CLAIMS

I/We claim:

1. A microelectronic device package, comprising:

a first member comprising a first conductive material, a second conductive material, and a first insulating material sandwiched between the first conductive material and the second conductive material, wherein the first member has a first cavity portion extending directly through apertures in the first conductive material, the first insulating material, and the second conductive material;

a second member comprising a third conductive material, a fourth conductive material, and a second insulating material sandwiched between the third conductive material and the fourth conductive material, wherein the second member has a second cavity portion extending directly through apertures in the third conductive material and the second insulating material but not through the fourth conductive material, wherein the fourth conductive material is contiguous, wherein the forth conductive material forms a closed end of the second cavity portion, and wherein the sandwich construction of the first member is oriented in a generally stacked arrangement relative to the sandwich construction of the second member;

an intermediate member between the first member and the second member, the intermediate member having an opening generally aligned with the first and second cavity portions, wherein the first cavity of the first member, the opening of the intermediate member and the second cavity of the second member are generally aligned; and

a microelectronic device having a first side and a second side opposite from the first side, the second side carried by the fourth conductive material of the second member at least partially within the second cavity portion, wherein the microelectronic device has bond sites on the first side, wherein the bond sites are electrically coupled to the fourth conductive material.

2. The microelectronic device package of claim 1, further comprising an adhesive attached between the second surface of the microelectronic device and the fourth conductive layer.

3. The microelectronic device package of claim 1, further comprising an encapsulant over at least a portion of the microelectronic device in the second cavity portion.

4. The microelectronic device package of claim 1 wherein the microelectronic device is connected to an intermediate conductive structure that is in turn electrically coupled to the fourth conductive material.

5. The microelectronic device package of claim 1 wherein the first cavity portion and second cavity portion together are deeper than a corresponding dimension of the microelectronic device.

6. The microelectronic device package of claim 1 wherein the intermediate member includes a circuit board.

7. The microelectronic device package of claim 1, further comprising at least one of an electrically conductive via electrically connected between the first and second conductive materials and an electrically conductive vie electrically connected between the third and fourth conductive materials.

8. The microelectronic device package of claim 1 wherein the microelectronic device is a first microelectronic device, and wherein the microelectronic device package further comprises a second microelectronic device stacked on the first microelectronic device in at least one of the first cavity portion and the second cavity portion.

9. The microelectronic device package of claim 8, wherein both the first and second microelectronic devices are electrically coupled to the fourth conductive layer.

10. The microelectronic device package of claim 1 wherein the microelectronic device is electrically coupled to the fourth conductive layer with a wire bond.

11. A microelectronic device package, comprising:

a support member having a cavity with an opening, a closed end opposite the opening, and a contiguous conductive material at the closed end, the support member including:

a first support member element comprising a first conductive material, a second conductive material, and a first insulating material positioned between the first and second conductive materials, the first support member element having a first aperture extending directly through the first conductive material, the first insulating material, and the second conductive material; and

a second support member element having a third conductive material, a fourth conductive material, and a second insulating material positioned between the third conductive material and the fourth conductive material, the second support member element being attached to the first support member element and having a second aperture extending directly through the third conductive material and the second insulating material, the first and second apertures being substantially axially aligned to form the cavity;

a first microelectronic device disposed in the cavity, the first microelectronic device having a first surface with bond sites accessible from the first surface and electrically coupled to the fourth conductive material, the microelectronic device further having a second surface facing opposite from the first surface, the second surface facing toward and carried by the fourth conductive material in the cavity; and

a second microelectronic device stacked on the first microelectronic device.

12. The microelectronic device package of claim 11 wherein the first and second microelectronic devices are electrically coupled to each other.

13. The microelectronic device package of claim 11, further comprising:

first package bond sites positioned to couple the microelectronic device package to external devices, the first package bond sites being electrically coupled to the first microelectronic device via a first signal path; and

second package bond sites positioned to couple the microelectronic device package to external devices, the second package bond sites being electrically coupled to the second microelectronic device via a second signal path that is electrically isolated from the first signal path.

14. The microelectronic device package of claim 13 wherein the first and second package bond sites are accessible from the same side of the microelectronic device package.

15. The microelectronic device package of claim 13 wherein the first and second package bond sites are accessible from the opposite sides of the microelectronic device package.

16. The microelectronic device package of claim 11, further comprising:

first package bond sites positioned to couple the microelectronic device package to external devices, the first package bond sites being electrically coupled to the first microelectronic device; and

second package bond sites positioned to couple the microelectronic device package to external devices, the second package bond sites being electrically coupled to the second microelectronic device and being located at the same conductive material as the first package bond sites.

17. The microelectronic device package of claim 11, further comprising an intermediate element positioned between the first and second support members.

18. The microelectronic device package of claim 11 wherein the first and second microelectronic devices are electrically coupled to each other.

19. The microelectronic device package of claim 11, further comprising a third microelectronic device stacked on the second microelectronic device in the cavity.

20. The microelectronic device package of claim 11, wherein the first and second microelectronic devices have at least approximately the same shape and configuration.

21. The microelectronic device package of claim 11, wherein the first and second microelectronic devices have different shapes, configurations, or both.

