HEWLETT PACKARD

Operating Note

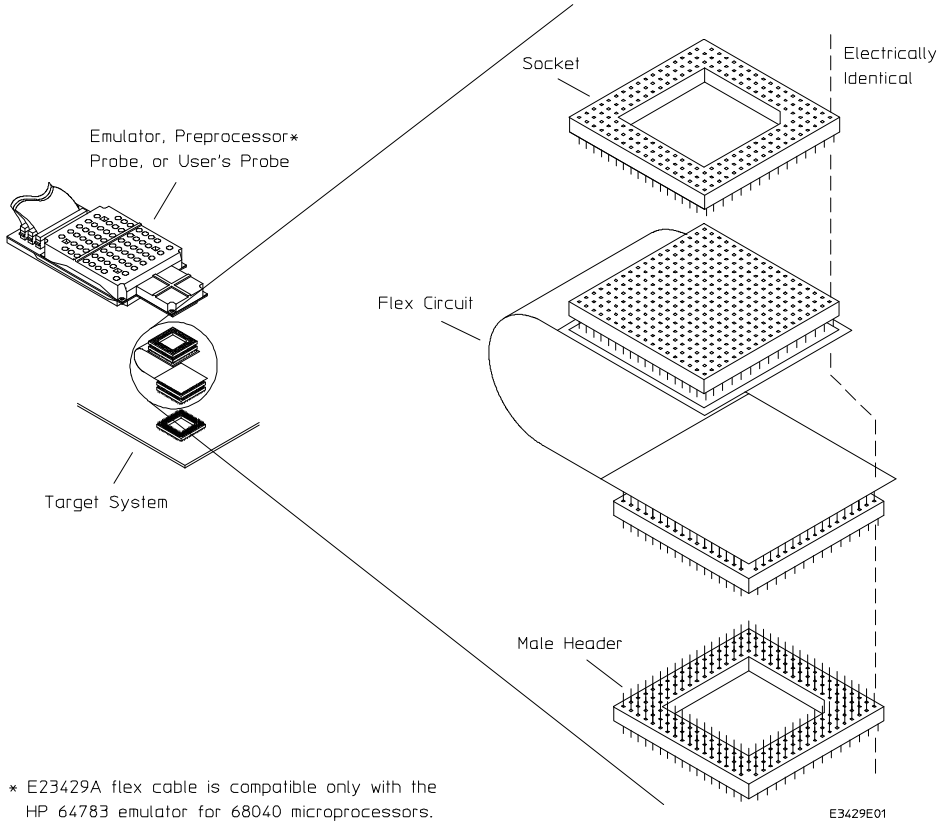
Flex Circuit Adapters for 68040 and 68360

