PDP-11/70
PERFORMANCE ENHANCEMENT PRODUCT

FEATURES

- Memory Access Time, 15ns
- Full 4MB Capacity on one HEX board
- Battery Back-Up
- Plug and Play, plugs into CPU back plane
- Replaces all present memory including cabinets and associated hardware
- Reduces system floor space
- Increases system data rate capability

1.86 Performance Factor

190 NS

725 NS

WORLD'S FASTEST PDP-11/70 MEMORY

DIGITAL DATA SYSTEMS INC.
1551 N.W. 85TH AVENUE • FORT LAUDERDALE, FL 33313
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**DESCRIPTION**

Model PEP-70

Digital Data Systems, Inc. and SETASI Research and Development, the companies that brought you the World’s Fastest UNIBUS Memory, now brings you the World’s Fastest PDP 11/70 Memory, the PEP-70.

The PEP-70 is a fast 4MB Memory all on one plug-and-play module that resides in the CPU backplane. The PEP-70 eliminates all existing memory including cabinets and associated hardware.

The PEP-70 increases CPU and bus throughput, thus allowing a previously CPU bound system to have the same user response as a lightly loaded system. The additional UNIBUS bandwidth allows you to increase I/O capacity, 1/0 transfer rates, and user loads.

The PEP-70, when installed, is fully compatible with present hardware and operating system software. Installation is a simple process with minimum system down time.

Over two decades of design experience enables us to offer performance products of unfailing reliability at the lowest possible cost. How do you know? Because we have a lifetime warranty and a 24-hour replacement guarantee.

**PERFORMANCE DATA**

The performance of a computer is measured by how fast it can EXECUTE an instruction. Therefore anything that can be done to reduce this time will increase computer performance.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PEP-70 INSTALLED</th>
<th>MK-11 MEMORY INSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>120ns</td>
<td>120ns</td>
</tr>
<tr>
<td>CACHE</td>
<td>180ns</td>
<td>180ns</td>
</tr>
<tr>
<td>MEM. OVERHEAD</td>
<td>410ns</td>
<td>410ns</td>
</tr>
<tr>
<td>MEM. ACCESS</td>
<td>15ns</td>
<td>640ns</td>
</tr>
<tr>
<td>TOTAL EXECUTION TIME</td>
<td>725ns</td>
<td>1350ns</td>
</tr>
</tbody>
</table>

725 vs 1350 equals a 1.86 Performance Factor

<table>
<thead>
<tr>
<th>ACTUAL BENCH MARK RUN TIMES</th>
<th>PEP-70 Time</th>
<th>MK-11 Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Running DEC diagnostic “EUMJA”</td>
<td>555 seconds</td>
<td>994 seconds</td>
</tr>
<tr>
<td>5% MB, 1 PASS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

555 vs 994 equals a 1.79 Performance Factor

<table>
<thead>
<tr>
<th>Running Speed Test “Cache on”</th>
<th>PEP-70 Time</th>
<th>MK-11 Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2MB MOVES (above) 10,000/8 Passes 230,686,720 Instructions Executed</td>
<td>59 seconds</td>
<td>99 seconds</td>
</tr>
</tbody>
</table>

59 vs 99 equals a 1.68 Performance Factor

**SPECIFICATIONS**

| MEMORY CAPACITY: | 2 MB or 4 MB |
| Read access time | 15 microsec. |
| Memory cycle time | 100 microsec. |

*Time measured at memory interface from logic signals MSTARTL to DRDYL

**POWER REQUIREMENTS:**

- Voltage: 5VDC
- Operating: 1.5A (6.5W)
- Battery power: 1.2W
- Battery Back-up: 2.6 mAh (8mS)

**MECHANICAL:**

- Dimensions: 8.076 x 15.68 in (Standard HEX PC board)
- Weight: 2.0 lbs.

**ENVIRONMENTAL:**

Meets all requirements specified for applicable system type by manufacturers, including class C.

**NOTES:**

DEC, PDP-11 and UNIBUS are registered Trademarks of Digital Equipment Corporation. PEP-70 is a trademark of DDS and SETASI.

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**THE INTELLIGENT SOLUTION**

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