

Abstract of the Disclosure (Fig. 4A)

**SEMICONDUCTOR DEVICE AND
SEMICONDUCTOR DEVICE PACKAGING SYSTEM**

One embodiment of the present invention is a semiconductor device having a substrate (4) with a printed circuit (6), a first semiconductor chip (100) with pads for wire bonding and contacts for chip-to-chip interconnection, and a second semiconductor chip (200) also with contacts for chip-to-chip interconnection. The first and second chips are coupled together via respective contacts. The two chips together are tightly-coupled pair having low interconnect capacitances and resistances. The first chip comprises an arithmetic logic unit (ALU), at least one register, a stack pointer, a program counter, and an index register. The second chip comprises a command register, a command decoder, and a timing generator, the command decoder in communication with the first semiconductor chip, the command register responsive to a program memory located outside the device.