectors

Check mating plugs and cable strain relief.

05 Restore power safely

Use the site isolation and 1771 chassis procedure.

06 Prove each channel

Check end-to-end message exchange and fault handling after replacement.

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03 Fault isolation and acceptance

If the restored function does not behave as expected

01 How can a silent serial port on 1771-DXPS be diagnosed?

Check cable pinout and continuity, port configuration, protocol timing and the remote device before replacing hardware.

02 When is a substitute for 1771-DXPS acceptable?

Only after the host-module interface, serial channels, application configuration and chassis approval are reviewed.

03 What commissioning evidence is useful for 1771-DXPS?

Record a successful exchange on both added serial channels and any expected fault or timeout response.

04 How should a protocol conversion application using 1771-DXPS be restored?

Restore the approved main-module program and verify the serial endpoint maps and data formats.

05 What physical clearance matters for 1771-DXPS?

Confirm the adjacent chassis position and cable routing for the expander connection and front ports.

Acceptance and handover evidence

Channel assignment	Trace COMM 2 and COMM 3 to their actual endpoint devices before changing the assembly.
Host relationship	The expander and main module form a two-slot control-coprocessor installation.
Acceptance	Prove each serial exchange and its configured error response after restoration.

Serial route: COMM 2 and COMM 3 are distinct assigned channels. Record the endpoint and configured protocol for each.

Other catalogue references

The references below are navigation aids, not confirmed substitutes. Review each against the installed system.

Allen-Bradley 1784-PKTX

Allen-Bradley 1771-P4S1

Allen-Bradley 1771-OW16

Technical basis: Rockwell Automation PLC-5 / 1771 System, Control Coprocessor product table; 1771-UM676 Control Coprocessor User Manual.

For the exact offered unit, request current marking and connector photographs and retain the approved as-found configuration with the acceptance record.