CLAIMS

1. An apparatus for depositing an assembly material on an electronic substrate, the apparatus comprising:

a frame;

an assembly applicator coupled to the frame, the assembly applicator being configured to apply assembly material on the electronic substrate;

a support assembly coupled to the frame, the support assembly being configured to support the electronic substrate, the support assembly including a heated chuck plate including

a body including an external surface, the body configured to secure the electronic substrate near the external surface, and

an air channel network configured to selectively direct heated air to a plurality of predetermined locations on the electronic substrate, the air channel network including

a first heating pathway configured to direct the heated air through the external surface and onto a first location of the plurality of predetermined locations, and

a second heating pathway configured to direct the heated air through the external surface and onto a second location of the plurality of predetermined locations; and

a first mask including at least one hole positioned in the first mask to direct the heated air from the first heating pathway onto the first location.

2. The apparatus of claim 1, wherein

the air channel network includes a plurality of holes in the external surface of the body of the heated chuck plate,

the first heating pathway includes a first set of the plurality of holes, and

the second heating pathway includes a second set of the plurality of holes.

3. The apparatus of claim 2, wherein the first set of the plurality of holes includes a first grouping of the plurality of holes positioned to direct the heated air onto the first location of the plurality of predetermined locations on the electronic

substrate, and

the second set of the plurality of holes includes a second grouping of the plurality of holes positioned to direct the heated air onto the second location of the plurality of predetermined locations on the electronic substrate.

4. The apparatus of claim 1, wherein the air channel network further includes at least one port configured to selectively permit the heated air into one of the first heating pathway and the second heating pathway.

5. The apparatus of claim 4, wherein

the at least one port includes a first port configured to selectively permit the heated air into the first heating pathway and a second port configured to selectively permit the heated air into the second heating pathway.

6. The apparatus of claim 5, wherein

the first port is configured to receive a first set screw, the first set screw blocking the heated air from traveling through the first heating pathway when the first set screw is tightened and permitting the heated air to travel through the first heating pathway when the first set screw is loosened, and

the second port is configured to receive a second set screw, the second set screw blocking the heated air from traveling through the second heating pathway when the second set screw is tightened and permitting the heated air to travel through the second heating pathway when the second set screw is loosened.

7. The apparatus of claim 6, wherein the air channel network further includes a third heating pathway configured to receive the heated air regardless of any position of the first set screw in the first port and regardless of any position of the second set screw in the second port.

8. The apparatus of claim 1, wherein the first mask, except for the at least one hole, is configured to block the heated air from directly encountering the electronic substrate.

9. The apparatus of claim 1, wherein the at least one hole includes

a first hole positioned in the first mask to direct the heated air from the first heating pathway onto a first site included in the first location, and

a second hole positioned in the first mask to direct the heated air from the first heating pathway onto a second site included in the first location.

10. The apparatus of claim 1, wherein the first mask includes a grasping portion for removing the first mask from the external surface, the grasping portion extending over an edge of the external surface.

11. The apparatus of claim 1, further comprising a second mask including at least one hole positioned in the second mask to direct the heated air from the second heating pathway onto the second location.

12. A heated chuck plate comprising:

a body including an external surface, the body configured to secure an electronics assembly near the external surface;

an air channel network configured to selectively direct heated air to a plurality of predetermined locations on the electronics assembly, the air channel network including:

a first heating pathway configured to direct the heated air through the external surface and onto a first location of the plurality of predetermined locations; and

a second heating pathway configured to direct the heated air through the external surface and onto a second location of the plurality of predetermined locations; and

a first mask including at least one hole positioned in the first mask to direct the heated air from the first heating pathway onto the first location.

13. The heated chuck plate of claim 12, wherein

the air channel network includes a plurality of holes in the external surface of the body of the heated chuck plate,

the first heating pathway includes a first set of the plurality of holes, and

the second heating pathway includes a second set of the plurality of holes.

14. The heated chuck plate of claim 13, wherein

the first set of the plurality of holes includes a first grouping of the plurality of holes positioned to direct the heated air onto the first location of the plurality of predetermined locations on the electronics assembly, and

the second set of the plurality of holes includes a second grouping of the plurality of holes positioned to direct the heated air onto the second location of the plurality of predetermined locations on the electronics assembly.

15. The heated chuck plate of claim 12, wherein the air channel network further includes at least one port configured to selectively permit the heated air into one of the first heating pathway and the second heating pathway.

16. The heated chuck plate of claim 15, wherein the at least one port includes a first port configured to selectively permit the heated air into the first heating pathway and a second port configured to selectively permit the heated air into the second heating pathway.

17. The heated chuck plate of claim 16, wherein

the first port is configured to receive a first set screw, the first set screw blocking the heated air from traveling through the first heating pathway when the first set screw is tightened and permitting the heated air to travel through the first heating pathway when the first set screw is loosened, and

the second port is configured to receive a second set screw, the second set screw blocking the heated air from traveling through the second heating pathway when the second set screw is tightened and permitting the heated air to travel through the second heating pathway when the second set screw is loosened.

18. The heated chuck plate of claim 17, wherein the air channel network further includes a third heating pathway configured to receive the heated air regardless of any position of the first set screw in the first port and regardless of any position of the second set screw in the second port.

19. The heated chuck plate of claim 12, further comprising a valve configured to selectively direct the heated air into one of the first heating pathway and the

second heating pathway.