163 to contain the connector 134 and associated wiring. The enclosure may form a lower part of the separator wall 160. Weep holes 228s (shown in **FIGS. 1-3**) may extend from inside the enclosure 163 through the side wall 110s to allow water to exit the enclosure 163. In this embodiment, the central compartment 130 has a large opening 131 in the bottom so that a camera can be utilized, such as by viewing downward or by lowering it into the airstream through the large opening 131. The large opening 131 also allows drainage of fluid from the central compartment 130.

[00017] In various embodiments, the mating surface 134m of the connector 134 may be located high above the opening 131, on the top of the enclosure 163, so that the mating surface is not submerged in water when the payload 30 (**FIG. 1**) is connected/disconnected, even if the fuselage is not completely out of the water.

[00018] The rear avionics compartment 140 has a mounting surface 142 in a bottom of the avionics compartment 140. The mounting surface 142 has a forward channel 146f and a rear channel 146r. Channels 146f and 146r are recessed below the mounting surface 142. Drainage openings such as weep hole 228s (shown in **FIGS. 1-3**) in channel 146f extends through the side wall 110s of the fuselage 100. Weep holes 228b (shown in **FIGS. 2 and 3**) in the channel 146r extend through the bottom wall 110b of the fuselage 100. A sloping recess 229 in the mounting surface 142 drains water off the mounting surface 142 and into the channel 146r.

[00019] The embodiment shown in **FIG. 3** has an opening 141 in the side wall 110s of fuselage 100, to expose a heat sink 41 (**FIG. 1**) and allow heat generated by the avionics electronics 40 (**FIG. 1**) to be released.

fluid drain ports when the UAV is retrieved from the water. In this manner, the protection of the electrical and electronic components is not dependant on maintaining the integrity of the fuselage 100 or the exterior walls 110, which is likely to be damaged during landings on hard and/or rugged surfaces (typical of land landings).

[00025] This also allows the volume within the aircraft that needs to be waterproof to be minimized, thus reducing weight and overall system complexity.

[00026] Further, the aircraft's ability to land on hard surfaces or rugged terrain without damage to the electrical and electronic components is achieved not just by having these components encased in modularized compartments 120, 130, and 140, but also by allowing the walls 110 of the compartments 120, 130, and 140 to be partially compromised without necessarily causing failure of the UAV. The walls 110 create an impact zone around the electrical and electronic components within the compartments 120, 130, and 140, and the separators inhibit the components 20, 30, and 40 from impacting each other. Optionally, in some embodiments, the walls 110 and mounts 122, 132f, 132r, and 142 are such that the components 20, 30, and 40 (**FIG. 1**) are recessed from the walls 110 and/or their respective separators 150 and 160 (**FIG. 2**). Additional shock absorbing material (not shown) may be added within the compartments 120, 130, or 140 to further reduce any chance of damage to the components 20, 30, or 40 from impacts.

[00027] As illustrated in **FIGS. 1 and 2**, the fuselage 100 may contain an optional exterior channel 110c in the side 110s of the fuselage 100, extending rearward from a hole 218 in the side wall 110s at the avionics compartment 140, to the tail section of the aircraft 10. Wiring 203 extends through the hole 218 and along the exterior channel 110c to connect