fluid-ejection device. A portion of the fluid supply cartridge 120 is depicted in FIG. 5. The interface 100 is disposed at a surface 130 of a housing 122 of the fluid supply cartridge 120, which may be a recessed surface at a back of a cavity defined by a lip 132 of the housing 122. The interface 100 includes an electrical interface 104 and fluidic interconnect septums 102A and 102B, which are collectively referred to as the fluid interconnect septums 102. In the example of FIG. 5, the electrical interface 104 is disposed between the septums 102, as in FIGs. 1A and 1 B, but the septums 102 may also be disposed to the same side of the interface 104, as in FIGs. 2A and 2B.

[0050] The electrical interface 104 of the horizontal interface 100 horizontally conductively connects a digital fluid level sensor 124 of the fluid supply cartridge 120 to a corresponding electrical interface of a fluid-ejection device. The fluidic interconnect septums 102 horizontally fluidically interconnect a supply of fluid 128 contained within the housing of the fluid supply cartridge 120 to the fluid- ejection device 140. In the example of FIG. 5, the septum 102A is a supply septum to supply the fluid 128 of the cartridge 120 to the fluid-ejection device, and the septum 102B can be a return septum to return unused fluid and replacement air from the fluid-ejection device to the cartridge 120. The septum 102B can be fluidically interconnected to a tube 126 within the housing 122 to ensure that such unused fluid and air are returned within the housing 122 at a level above the level of the fluid 128 within the housing 122, as in FIG. 1 A.

[0051] The horizontal interface 100 of FIG. 5 differs from that of FIGs. 1A, 1 B, 2A, and 2B in that the septum 102A is disposed at a sump 500 of the fluid supply cartridge 120. An internal surface 502 within the housing 122 is present in FIG. 5, and is angled downwards towards the septum 102A. The downward angle of the surface 502 of the housing towards the septum 102A at least partially defines the sump 500.

We Claim:

1. A fluid supply cartridge horizontally insertable, perpendicular to a gravitational direction, into a fluid-ejection device,
comprising:

a housing;

a supply of fluid within the housing;

a digital fluid level sensor within the housing, the digital fluid level sensor comprising a liquid level sensing interface, the liquid level sensing interface comprising:

an elongate strip, a series of heaters and a series of sensors, the elongate strip in contact with a liquid of the fluid supply to measure a level of the fluid within the housing, wherein the elongate strip supports the series of heaters and the series of sensors such that differences between signals from the sensors indicate a level of liquid within the housing; and

a horizontal interface at an end of the housing to connect the fluid supply cartridge to a fluid-ejection device, comprising:

a first fluid interconnect septum to horizontally fluidically interconnect the supply of fluid to the fluid-ejection device and a second fluid interconnect septum to horizontally fluidically interconnect the supply of fluid to the fluid-ejection device; and

an electrical interface to conductively connect the
digital fluid level sensor to a corresponding electrical interface of the fluid-ejection device.

2. The fluid supply cartridge of claim 1, wherein the first fluidic interconnect septum is disposed below the second fluidic interconnect septum, and the second fluidic interconnect septum is disposed below the electrical interface.

3. The fluid supply cartridge of claim 1, wherein the electrical interface comprises:

a horizontally oriented electrical interface having a first surface and a second surface opposite the first surface;

a plurality of electrical contacts on one or more of the first surface and the second surface, the plurality of electrical contacts having surfaces that conductively connect to corresponding electrical contacts of an electrical interface of the fluid ejection device along surfaces parallel to the horizontal direction in which the fluid supply cartridge is insertable into the fluid ejection device.

4. The fluid supply cartridge of claim 3, wherein the electrical contacts are just on the first surface.

5. The fluid supply cartridge of claim 3, wherein the electrical contacts comprise:

one or more first electrical contacts on the first surface; and

one or more second electrical contacts on the second surface.

6. The fluid supply cartridge of claim 3, wherein the horizontally oriented electrical interface is a circuit board insertable into a corresponding connector of

the corresponding electrical interface of the fluid-ejection device.

7. The fluid supply cartridge of claim 3, wherein the horizontally oriented electrical interface is a connector into which a corresponding circuit board of the corresponding electrical interface of the fluid-ejection device is insertable.

8. The fluid supply cartridge of claim 3, wherein the horizontally oriented electrical interface is an integrated part of the digital fluid level sensor.

9. The fluid supply cartridge of claim 1, wherein the electrical interface comprises:

a vertically oriented electrical interface having a surface;

a plurality of electrical contacts on the surface, the plurality of electrical contacts arranged to conductively connect to corresponding electrical contacts of an electrical interface of the fluid ejection device on surfaces perpendicular to the horizontal direction in which the fluid supply cartridge is insertable into the fluid ejection device.

10. The fluid supply cartridge of claim 9, wherein the vertically oriented electrical interface is a circuit board physically pressable against a corresponding compression connector of the corresponding electrical interface of the fluid-ejection device.

11. The fluid supply cartridge of claim 9, wherein the vertically oriented electrical interface is a compression connector against a corresponding electrical

interface of the fluid-ejection device is physically pressable.

12. The fluid supply cartridge of claim 10, wherein the vertically oriented electrical interface is an integrated part of the digital fluid level sensor and is physically pressable against a corresponding compression connector of the corresponding electrical interface of the fluid-ejection device.