

# digital

# Software Product Description

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**PRODUCT NAME:** PDL/RT-11, Version 1, Programmable Data Logger

**SPD 15.71.3**

## **DESCRIPTION:**

Programmable Data Logger (PDL) is a hardware/software package based upon the PDP-11 that provides a unique solution to the data acquisition needs of medical laboratories. Data acquisition from common laboratory instruments is accomplished by software modules that provide a link to MU BASIC/RT-11. With this link, programs can be prepared in BASIC to calculate and report the data collected from the instruments.

PDL/RT-11 data acquisition software can service up to 15 instruments. The instruments can be analog peak sensing devices such as auto analyzers, analog plateau sensing devices such as SMA's, or digital instruments like the Coulter Model "S".

In addition, the acquisition modules can collect data from instruments with serial ASCII output such as radioimmunoassay devices. The modules provided also collect data in an on-demand mode from both analog and digital instruments to handle a wide variety of semi-automatic devices. The parameters to be used with each instrument channel are specified in a BASIC program and can be readily changed. Feedback to the instrument operator is provided by the Local Operator's Console (LOC) Box located beside each instrument. The LOC Box reports the status of buffers to the operator by a set of lights. The LOC Box sends control information such as Start Data Acquisition, Mark Samples, and Halt Data Acquisition received from the operator by push buttons.

PDL provides all the facilities of MU BASIC/RT-11 simultaneously with data acquisition. Programs can be written, stored, loaded and executed completely independent of any data acquisition processing. Because MU BASIC/RT-11 provides these facilities for multiple users, laboratories can use PDL to maintain monthly quality control logs, statistics, routine laboratory calculations, instrument reports, patient reports, worklists, and patient identification.

PDL also supports a serial asynchronous interface (DL11) which can be used to communicate with another computer.

## *System Features:*

- On-line data acquisition for up to 15 instruments
- Simultaneous data logger and calculator
- Programmed by user in easy-to-learn BASIC
- Up to 6 simultaneous users on the disk-based system
- Up to 4 simultaneous users on the floppy-based system
- Data acquisition initialized by program control as well as switch closure
- Instrument descriptions entered and modified by user
- Continual status reporting by the H321 switch box (LOC Box)
- Fast access to BASIC file structure

## **MINIMUM HARDWARE REQUIRED:**

One of the following PDL configurations:

- PDL11-DA, DB Floppy Based system which consists of:
  1. PDP-11 with 32K words of memory
  2. RX11 dual floppy disk system
  3. AR11-KT analog kit
  4. DR11-KT kit for first five LOC Box channels
- PDL11-EA, EB RK05 Based system which consists of:
  1. PDP-11 with 32K words of memory
  2. RK11 disk cartridge controller (includes one RK05 drive) with an additional RK05 drive
  3. AR11-KT analog kit
  4. DR11-KT kit for first five LOC Boxes

which meets the following additional requirements:

- For each analog channel:
  1. One H321 LOC Box (includes 75 feet of cable)
  2. One XL01 Retransmitting Potentiometer or CC55C/D if the instrument already has a printer
- For each parallel digital channel:
  1. One DR11-K Digital I/O interface

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- For each Coulter "S" Interface:
  1. One DR11-K Digital I/O Interface
  2. One BC11-MA Cable standard 100 ft.
  3. One H321 LOC Box for DR11-K
- When adding the sixth and eleventh channel (LOC Box):
  1. One DR11-K Digital I/O Interface
  2. One H322 Distribution Panel
  3. Two BC08R-06 Cables
- For each ASCII Channel:
  1. One H321 LOC Box (includes 75 feet of cable)
  2. DL11-A, -B, -C, -D, or -E Serial Line or DL11W
  3. Corresponding Interface Cable

**OPTIONAL HARDWARE SUPPORTED:**

Supports any mass storage, terminal, or unit record device supported by RT-11.

**PREREQUISITE SOFTWARE:**

RT-11 operating system, Version 2B or later, and MU BASIC/RT-11, Version 1 or later

**OPTIONAL SOFTWARE SUPPORTED:**

None

**TRAINING CREDITS:**

2 — Consult the latest Educational Services Catalog for available courses.

**SUPPORT CATEGORY:**

A — Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

**UPDATE POLICY:**

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

**ORDERING INFORMATION:**

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Standard options with no support services are only available after the purchase of one supported license and after either an OEM Agreement or End-User Waiver of Support Agreement is in effect. When a software license is ordered without support services, the category of support applicable to such software is Category C.

Source and/or listing options are only available after the purchase of at least one supported license and after a source license agreement is in effect.

The following key (A, B) represents the form of power source for the product and must be specified at the end of the option number, i.e., PDL11-DA = system power provided in the United States.

A = United States (60 hz)

B = Europe (50 hz)

The following key (E, R, Y) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QJ191-EY = sources on floppy disk.

E = RK Disk (DECpack)

R = Microfiche

Y = Floppy Disk

*Standard Options*

PDL11 -D— Floppy-based PDL system, single-use license, binaries, documentation, support services (power: A, B)

PDL11 -E— RK05-based PDL system, single-use license, binaries, documentation, support services (power: A, B)

*Source/Listing Options*

QJ191 -E— All sources (media: E, Y)

QJ191 -F— Listings (media: R)

**ADDITIONAL SERVICES:**

None