CLAIMS

What is claimed is:

1. ~~A gaming controller for a~~ A mobile device, comprising:

a housing;

a mobile device processor in the housing, the mobile device processor coupled to a memory module and configured to run a software application; and

a virtual controller module;

wherein a side portion of the housing is configured to be removably coupleable to a first hardware gaming controller configured to be manipulated by a user's left thumb and/or fingers to generate a left controller input,

wherein an opposing side portion of the housing is configured to be removably coupleable to a second hardware gaming controller configured to be manipulated by a user's right thumb and/or fingers to generate a right controller input;

wherein the virtual controller module is configured to combine the left controller input and the right controller input to form a single controller input representation for providing to the software application.

2. The mobile device of claim 1, wherein the mobile device processor is configured to receive the left controller input and the right controller input as distinct data packets.

3. The mobile device of claim 2, wherein each of the data packets corresponding to the left controller input and the right controller input comprises a respective identifier to identify the corresponding data packet as being from the first hardware gaming controller or the second hardware gaming controller.

4. The mobile device of claim 1, wherein an operating system running on the mobile device processor is configured to receive the left controller input and the right

controller input as distinct data packets; and wherein the virtual controller module is configured for operation on the operating system.

5. The mobile device of claim 4, wherein a device driver running on the mobile device processor is configured to receive the left controller input and the right controller input as distinct data packets, for interpreting the data packets for communication with the operating system.

6. A gaming controller for a mobile device, comprising:

a first hardware gaming controller comprising a first programmable controller and at least one input switch, the at least one input switch of the first hardware gaming controller configured to be manipulated by a ~~user's~~user's left thumb and/or fingers to generate

a left controller input with the first programmable controller; and

a second hardware gaming controller comprising a second programmable controller and at least one input switch, the at least one input switch of the second hardware gaming controller configured to be manipulated by a ~~user's~~user's right thumb and/or

fingers to generate a right controller input with the second programmable controller;

~~the first hardware gaming controller and the second hardware gaming controller each configured to be removably coupleable with a mobile device, the mobile device comprising a mobile device processor coupled to a memory module and configured to run a software application;~~

wherein the first hardware gaming controller is configured to be ~~mechanically secured~~ removably coupleable to a side portion of a housing of ~~the~~a mobile device, and the second hardware gaming controller is configured to be ~~mechanically~~

~~secured~~removably coupleable to an opposing side portion of the housing of the mobile device~~; and~~ , the mobile device configured to run a software application,

wherein the left controller input and the right controller input are ~~combined with a~~ combinable using a virtual controller module to form a virtual gaming controller with a single controller input representation for providing to the software application.

~~virtual controller module to form a virtual gaming controller with a single controller input~~

~~representation for providing to the software application.~~

~~2.~~ 7. The gaming controller ~~according to~~of claim ~~1~~6, wherein the first hardware gaming

controller comprises a serial bus connection coupling the first programmable controller to

the mobile device ~~processor~~ and the second hardware gaming controller comprises a

separate serial bus connection coupling the second programmable controller to the mobile device ~~processor.~~ .

~~3.~~ 8. The gaming controller ~~according to~~of claim ~~1~~6, wherein the first hardware gaming

controller comprises a first wireless transceiver coupled to the first programmable

controller and the second hardware gaming controller comprises a second wireless

transceiver coupled to the second programmable controller, for establishing a wireless

data coupling.

~~4.~~ 9. The gaming controller ~~according to~~of claim ~~3~~6, wherein the first hardware gaming

controller and the second hardware gaming controller are configured to establish separate

wireless data couplings to the mobile device ~~processor.~~ .

~~5.~~ 10. The gaming controller ~~according to~~of claim ~~3~~6, wherein a wireless data coupling is

configured to be established between the first programmable controller in the first

hardware gaming controller and the second programmable controller in the second hardware gaming controller.

~~hardware gaming controller.~~

~~6.~~ 11. The gaming controller ~~according to~~of claim ~~5~~6, wherein any one of the first hardware

gaming controller or the second hardware gaming controller comprises a serial bus

connection to the mobile device ~~processor.~~ .

~~7.~~ 12. The gaming controller ~~according to~~of claim ~~5~~11, wherein any one of the first hardware

gaming controller or the second hardware gaming controller further establishes a wireless data coupling to the mobile device.

~~8.~~ 13. The gaming controller ~~according to~~of claim ~~3~~8, wherein the wireless data coupling is ~~-~~any one of a Bluetooth connection, a Wireless Universal Serial Bus (WUSB) connection,

a radio frequency connection, or an infrared data connection.

