## CLAIMS

1. A side by side semiconductor package, comprising: a first die having an active side and a backside; a second die having an active side and a backside, the second die being horizontally adjacent the first die and spaced therefrom; a bridge interposer having an active side and a backside, the bridge interposer active side facing the active sides of the first die and the second die and partially horizontally overlapping the first die and the second die, the bridge interposer providing an interconnection between the first die and the second die; a first substrate having a cavity therein and attached to the backside of the bridge interposer such that the bridge interposer is positioned within the first substrate cavity; and a thermal element attached to the backside of the first die and the backside of the second die, the thermal element providing a heat path and heat storage for the first die and the second die.

2. The semiconductor package of claim 1, further comprising a thermal interface material layer positioned between the thermal element and the first die backside and the second die backside.

3. The semiconductor package of claim 2, further comprising a bridge interposer adhesive layer on the bridge interposer backside, the bridge interposer adhesive layer attaching the bridge interposer to the cavity and filling in the cavity not occupied by the bridge interposer.

4. The semiconductor package of claim 3, wherein the bridge interposer has routing pathways with a line space parameter of 2/2 or smaller.

5. The semiconductor package of claim 4, further comprising a plurality of connection points on the bridge interposer active side, the first die active side, and the second die active side.

6. The semiconductor package of claim 5, wherein the plurality of bridge interposer connection points are coupled to a portion of the plurality of first die connection points and to a portion of the plurality of second die connection points to provide signal pathways between the first die and the second die.

7. The semiconductor package of claim 6, wherein the plurality of connection points having a line space parameter of 2/2 or smaller.

8. The semiconductor package of claim 7, wherein the semiconductor package is integrated into one of a mobile phone, a mobile communication device, a pager, a personal digital assistant, a personal information manager, a mobile hand-held computer, a laptop computer, a wireless device, or a wireless modem.

9. A side by side semiconductor package, comprising: a first die having an active side and a backside; a second die having an active side and a backside, the second die being horizontally adjacent the first die and spaced therefrom; a bridge interposer having an active side and a backside, the bridge interposer active side facing the active sides of the first die and the second die and partially horizontally overlapping the first die and the second die, the bridge interposer providing an interconnection between the first die and the second die; a first substrate having a cavity therein and attached to the backside of the bridge interposer such that the bridge interposer is positioned within the first substrate cavity; a second substrate having a cavity therein and attached to the backside of the first die and the back side of the second die such that the first die and the second die are positioned within the second substrate cavity; and a thermal element attached to the backside of the first die and the backside of the second die, the thermal element providing a heat path and heat storage for the first die and the second die.

10. The semiconductor package of claim 9, further comprising a thermal interface material layer positioned between the thermal element and the first die backside and the second die backside.

11. The semiconductor package of claim 10, further comprising a bridge interposer adhesive layer on the bridge interposer backside, the bridge interposer adhesive layer attaching the bridge interposer to the cavity and filling in the cavity not occupied by the bridge interposer.

12. The semiconductor package of claim 11, wherein the bridge interposer has routing pathways with a line space parameter of 2/2 microns or smaller.

13. The semiconductor package of claim 12, further comprising a plurality of connection points on the bridge interposer active side, the first die active side, and the second die active side.

14. The semiconductor package of claim 13, wherein the plurality of bridge interposer connection points are coupled to a portion of the plurality of first die connection points and to a portion of the plurality of second die connection points to provide signal pathways between the first die and the second die.

15. The semiconductor package of claim 14, wherein the plurality of connection points having a line space parameter of 2/2 microns or smaller.

16. The semiconductor package of claim 15, further comprising a first die adhesive layer on the first die backside and a second die adhesive layer on the second die backside.

17. The semiconductor package of claim 16, wherein the semiconductor package is integrated into one of a mobile phone, a mobile communication device, a pager, a

personal digital assistant, a personal information manager, a mobile hand-held computer, a laptop computer, a wireless device, or a wireless modem.

18. A method of forming a side by side semiconductor package, the method comprising: attaching a first die having an active side and a backside to a carrier, the first die attached to the carrier by the backside of the first die; attaching a second die having an active side and a backside to the carrier horizontally adjacent and spaced from the first die, the second die attached to the carrier by the backside of the second die; attaching a bridge interposer having an active side and a backside to the active side of the first die and the active side of the second die, the bridge interposer attached to the first die and the second die by the backside of the bridge interposer; attaching a first substrate having a cavity to the backside of the bridge interposer such that the bridge interposer is positioned within the first substrate cavity; removing the carrier; and attaching a thermal element to the backside of the first die and the backside of the second die.

19. The method of claim 18, further comprising applying a thermal interface material to the backside of the first die and the backside of the second die before attaching the thermal element.

20. The method of claim 19, further comprising applying an adhesive layer to the backside of the bridge interposer before attaching the bridge interposer to the first substrate.

21. The method of claim 20, wherein the bridge interposer has routing pathways with a line and space parameter of 2/2 microns or less.

22. The method of claim 21, further comprising integrating the semiconductor package into one of a mobile phone, a mobile communication device, a pager, a personal digital assistant, a personal information manager, a mobile hand-held computer, a laptop computer, a wireless device, or a wireless modem.

23. A method of forming a side by side semiconductor package, the method comprising: attaching a first die having an active side and a backside to a carrier, the first die attached to the carrier by the backside of the first die; attaching a second die having an active side and a backside to the carrier horizontally adjacent and spaced from the first die, the second die attached to the carrier by the backside of the second die; attaching a bridge interposer having an active side and a backside to the active side of the first die and the active side of the second die, the bridge interposer attached to the first die and the second die by the backside of the bridge interposer; attaching a first substrate having a cavity to the backside of the bridge interposer such that the bridge interposer is positioned within the first substrate cavity; removing the carrier; attaching a second substrate having a cavity and a thermal element to the backside of the first die and the backside of the second die such that the first die and the second die are positioned with

the cavity and thermally coupled to the thermal element.

24. The method of claim 23, further comprising applying a thermal interface material to the backside of the first die and the backside of the second die before attaching the second substrate.

25. The method of claim 24, further comprising applying an adhesive layer to the backside of the bridge interposer before attaching the bridge interposer to the first substrate.

26. The method of claim 25, wherein the bridge interposer has routing pathways with a line and space parameter of 2/2 microns or less.

27. The method of claim 26, further comprising integrating the semiconductor package into one of a mobile phone, a mobile communication device, a pager, a personal digital assistant, a personal information manager, a mobile hand-held computer, a laptop computer, a wireless device, or a wireless modem.