Operating Note Part Number E3429-92000 Printed in U.S.A. November 1993

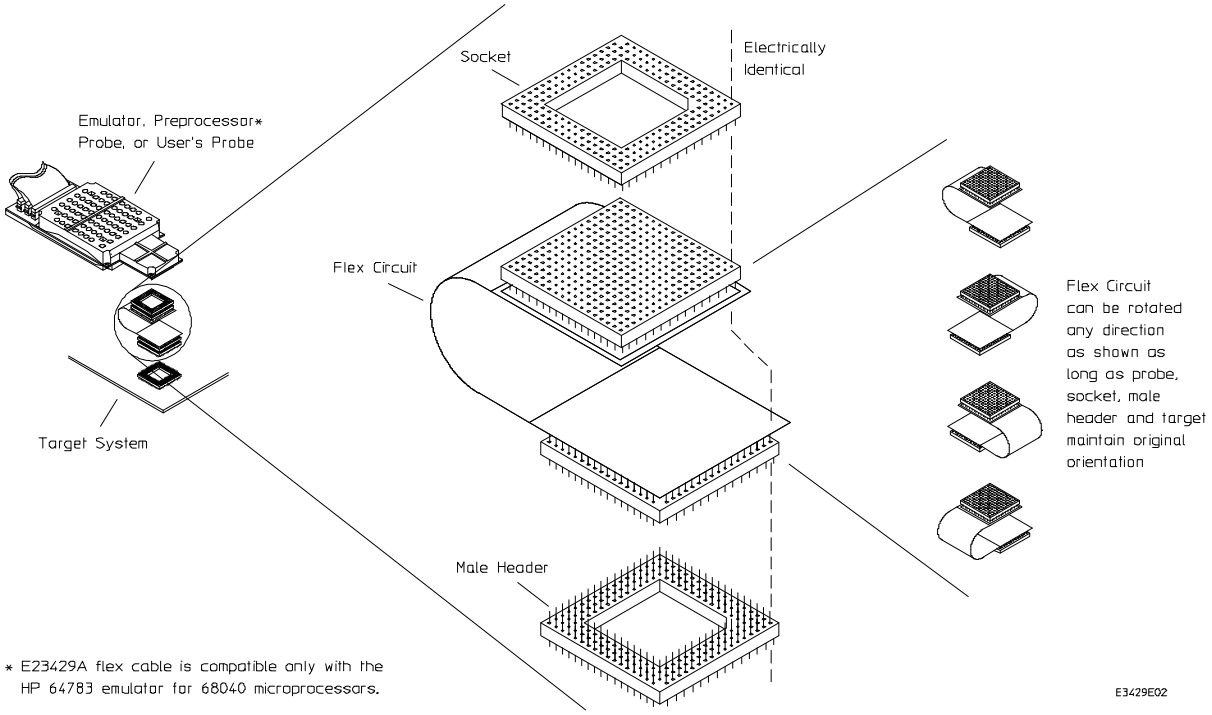
Introduction

A Flex Circuit Adapter provides a low-stress, rotatable connection between test/measurement equipment and target systems. The Flex Circuit Adapter can be oriented in four directions, allowing access to target systems which otherwise might not be accessable due to components on the target system board.

A Flex Circuit Adapter consists of a Flex Circuit, a Male Header, and a Socket. The Flex Circuit is a 260 pin 18 x 18 PGA pattern. The Male Headers and Sockets come in different configurations, to match different PGA patterns. The table in the back lists the various Flex Circuit Adapter packages which are available.



* E23429A flex cable is compatible only with the HP 64783 emulator for 68040 microprocessors.


Socket
Electrically
Identical
Emulator, Preprocessor*
Probe, or User's Probe
Flex Circuit
Flex Circuit
can be rotated
any direction
as shown as
long as probe,
socket, male
header and target
maintain original
orientation
Target System
Male Header
* E23429A flex cable is compatible only with the
HP 64783 emulator for 68040 microprocessors.
E3429E02

Installation

The Flex Circuit Adapter is shipped from the factory with the appropriate Male Header and Socket configured to a specific microprocessor pattern. The Male Header is attached to the end of the Flex Circuit which will connect to your target system; the product number is on the back side of that end of the Flex Circuit. The Socket is attached to the end which will connect to your test/measurement equipment; the HP logo is on the back side of that end of the flex circuit. To use the Flex Circuit Adapter to connect your target system to your test/measurement equipment, use the following procedure:

1. Ensure that the patterns on the Male Header and the Socket match your target system.
2. Remove the microprocessor from the target system, and store it in a protected environment.
3. Orient your test/measurement probe with the microprocessor socket on the target system so that Pin A1 is properly aligned. Do not connect anything until step 8. When you install the Flex Circuit Adapter, the test/measurement probe must keep this alignment.

Caution

Incorrect alignment of the test/measurement equipment and target system may cause equipment damage.

