



DK10 FEATURES

- High resolution (10 μ sec)
- External clock input to 400 kHz
- Assignable to any interrupt channel
- Time of day and interval timing
- Clock can be read without loss of counts

digital
pdp10

DK10 REAL-TIME CLOCK

The DK10 Real-Time Clock for the PDP-10 provides high resolution time keeping for time accounting, time base maintenance, periodic high frequency interrupts, and interval timing. Meeting the most demanding real-time requirements, the clock provides 10 μ sec resolution and a choice of up to 2^{18} possible timing intervals, so that interrupts can be programmed at intervals from 10 μ sec up to 2.6 seconds.

In addition to an interval register, the DK10 has a frequency counter which counts the pulses of an internal 100 kHz \pm 0.01% clock, or an external clock having a maximum frequency of 400 kHz. The clock also includes a comparator network which provides a running comparison between the frequency counter and the interval register. When the frequency counter reading equals the total on the interval register, a program interrupt is generated and the frequency counter is automatically reset so that it can time the next interval.

The clock, which is assignable to any interrupt channel, can be used to pace real-time, monitor, or other functions performed in either the PDP-10 Executive or User modes. In fact, a system can have two clocks—one for each mode—since two device codes are available for clock use. The clocks are synchronized to the DATAI instructions so that they can be read—at any time—by the PDP-10 without losing a clock pulse.

To use the DK10 as a Time of Day clock, the desired interval (which will determine clock accuracy) is set into the interval counter. Software establishes the desired clock format and updates the stored information each time the clock provides an interrupt.

The DK10 mounts in a DECTape cabinet in the space required for one TU55 DECTape. Installation is easy, with power available within the cabinet; no separate power supplies are necessary.

SPECIFICATIONS

Relative Humidity	20% to 80%	Power	+10 V dc @ 0.5 A —15 V dc @ 2.0 A
Operating Temperature	60F to 95F (15C to 35C)	Power Dissipation	35 Watts
Storage Temperature	40F to 110F (5C to 43.3C)	Heat Dissipation	120 BTU/hr



DIGITAL EQUIPMENT CORPORATION, Maynard, Massachusetts, Telephone: (617) 897-5111 • ALABAMA, Huntsville • CALIFORNIA, Anaheim, Los Angeles, and Palo Alto • COLORADO, Denver • CONNECTICUT, New Haven • DISTRICT of COLUMBIA, Washington (College Park, Md.) • FLORIDA, Orlando • GEORGIA, Atlanta • ILLINOIS, Chicago • MASSACHUSETTS, Cambridge and Waltham • MICHIGAN, Ann Arbor • MINNESOTA, Minneapolis • MISSOURI, St. Louis • NEW JERSEY, Parsippany and Princeton • NEW MEXICO, Albuquerque • NEW YORK, Centereach (L.I.), New York City, and Rochester • NORTH CAROLINA, Chapel Hill • OHIO, Cleveland and Dayton • PENNSYLVANIA, Philadelphia and Pittsburgh • TENNESSEE, Knoxville • TEXAS, Dallas and Houston • UTAH, Salt Lake City • WASHINGTON, Seattle • AUSTRALIA, Brisbane, Melbourne, Perth, and Sydney • CANADA, Edmonton, Alberta; Carleton Place, Ottawa, and Toronto, Ontario; and Montreal, Quebec • ENGLAND, London, Manchester, and Reading • FRANCE, Paris • GERMANY, Cologne and Munich • HOLLAND, The Hague • ITALY, Milan • JAPAN, Tokyo • SWEDEN, Stockholm • SWITZERLAND, Geneva