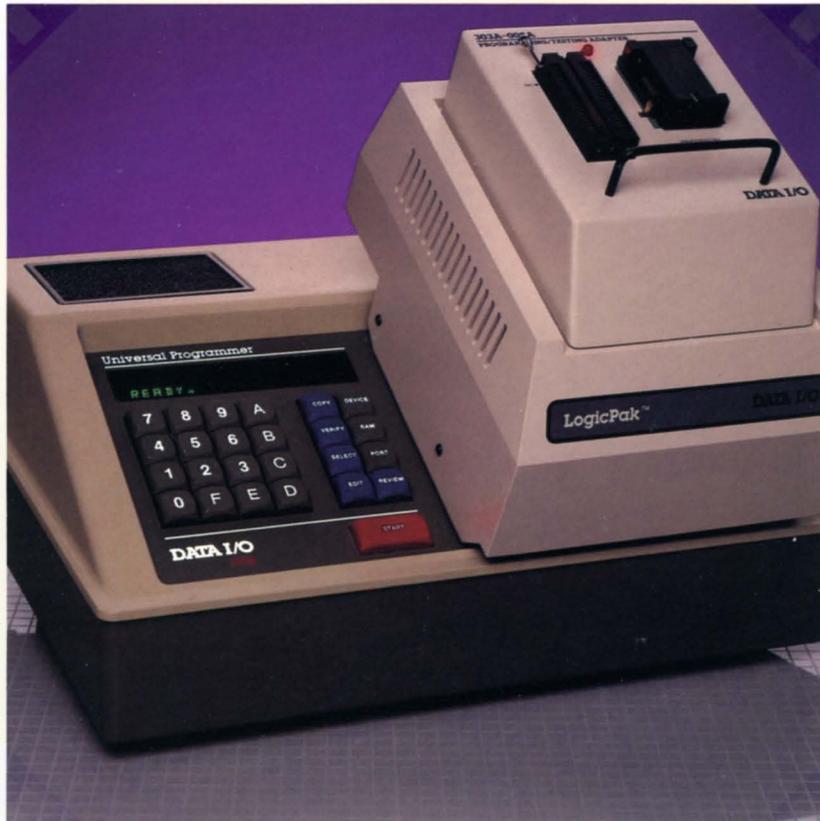


# PROGRAMMABLE LOGIC DEVELOPMENT SYSTEM



**DATA I/O**

**PROGRAM AND TEST ANY LOGIC DEVICE.**

Data I/O's Programmable Logic Development System (PLDS) is the premiere logic workstation offering extensive support for virtually every programmable logic device, including IFLs, PAL<sup>®</sup>s, 40-pin MegaPALs and CMOS. The system combines the Data I/O 29B universal mainframe, or earlier models 29A and 19, with the LogicPak<sup>™</sup> to create a sophisticated engineering tool with the most advanced logic design, programming and testing capabilities.

**SEMICONDUCTOR MANUFACTURER APPROVALS.**

The close relationships we have established with semiconductor manufacturers ensure that the PLDS will always support the latest devices, technologies and packaging. We obtain approvals from these manufacturers so you can be sure that your devices will be programmed precisely to their specifications, producing the maximum possible yields.

**EXPANDS TO WITHSTAND THE TEST OF TIME.**

With additional plug-in paks for PROM programming, you can further expand the capabilities of your 29B, 29A or 19 mainframe. Exchange the LogicPak for the UniPak 2<sup>™</sup>, and program more PROMs, EPROMs and EEPROMs than any other PROM programmer on the market. Or insert the GangPak<sup>™</sup>, and you can program multiple MOS EPROM sets in just one operation.

These paks give you the flexibility to program a wide range of devices to suit your applications. And algorithm updates ensure the paks are always programming the most current devices.



Equipped with the LogicPak<sup>™</sup>, Data I/O's 29B, 29A, or 19 mainframe becomes the sophisticated Programmable Logic Development System (PLDS) for designing, programming and testing virtually every programmable logic device.

**FULL-FUNCTIONAL TESTING VERIFIES DEVICE ACCURACY.**

To ensure that programmed devices match your design specifications, the PLDS performs device testing on three selectable levels. An automatic array verify confirms that fuses are programmed as specified. The optional structured-vectors test compares actual device output with designer-specified results. Finally, our unique Logic Fingerprint<sup>™</sup> uses a signature analysis-based technique to compare newly programmed logic devices with known-good master devices.

**LINKS TO A TERMINAL OR PC FOR DESIGN AND PROGRAMMING EASE.**

While the PLDS can be easily operated as a stand-alone station, it can also be linked to a personal computer or terminal.

With just the terminal, the programmer guides you through operation using menu options displayed in clear English commands.

As you become more proficient, you can bypass these prompts and control the system from the main menu display or directly from the programmer. With just a few keystrokes, you can instantly select commands such as load, program or test.



Link the PLDS with a personal computer to facilitate logic design and programming.

Standard RS232 serial port for remote operation from terminal or host computer

Fuse and vector editing



Built-in keyboard for stand-alone operation

Manufacturer-approved algorithms

Support for virtually every programmable logic device

Software module available for device design



To further facilitate logic design and programming on a personal computer, Data I/O offers two unique software tools compatible with the PLDS—ABEL<sup>™</sup> (Advanced Boolean Expression Language) and the PROMlink<sup>™</sup> software driver.

ABEL, Data I/O's revolutionary high-level language, allows you to specify your logic designs in any combination of truth tables, state diagrams or Boolean equations. With

ABEL's design and simulation loop you can create your design, write test vectors and test your design all in one operation.