CLAIMS

I/We claim:

1. A microelectronic device package, comprising:

a first member comprising a first conductive material, a second conductive material, and a first insulating material sandwiched between the first conductive material and the second conductive material, wherein the first member has a first cavity portion extending directly through apertures in the first conductive material, the first insulating material, and the second conductive material;

a second member comprising a third conductive material, a fourth conductive material, and a second insulating material sandwiched between the third conductive material and the fourth conductive material, wherein the second member has a second cavity portion extending directly through apertures in the third conductive material and the second insulating material but not through the fourth conductive material, wherein the fourth conductive material is contiguous, wherein the forth conductive material forms a closed end of the second cavity portion, and wherein the sandwich construction of the first member is oriented in a generally stacked arrangement relative to the sandwich construction of the second member;

an intermediate member between the first member and the second member, the intermediate member having an opening generally aligned with the first and second cavity portions, wherein the first cavity of the first member, the opening of the intermediate member and the second cavity of the second member are generally aligned; and

a microelectronic device having a first side and a second side opposite from the first side, the second side carried by the fourth conductive material of the second member at least partially within the second cavity portion, wherein the microelectronic device has bond sites on the first side, wherein the bond sites are electrically coupled to the fourth conductive material.

2. The microelectronic device package of claim 1, further comprising an adhesive attached between the second surface of the microelectronic device and the fourth conductive layer.

3. The microelectronic device package of claim 1, further comprising an encapsulant over at least a portion of the microelectronic device in the second cavity portion.

4. The microelectronic device package of claim 1 wherein the microelectronic device is connected to an intermediate conductive structure that is in turn electrically coupled to the fourth conductive material.

5. The microelectronic device package of claim 1 wherein the first cavity portion and second cavity portion together are deeper than a corresponding dimension of the microelectronic device.

6. The microelectronic device package of claim 1 wherein the intermediate member includes a circuit board.

7. The microelectronic device package of claim 1, further comprising at least one of an electrically conductive via electrically connected between the first and second conductive materials and an electrically conductive via electrically connected between the third and fourth conductive materials.

8. The microelectronic device package of claim 1 wherein the microelectronic device is a first microelectronic device, and wherein the microelectronic device package further comprises a second microelectronic device stacked on the first microelectronic device in at least one of the first cavity portion and the second cavity portion.

9. The microelectronic device package of claim 8, wherein both the first and second microelectronic devices are electrically coupled to the fourth conductive layer, and wherein the fourth conductive layer is patterned.

10. The microelectronic device package of claim 1 wherein the microelectronic device is electrically coupled to the fourth conductive layer with a wire bond.

11. A microelectronic device package, comprising:

a support member having a cavity with an opening, a closed end opposite the opening, and a contiguous conductive material at the closed end, the support member including:

a first support member element comprising a first conductive material, a second conductive material, and a first insulating material positioned between the first and second conductive materials, the first support member element having a first aperture extending directly through the first conductive material, the first insulating material, and the second conductive material; and

a second support member element having a third conductive material, a fourth conductive material, and a second insulating material positioned between the third conductive material and the fourth conductive material, the second support member element being attached to the first support member element and having a second aperture extending directly through the third conductive material and the second insulating material, the first and second apertures being substantially axially aligned to form the cavity;

a first microelectronic device disposed in the cavity, the first microelectronic device having a first surface with bond sites accessible from the first surface and electrically coupled to the fourth conductive material, the microelectronic device further having a second surface facing opposite from the first surface, the second surface facing toward and carried by the fourth conductive material in the cavity; and

a second microelectronic device stacked on the first microelectronic device.

12. The microelectronic device package of claim 11 wherein the first and second microelectronic devices are electrically coupled to each other.

13. The microelectronic device package of claim 11, further comprising:

first package bond sites positioned to couple the microelectronic device package to external devices, the first package bond sites being electrically coupled to the first microelectronic device via a first signal path; and

second package bond sites positioned to couple the microelectronic device package to external devices, the second package bond sites being electrically coupled to the second microelectronic device via a second signal path that is electrically isolated from the first signal path.

14. The microelectronic device package of claim 13 wherein the first and second package bond sites are accessible from the same side of the microelectronic device package.

15. The microelectronic device package of claim 13 wherein the first and second package bond sites are accessible from the opposite sides of the microelectronic device package.

16. The microelectronic device package of claim 11, further comprising:

first package bond sites positioned to couple the microelectronic device package to external devices, the first package bond sites being electrically coupled to the first microelectronic device; and

second package bond sites positioned to couple the microelectronic device package to external devices, the second package bond sites being electrically coupled to the second microelectronic device and being located at the same conductive material as the first package bond sites.

17. The microelectronic device package of claim 11, further comprising an intermediate element positioned between the first and second support members.

18. The microelectronic device package of claim 11 wherein the first and second microelectronic devices are electrically coupled to each other.

19. The microelectronic device package of claim 11, further comprising a third microelectronic device stacked on the second microelectronic device in the cavity.

20. The microelectronic device package of claim 11, wherein the first and second microelectronic devices have at least approximately the same shape and configuration.

21. The microelectronic device package of claim 11, wherein the first and second microelectronic devices have different shapes, configurations, or both.