FOLDABLE PC EMBEDDED WITH FLEXIBLE DISPLAY AND KEYBOARD

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Foldable PC embedded with flexible display and keyboard

The Foldable PC is with foldable display and foldable keyboard so that these two parts can be collapsed to as a cylinder. The Foldable PC has below benefit compare to regular laptop PC:

- Cylinder shape, easy to carry.
- Compact size.
- Light weight.

The Foldable PC is consisted of PCB with processor, battery for power supply, antenna for wireless connection, I/O for connect with other devices, foldable display for showing information and foldable keyboard for input, a physical mechanism to pop out the display and keyboard as well as collapse back into the enclosure.

- The foldable display is a film based OLED
- The Keyboard is a film based touch panel
- The display support plate is a kind of shape memory alloy.
The panel, keyboard and panel back plate is scrolled and collapsed on a rotational internal tube. A torsion spring is attached to the tube with compressed force and locked by a latch. The latch could be in form of ratchet wheel and pawl mechanism. Once the latch is released, the torsion spring makes the tube rotate by spring force and pop out the foldable keyboard and panel.

Disclosed by James Pan, KT Wu and Chad Chen, HP Inc.