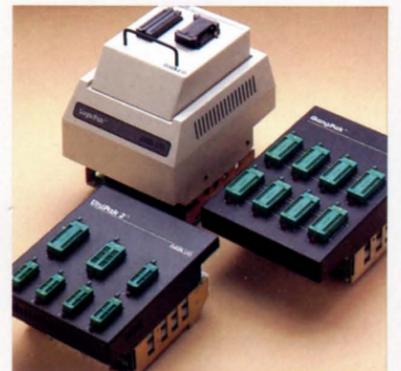
In addition, functional timesavers eliminate unnecessary

design restrictions. For example, set notation lets you group signals into sets and treat them as separate units in your design description.

When you have completed your design, use PROMlink for convenient interface to an IBM<sup>®</sup> PC. This gives you ease of use for selecting all programming functions as well as storing and retrieving data files.

**SERVICE AFTER THE SALE.**

Our full range of calibration and update-contract services helps prevent unscheduled downtime and allows you to budget update and repair costs for an entire year. With worldwide service centers and a network of specially trained technicians, we offer the most comprehensive service packages available from any device programmer manufacturer.



Support for DIP LCC, and NLCC package types

Selectable blank check, illegal bit, array verify, structured vector and logic fingerprint testing

Additional programming paks for PROMs, EPROMs, EEPROMs, and micros

Expand the capabilities of your Data I/O mainframe with additional programming paks for PROM programming, such as the UniPak 2<sup>™</sup> and the GangPak<sup>™</sup>.

## THE DATA I/O COMMITMENT TO YOU

Data I/O has become the world's largest supplier of micro-circuit programming equipment by working closely with you and the people who design and manufacture the devices you program.

Our close relationship with all device manufacturers ensures that Data I/O's PLDS accurately

implements state-of-the-art programming algorithms and is prepared to support future devices as they become available.

Data I/O is fully committed to providing service and support for every programmer we sell.

For more information about the PLDS, consult your Data I/O sales representative.

## FUNCTIONAL SPECIFICATIONS

<b>General Architecture:</b>	Microprocessor-controlled (6802)
<b>RAM:</b>	64k x 8 standard
<b>Keyboard:</b>	16-key hexadecimal, 10-key functional
<b>Display:</b>	16-character alphanumeric
<b>Input/Output:</b>	Serial RS232C and 20 mA current loop
<b>Baud Rates:</b>	50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2000, 2400, 3600, 4800, 7200, 9600, 19200
<b>Remote Control:</b>	CRC - standard SRC - standard TRC - optional
<b>Other Options:</b>	Handler Interface Control
<b>Translation Format:</b>	JEDEC-42.1-81-62
<b>Device Testing: (Selectable)</b>	Blank, illegal bit, array verify, structured vectors, Logic Fingerprint™
<b>Accessories Included:</b>	Power cord, instruction manual

## ELECTRICAL REQUIREMENTS

<b>Operating Voltages:</b>	100, 120, 220, or 240 VAC + 5% or -10%
<b>Frequency Range:</b>	48-52 Hz & 58-62 Hz for 100 & 120V, 48-52 Hz for 220 & 240V
<b>Power Consumption:</b>	115W/175VA maximum
<b>Fuse Protection:</b>	Primary and secondary fuse protection

## PHYSICAL AND ENVIRONMENTAL SPECIFICATIONS

<b>Dimensions:</b>	38.1 x 15.2 x 27.3 cm (15" x 6" x 10.8")
<b>Weight:</b>	6.4 kg (14.1 pounds)
<b>Shipping Weight:</b>	7.3 kg (16.1 pounds)
<b>Operating Temperature:</b>	+ 5° to +45° C (41° to 113° F)
<b>Storage Temperature:</b>	-40° to +70° C (-40° to +158° F)
<b>Humidity:</b>	To 95% (noncondensing)
<b>Operational Altitude:</b>	To 10,000 feet

**Data I/O Corporation**  
10525 Willows Road N.E.  
P.O. Box 97046  
Redmond, WA  
98073-9746  
(206) 881-6444

## U.S. REGIONAL SALES FACILITIES

**Northwest Region**  
1700 Wyatt Drive  
Suite 1  
Santa Clara, CA 95054  
(408) 727-0641

**Western Region**  
2770 South Harbor Blvd.  
Suite K  
Santa Ana, CA 92704  
(714) 662-1182

**Southern Region**  
1810 N. Glenville Drive  
Suite 108  
Richardson, TX 75081  
(214) 235-0044

**Eastern Region**  
Birch Pond  
Business Center  
22 Cotton Road  
Nashua, NH 03063  
(603) 889-8511

## INTERNATIONAL SALES FACILITIES

**Data I/O Japan**  
Ginza Orient Building 6-F  
8-9-13, Ginza Chuo-ku  
Tokyo 104, Japan  
(03) 574-0211

**Data I/O Europe**  
Vondelstraat 50-52  
1054 GE Amsterdam  
The Netherlands  
(20) 186855

**Data I/O Germany  
GmbH**  
Bahnhofstrasse 3  
D-6453 Seligenstadt  
Federal Republic of  
Germany  
(6182) 3088/89

## CANADIAN REPRESENTATIVE

**Allan Crawford  
Associates, Ltd.**  
5835 Coopers Ave.  
Mississauga, Ontario  
L4Z 1R9  
(416) 890-2010

™Logic Fingerprint, PROMlink, ABEL, UniPak 2, GangPak and LogicPak are trademarks of Data I/O Corporation.

\* PAL is a registered trademark of Monolithic Memories, Inc.

\* IBM is a registered trademark of International Business Machines.

# DATA I/O