

CLAIMS

1. A flash drive configured to pass current from a source device to a mobile device to charge a battery of the mobile device, the flash drive comprising:

- a printed circuit board (PCB);
- a flash memory integrated circuit (IC);
- a first connector to connect to and communicate with the source device;
- a second connector to connect to and communicate with the mobile

device;

a power switch; and

a control module that is

a) coupled the flash memory IC, the PCB, the power switch, the first connector, and the second connector,

b) configured to enable a first data received via the first connector i) to be written to the flash memory IC, ii) to be read from the flash memory IC and sent to the source device via the first connector or to the mobile device via the second connector, and iii) to be erased from the flash memory IC,

c) configured to enable a second data received via the second connector i) to be written to the flash memory IC, ii) to be read from the flash memory IC and sent to the source device via the first connector or to the mobile device via the second connector, and iii) to be erased from the flash memory IC, and

d) configured to control the power switch to enable the power switch to pass the current from the source device to the mobile device to charge the battery of the mobile device.

2. The flash drive of claim 1, wherein the control module is further configured to enable a movie to be copied from the source device via the first connector and streamed to the mobile device via the second connector.

3. The flash drive of claim 2, wherein control module is further configured to enable the movie that is copied from the source device to be stored in the flash

memory IC, and to enable the streaming of the movie to the mobile device to include reading the movie from the flash memory IC.

4. The flash drive of claim 2, wherein the control module is further configured to stream the movie using Small Computer System Interface (SCSI) commands.

5. The flash drive of claim 1, further comprising:

a data switch coupled to the control module, the first connector, and the second connector; and

a logic module, wherein the logic module is configured to control the data switch to enable

a) the first data to be written to the flash memory IC, and, after being read from the flash memory IC, to be sent to the source device via the first connector or to the mobile device via the second connector, and

b) the second data to be written to the flash memory IC, and, after being read from the flash memory IC, to be sent to the source device via the first connector or to the mobile device via the second connector.

6. The flash drive of claim 1, wherein the control module IC is further configured to:

read file system software from the flash memory IC; and

send the file system software to the mobile device to enable the mobile device to use the file system software to send data to and receive data from the flash drive.

~~7. A flash drive comprising:~~

~~a printed circuit board (PCB);~~

~~a flash memory integrated circuit (IC);~~

~~a first standard interface connector;~~

~~a second standard interface connector;~~

~~a power switch; and~~

~~a control module that is~~

~~a) coupled to the flash memory IC, the PCB, the power switch, the first connector, and the second connector,~~

~~b) configured to enable a first data received via the first standard interface connector i) to be written to the flash memory IC, ii) to be read from the flash memory IC and sent to a first device via the first standard interface connector or to a second device via the second standard interface connector, and iii) to be erased from the flash memory IC,~~

~~e) configured to enable a second data received via the second standard interface connector i) to be written to the flash memory IC, ii) to be read from the flash memory IC and sent to the first device via the first standard interface connector or to the second device via the second standard interface connector, and iii) to be erased from the flash memory IC, and~~

~~d) configured to control the power switch to enable the power switch to pass current from the first device via the first standard interface connector to the second device via the second standard interface connector.~~

8.7. The flash drive of claim 7_1, wherein the control module includes a plurality of sub-modules, wherein each of the sub-modules is respectively included in an IC of a plurality of ICs, wherein each of the plurality of ICs is coupled to the PCB, and wherein each of the plurality of ICs includes at least one of the sub-modules.

9.8. The flash drive of claim 7_1, wherein the flash memory IC stores instructions which, when executed by the control module, cause the flash drive to perform operations including:

receiving movie data from the first device via the first standard interface connector;

storing the movie data at the flash memory IC;

in preparation to stream the movie data, reading the movie data from the flash memory IC; and

streaming the movie data to the second device via the second standard interface connector.

~~10.9.~~ The flash drive of claim ~~7~~1, wherein the control module IC is further configured to prevent detection of an error via a standard USB error detection mechanism, and to enable the detection of the error via file system software stored at the flash drive.

~~11.10.~~ The flash drive of claim ~~7~~1, wherein the first standard connector is one of a full size USB connector, a standard USB connector, a standard A-type USB connector, a B-type USB connector, a mini USB connector, a mini USB A-type connector, a mini USB B-type connector, a micro USB connector, a micro USB A-type connector, a micro USB B-type connector, or a UC-E6 connector, and wherein the second standard interface connector is one of an Apple Lightning connector, an Apple 30-pin connector, an Apple Thunderbolt connector, a mini USB connector, a mini USB A-type connector, a mini USB B-type connector, a micro USB connector, a micro USB A-type connector, a micro USB B-type connector, or a UC-E6 connector.

~~12.11.~~ The flash drive of claim ~~7~~1, further comprising:

a power management module that is coupled to the first and the second standard interface connectors, and that is configured to enable power to flow from the first device via the first standard interface connector to the second device via the second standard interface connector.

~~13.12.~~ The flash drive of claim ~~12~~11, wherein the flash drive is configured to communicate with the first device to determine how much current the first device can provide to the flash drive.

~~14.13.~~ The flash drive of claim ~~12~~11, wherein the flash drive is configured to communicate with the second device to determine how much current the second device will consume, the power to flow from the first device to the second device via current that is provided by the first device and that flows to the second device.

~~15.14.~~ The flash drive of claim ~~7~~1, further comprising:

a data switch that is coupled to the first standard interface connector, the second standard interface connector, and the control module, wherein the control

module is further configured to determine whether to communicate with the first device or the second device, and to control the data switch to enable the determined communication.

~~16-15.~~ The flash drive of claim 7_1, wherein the control module is further configured to prevent a first power supply of the first device, and a second power supply of the second computing device, from electrically interacting to damage any component of the flash drive coupled to either the first or the second power supplies, or to damage the first or the second power supplies.

~~17-16.~~ The flash drive of claim 7_1, wherein the control module is further configured

a) to detect

i) when the first device is coupled to the first standard interface connector, and

ii) when the second device is coupled to the second standard interface connector, and

b) to determine whether to send data from the flash memory IC to the first or the second device based on an order between

i) the detection of the first device being coupled to the first connector, and

ii) the detection of the second device being coupled to the second connector.

~~18-17.~~ A method comprising:

receiving, by a flash drive, first data from a first device via a first standard interface connector that is connected to the first device;

writing, by the flash drive, the first data to a first block of memory in a flash memory integrated circuit (IC) of the flash drive, wherein the first block includes the first data and other data;

reading, by the flash drive, the first data from the flash memory IC;

sending, by the flash drive, the first data to a second device via a second standard interface connector that is connected to the second device;

erasing, by the flash drive, the first block of memory, wherein the first block of memory includes the first data and additional data; and

sending, by the flash drive, a signal to a power switch of the flash drive to cause current to flow from the first device via the first standard interface connector to the second device via the second standard interface connector.

19-18. The method of claim 18-17, further comprising:

sending a signal, by the flash drive, to the first device to establish the first device as a Universal Serial Bus (USB) host, wherein the receiving of the first data is based on the first device being established as the USB host.

20-19. The method of claim 19-18, further comprising:

sending a signal, by the flash drive, to the second device to establish the second device as the USB host, wherein the sending of the second data is based on the second device being established as the USB host.

21-20. The method of claim 18-17, further comprising:

sending a signal to the first device to determine how much current the first device can provide to the flash drive.

22-21. The method of claim 18-17, further comprising:

sending a signal to the second device to determine how much current the second device will receive from the flash drive.