~~9.~~ 14. The gaming controller ~~according to~~of claim ~~1, wherein the mobile device processor~~

~~is configured to receive the left controller input and the right controller input as distinct data packets.~~

~~10. The gaming controller according to claim 9, wherein an operating system running~~

~~on the mobile device processor is configured to receive the left controller input and the~~

~~right controller input as distinct data packets; and~~

~~wherein the virtual controller module is configured for operation on the operating system.~~

~~11. The gaming controller according to claim 9, wherein a device driver running on the mobile device processor is configured to receive the left controller input and the right~~

~~controller input as distinct data packets by, for interpreting the data packets for communication with the operating system.~~

~~12. The gaming controller according to claim 1~~6, further comprising a data coupling between the first programmable controller in the first hardware gaming controller and the

second programmable controller in the second hardware gaming controller; wherein the -virtual controller module is configured for operation on any one of the first programmable controller or the second programmable controller.

~~13. A~~15. The gaming controller of claim 6, wherein the left controller input and the right controller input are distinct data packets.

16. The gaming controller of claim 15, wherein each of the data packets corresponding to the left controller input and the right controller input comprises a respective identifier to identify the corresponding data packet as being from the first hardware gaming controller or the second hardware gaming controller.

17. The gaming controller of claim 6, wherein each of the first hardware gaming controller and the second hardware gaming controller is mechanically securable to a respective side portion of the housing of the mobile device.

18. A non-transitory computer-readable medium comprising instructions which, when executed by a processor, causes the processor to perform a method of operating a gaming controller, the ~~gaming controller comprising a~~

~~first hardware gaming controller and a second hardware gaming controller each configured to be removably coupleable with a mobile device, the first hardware gaming~~

~~controller configured to be mechanically secured to a side portion of a housing of a mobile device, and the second hardware gaming controller configured to be mechanically~~

~~secured to an opposing side portion of the housing of the mobile device , the~~ method comprising:

~~generating~~receiving a left controller input ~~with~~generated by a first programmable controller in ~~the~~a first

hardware gaming controller through a data coupling between the first hardware gaming controller and the mobile device, the first hardware gaming controller configured to be manipulated by a user's left thumb and/or fingers;

~~manipulated by a user's left thumb and/or fingers;~~

~~generating~~receiving a right controller input with a second programmable controller in ~~the~~

a second hardware gaming controller through a data coupling between the first hardware gaming controller and the mobile device, the second hardware gaming controller configured to be manipulated by a ~~user's~~user's right thumb and/or fingers;

combining the left controller input and the right controller input to form a ~~virtual~~ single controller input representation; and

~~gaming controller with a~~ providing the single controller input representation~~; and providing the virtual gaming controller~~ to a software application operating on a mobile device processor in ~~the mobile device.~~

~~14. The method of claim 13, further comprising sending the left controller input and the right controller input separately each through a serial bus connection to the mobile device processor.~~

~~15. The method of claim 14, further comprising sending the left controller input to the mobile device processor through a first serial bus connection between the first hardware gaming controller and the mobile device, and sending the right controller input to the~~

~~mobile device processor through a second serial bus connection between the second~~

~~hardware gaming controller and~~ the mobile device.

~~16.~~ 19. The ~~method~~ non-transitory computer-readable medium of claim ~~13,~~ 18, wherein the method further ~~comprising sending~~comprises:

receiving the left controller input ~~to~~and right controller input as distinct data packets, by the mobile device processor ~~through a first wireless data coupling between the first hardware~~ in the mobile device.

~~gaming controller and the mobile device, and sending the right controller input to the~~

~~mobile device processor through a second wireless data coupling between the second~~

~~hardware gaming controller and the mobile device. 17. The method of claim 13, further comprising sending controller input from the any~~

~~one of the first hardware gaming controller or the second hardware gaming controller to~~

~~the corresponding second hardware gaming controller or first hardware gaming controller~~

~~respectively, through a wireless data coupling.~~

~~18. The method of claim 17, further comprising sending the left controller input and~~

~~the right controller input to the mobile device processor through any one of a serial bus connection or a wireless data coupling between the corresponding second hardware~~

~~gaming controller or first hardware gaming controller and the mobile device. 19. The method according to claim 13, further comprising receiving the left~~

~~controller input and right controller input as distinct data packets, by the mobile device~~

~~processor.~~

20. ~~The method~~The non-transitory computer-readable medium of claim 19, ~~further comprising combining~~wherein each of the data packets corresponding to the left controller

input and the right controller input ~~with the virtual controller module operating on~~comprises a respective identifier to identify the

~~mobile device processor. 21. The method of claim 19, further comprising interpreting the distinct data packets~~

~~with a device driver on the mobile device processor.~~

~~22. The method of claim 13, further comprising:~~

~~receiving the left controller input and the right controller input in any one of~~corresponding data packet as being from the first hardware gaming controller or the second hardware gaming controller~~; and~~

~~combining the left controller input and the right controller input with the virtual~~

~~controller module operating on any one of the first hardware gaming controller or the~~

~~second hardware gaming controller.~~

~~23. A computer program product directly loadable into a non-transitory memory~~

~~module of a digital computer provided in a mobile device, the computer program product~~

~~comprising software code portions for performing the steps of a method according to any~~

~~one of claims 13 to 22, when the computer program product is run on the digital~~

~~computer~~.