WHAT IS CLAIMED IS:

1. A wound dressing apparatus comprising:

a wound contact layer comprising a proximal wound-facing face and a distal face, wherein the proximal wound-facing face is configured to be positioned in contact with a wound;

at least one absorbent layer over the wound contact layer;

a cover layer configured to cover and form a seal over the wound contact layer and the at least one absorbent layer; and

an electronics assembly comprising:

an electronics unit comprising a negative pressure source;

a housing comprising:

a plate;

a flexible film; and

a window comprising a porous material;

wherein the electronics unit is enclosed within the flexible film and the plate;

wherein the at least one absorbent layer and the cover layer comprise recesses configured to receive the electronics assembly and the at least one absorbent layer is configured to be in fluid communication with the window of the electronics assembly.

2. The wound dressing apparatus of the preceding claim, wherein the window comprises a hydrophobic material configured to prevent fluid from entering the electronics assembly.

3. The wound dressing apparatus of any of the preceding claims, wherein the window comprises a bacterial filter.

4. The wound dressing apparatus of any of the preceding claims, wherein the electronics unit further comprises:

an outlet or exhaust mechanism positioned on an outlet of the negative pressure source, the outlet or exhaust mechanism comprising a vent aperture configured to expel air exhausted from the negative pressure source; and

a flexible circuit board, wherein the flexible circuit board comprises one or more of a sensor, a switch, a vent hole, and/or a light or LED indicators.

5. The wound dressing apparatus of Claim 4, wherein the vent hole of the flexible circuit board is configured to be in fluid communication with the vent aperture of the outlet or exhaust mechanism.

6. The wound dressing apparatus of Claim 5, wherein the vent hole of the flexible circuit board and the vent aperture of the outlet or exhaust mechanism comprises an antibacterial membrane and/or a non-return valve.

7. The wound dressing apparatus of Claim 4, further comprising an electronics label configured to cover and provide communication with the one or more sensors, a switch, vent hole, and/or light or LED indicators of the flexible circuit board.

8. The wound dressing apparatus of Claim 4, wherein the plate comprises an electronics label configured to cover the one or more sensors, a switch, vent hole, and/or light or LED indicators of the flexible circuit board.

9. The wound dressing apparatus of any of the preceding claims, wherein the electronics unit comprises one or more power sources.

10. The wound dressing apparatus of any of the preceding claims, wherein the wound dressing further comprises a transmission layer comprising a proximal wound-facing face and a distal face, the transmission layer positioned over the distal face of the wound contact layer.

11. The wound dressing apparatus of Claim 10, wherein the at least one absorbent layer comprises:

a first absorbent layer comprising a proximal wound-facing face and a distal face, the first absorbent layer positioned on the distal face of the transmission layer; and

a second absorbent comprising a proximal wound-facing face and a distal face, the second absorbent layer positioned on the distal face of the first absorbent layer.

12. A wound dressing apparatus comprising:

a wound dressing comprising:

an absorbent material;

an electronics unit comprising a negative pressure source, the electronics unit integrated within the wound dressing and at least partially encapsulated by a flexible film,

wherein the flexible film comprises a window comprising a porous material; and

wherein the window is configured to permit fluid communication between the absorbent material and the negative pressure source.

13. A wound dressing apparatus comprising:

a wound contact layer comprising a proximal wound-facing face and a distal face, wherein the proximal wound-facing face is configured to be positioned in contact with a wound;

at least one absorbent layer over the wound contact layer;

a cover layer configured to cover and form a seal over the wound contact layer and the at least one absorbent layer; and

an electronics assembly comprising:

an electronics unit comprising a negative pressure source and an inlet protection mechanism configured to prevent wound exudate from entering the negative pressure source;

a housing comprising:

a plate; and

a flexible film comprising an aperture;

wherein the electronics unit is enclosed within the flexible film and the plate; and

wherein the inlet protection mechanism is sealed to the aperture in the flexible film;

wherein the at least one absorbent layer and the cover layer comprise recesses configured to receive the electronics assembly and the at least one absorbent layer is configured to be in fluid communication with the inlet protection mechanism of the electronics unit.

14. The wound dressing apparatus of Claim 13, wherein the inlet protection mechanism comprises a hydrophobic material.

15. The wound dressing apparatus of any of Claims 13-14, wherein the electronics unit further comprises:

an outlet or exhaust mechanism positioned on an outlet of the negative pressure source, the outlet or exhaust mechanism comprising a vent aperture configured to expel air exhausted from the negative pressure source; and

a flexible circuit board, wherein the flexible circuit board comprises one or more of a sensor, a switch, a vent hole, and/or a light or LED indicators.

16. The wound dressing apparatus of Claim 15, wherein the vent hole of the flexible circuit board is configured to be in fluid communication with the vent aperture of the outlet or exhaust mechanism.

17. The wound dressing apparatus of Claim 16, wherein the vent hole of the flexible circuit board and the vent aperture of the outlet or exhaust mechanism comprises an antibacterial membrane and/or a non-return valve.

18. The wound dressing apparatus of Claim 15, further comprising an electronics label configured to cover and provide communication with the one or more sensors, a switch, vent hole, and/or light or LED indicators of the flexible circuit board.

19. The wound dressing apparatus of Claim 15, wherein the plate comprises an electronics label configured to cover the one or more sensors, a switch, vent hole, and/or light or LED indicators of the flexible circuit board.

20. The wound dressing apparatus of any of Claims 13-19, wherein the electronics unit comprises one or more power sources.

21. The wound dressing apparatus of any of Claims 13-20, wherein the wound dressing further comprises a transmission layer comprising a proximal wound-facing face and a distal face, the transmission layer positioned over the distal face of the wound contact layer.

22. The wound dressing apparatus of Claim 21, wherein the at least one absorbent layer comprises:

a first absorbent layer comprising a proximal wound-facing face and a distal face, the first absorbent layer positioned on the distal face of the transmission layer; and

a second absorbent comprising a proximal wound-facing face and a distal face, the second absorbent layer positioned on the distal face of the first absorbent layer.

23. A wound dressing apparatus comprising:

a wound dressing comprising:

an absorbent material;

an electronics unit comprising a negative pressure source and an inlet protection mechanism configured to prevent wound exudate from entering the negative pressure source, the electronics unit integrated within the wound dressing and at least partially encapsulated by a flexible film, the flexible film comprising an aperture;

wherein the inlet protection mechanism is sealed to the aperture in the flexible film; and

wherein the aperture in the flexible film is configured to permit fluid communication between the absorbent material and the negative pressure source.

24. A wound dressing apparatus comprising one or more of the features described in the foregoing description.

25. An electronics assembly comprising one or more of the features described in the foregoing description.