4. Fold the Flex Circuit so that the Male Header and Socket Adapter are facing away from each other.
5. Hold the test/measurement equipment probe above the microprocessor socket with one hand, with the orientation from step 3. In the other hand, hold the folded Flex Circuit. Determine which direction you want the folded Flex Circuit to face. The Flex Circuit can be oriented in four different directions with respect to the microprocessor socket and test/measurement equipment, allowing connections which otherwise might not be possible (see illustration).
6. Put the test/measurement equipment down. Hold the folded Flex Circuit over the target system, with the orientation selected in step 5. Check to see if the Male Header pins are aligned with the target system socket. If they are not aligned, you will have to rotate the Male Header and Socket. To rotate the Male Header and Socket, place the Flex Cable on a flat surface, in an extended (not folded) position. Remove the Male Header, and rotate in one direction (such as clockwise); remove the Socket and rotate it in the other direction a like number of degrees.

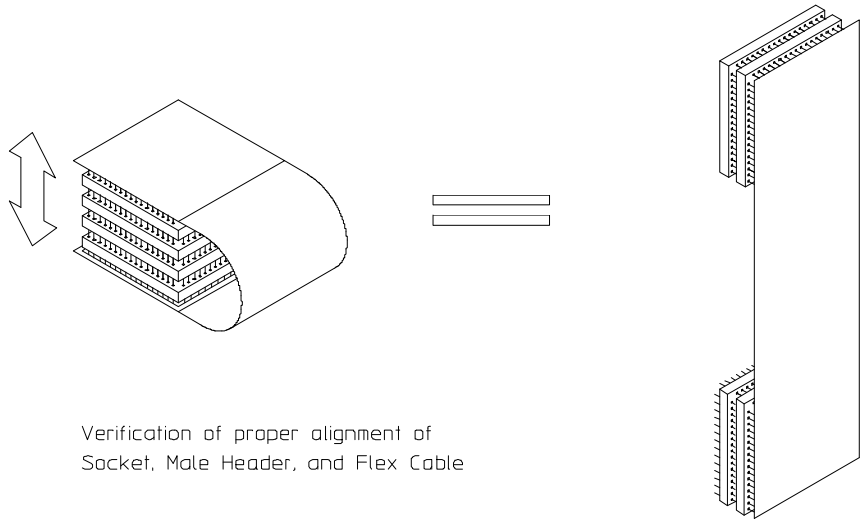
7. Check to ensure that the Male Header and Socket are properly installed.

Caution

Improper installation of the Male Header and Socket will cause equipment malfunction or damage. To ensure that they are properly installed, fold the Flex Circuit so that the Male Header is in contact with the Socket (see illustration below). If the Male Header pins fit into the Socket, and the PGA sockets on the end of the Flex Circuit are aligned, the installation is correct.

8. Using the orientation of the Flex Cable selected in step 5, connect the Male Header on the Flex Cable to the target system.
9. Fold the Flex Cable. Using the orientation of the test/measurement equipment determined in step 3, connect the test/measurement probe to the Socket on the Flex Cable.
10. For preprocessor interfaces, install the microprocessor on the preprocessor interface.

You are now ready to make measurements.



Verification of proper alignment of
Socket, Male Header, and Flex Cable

E3429E03

Replaceable Parts

The tables below show the HP product numbers for the complete Flex Circuit Adapters, which include the Flex Circuit, the appropriate Male Header and the appropriate Socket. Additional Male Headers and Sockets can be ordered directly from HP or from McKenzie Technology (1-510-651-2700).

HP Part Number Flex Circuit Adapter	Microprocessor Package	HP Part Number Male Header	HP Part Number Socket
HP E3429A* HP E3430A	68040 68360	1252-5293 64780-87601	1200-1597 1200-1812
*E3429A flex cable is compatible only with the HP 64783 emulator for 68040 microprocessors.			

HP Part Number Flex Circuit Adapter	Microprocessor Package	McKenzie Technolgy Part Number Male Header	McKenzie Technolgy Part Number Socket
HP E3429A HP E3430A	68040 68360	PGA-179H878S-1836R PGA-241H876S-1849F	PGA-179H004B1-1836-R PGA-241M004B1-1849-RPG