Semiconductor/Printed Circuit Board Assembly, and Computer System

Abstract

A computer system, a printed circuit board assembly, and a multiple die semiconductor assembly are provided comprising first and second semiconductor dies and an intermediate substrate. The first semiconductor die defines a first active surface including at least one conductive bond pad. The second semiconductor die defines a second active surface including at least one conductive bond pad. The intermediate substrate is positioned between the first active surface of the first semiconductor die and the second active surface of the second semiconductor die such that a first surface of the intermediate substrate faces the first active surface and such that a second surface of the intermediate substrate faces the second active surface. The first semiconductor die is electrically coupled to the intermediate substrate by at least one topographic contact extending from the first active surface to the first surface of the intermediate substrate. The second surface of the intermediate substrate includes a cavity defined therein. The intermediate substrate defines a passage there through. The second semiconductor die is secured to the second surface of the intermediate substrate within the cavity such that the conductive bond pad of the second semiconductor die is aligned with the passage. The second semiconductor die is electrically coupled to the intermediate substrate by at least one conductive line extending from the conductive bond pad of the second semiconductor die through the passage defined in the intermediate substrate and to a conductive contact on the first surface of the intermediate substrate.

Figure 8