

CLAIMS:

1. A multi-die electronic package, comprising:

a first die in a first mold layer, the first die comprising interconnections;

a first via and a second via in the first mold layer, the first via and the second via laterally adjacent to a first side of the first die, each of the first via and the second via extending from a top surface of the first mold layer to a bottom surface of the first mold layer;

a third via and a fourth via in the first mold layer, the third via and the fourth via laterally adjacent to a first side of a fourth die, each of the third via and the fourth via extending from the top surface of the first mold layer to the bottom surface of the first mold layer; wherein the first side of the first die and the first side of the fourth die face opposite lateral sides of the first mold layer;

a second die electrically coupled to the first die, and the second die electrically coupled to the first via and the second via;

a third die electrically coupled to the first die, the third die electrically coupled to the second die by the interconnections of the first die; and

a second mold layer between and in contact with the second die and the third die, the second mold layer having an upper surface co-planar with an upper surface of the second die, the second mold layer between the second die and the first die, and the second mold layer between the third die and the first die;

the fourth die in the first mold layer, wherein the fourth die is laterally spaced apart from the first die; and

a fifth die electrically coupled to the first die and the fourth die, wherein the fifth die is in the first mold layer, and wherein a direct electrical connection between the fifth die and the third die is absent.

2. The multi-die electronic package of claim 1, wherein the first die is in direct contact with the first mold layer.

3. The multi-die electronic package of claim 2, wherein each of the first via, the second via, the third via and the fourth via is in direct contact with the first mold layer.

4. The multi-die electronic package of claim 1, wherein the upper surface of the second mold layer is co-planar with an upper surface of the third die.

5. The multi-die electronic package of claim 1, wherein the second die is electrically coupled to the third die by an electrical pathway between the third die and the second die.

6. The multi-die electronic package of claim 1, wherein the third die is co-planar with the second die.

7. The multi-die electronic package of claim 1, further comprising:

a plurality of mid-level interconnects vertically beneath the first die.

8. The multi-die electronic package of claim 4, further comprising:

a solder resist beneath the first die, wherein the plurality of mid-level interconnects is in the solder resist.

9. A multi-die electronic package, comprising:

a first die in a first mold layer, the first die comprising interconnections;

a first via and a second via in the first mold layer, the first via and the second via laterally adjacent to a first side of the first die, each of the first via and the second via extending from a first surface of the first mold layer to a second surface of the first mold layer;

a second plurality of vias in the first mold layer, the second plurality of vias laterally adjacent to a first side of a fourth die, each of the second plurality of vias extending from the first surface of the first mold layer to the second surface of the first mold layer; wherein the first side of the first die and the first side of the fourth die face opposite lateral sides of the first mold layer;

a second die electrically coupled to the first die, and the second die electrically coupled to the first via and the second via;

a third die electrically coupled to the first die, the third die electrically coupled to the second die by the interconnections of the first die; and

a second mold layer between and in contact with the second die and the third die, the second mold layer having a surface co-planar with a surface of the second die, the second mold layer between the second die and the first die, and the second mold layer between the third die and the first die;

the fourth die in the first mold layer, wherein the fourth die laterally spaced apart from the first die; and

a fifth die electrically coupled to the fourth die, wherein the fifth die is in the first mold layer, and wherein a direct electrical connection between the fifth die and the third die is absent.

10. The multi-die electronic package of claim 9, wherein the first die is in direct contact with the first mold layer.

11. The multi-die electronic package of claim 10, wherein each of the first via, the second via, the third via and the fourth via is in direct contact with the first mold layer.

12. The multi-die electronic package of claim 9, wherein the second die is electrically coupled to the third die by an electrical pathway between the third die and the second die.

13. The multi-die electronic package of claim 9, wherein the third die is co-planar with the second die.

14. The multi-die electronic package of claim 9, further comprising:

a plurality of mid-level interconnects proximate a surface of the first die opposite the second die and the third die.

15. The multi-die electronic package of claim 14, further comprising:

a solder resist proximate the surface of the first die opposite the second die and the third die, wherein the plurality of mid-level interconnects is in the solder resist.