[0082]
Next, in S1004, the camera control circuit 101 makes such a control that the SW circuit 2 is turned on and the SW circuits 1, 3, and 4 are turned off, respectively.
[0083]
In S1005, the camera control circuit 101 confirms the voltage level of the input terminal P2, and determines that TC04 is connected to the grounded contact if it is a Lo level, and that TC04 is not connected to the grounded contact if it is a Hi level.
[0084]
Next, in S1006, the camera control circuit 101 makes such a control that the SW circuit 3 is turned on and the SW circuits 1, 2, and 4 are turned off, respectively.
[0085]
In S1007, the camera control circuit 101 confirms the voltage level of the input terminal P3, and determines that TC18 is connected to the grounded contact if it is a Lo level, and that TC18 is not connected to the grounded contact if it is a Hi level.
[0086]
Next, in S1008, the camera control circuit 101 makes such a control that the SW circuit 4 is turned on and the SW circuits 1, 2, and 3 are turned off, respectively.
[0087]
In S1009, the camera control circuit 101 confirms the voltage level of the input terminal P4, and determines that TC21 is connected to the grounded contact if it is a Lo level, and that it is not connected to the grounded contact if it is a Hi level.
[0088]
In S1010, the camera control circuit 101 makes such a control that the SW circuits 1, 2, 3, and 4 are turned on, respectively.
[0089]
Such a control enables the camera control circuit 101 to confirm the attachment state of the grounded contact with the attached accessory 200, and to determine whether or not to supply to the accessory power supply circuit 202 and the like based on the ground connection state.
[0090]
In the meanwhile, if the accessory 200 is tilted to the camera 100 or the like when the accessory 200 is attached to the camera 100, only some of the plurality of contacts TC01 to TC21 and TA01 to TA21 can be connected with each other. As illustrated in FIG. 16, where a Z direction is the attachment direction of the accessory 200 to the camera 100, an X direction is a direction in which the plurality of contacts TC01 to TC21 and TA01 to TA21 are aligned, and a Y direction is a direction orthogonal to the

CLAIMS

[CLAIM 1]

An electronic apparatus detachably attached to an accessory via an accessory shoe, the electronic apparatus comprising a plurality of contacts electrically connectable to the accessory via the accessory shoe and arranged in a row,

wherein the plurality of contacts include:

a first signal contact used to transmit a data signal in a communication between the electronic apparatus and the accessory;

a second signal contact used to transmit a clock signal in synchronization with the data signal in the communication; and

a third signal contact used to receive a communication request signal from the accessory,

wherein the first signal contact and the second signal contact are arranged next to each other,

wherein the third signal contact is disposed on an opposite side of the second signal contact with respect to the first signal contact, and

wherein a transmission of the data signal via the first signal contact is executed in response to a reception of the communication request signal via the third signal contact.

[CLAIM 2]

The electronic apparatus according to claim 1, wherein during the communication via the first signal contact, no communication is performed except for the clock signal to the accessory via the second signal contact and the communication request signal from the accessory via the third signal contact.

[CLAIM 3]

The electronic apparatus according to claim 1 or 2, wherein an open drain communication is executed via the first signal contact and the second signal contact.

[CLAIM 4]

The electronic apparatus according to any one of claims 1 to 3, wherein an open drain communication is executed via the third signal contact.

[CLAIM 5]

The electronic apparatus according to any one of claims 1 to 4, wherein the first signal contact and the second signal contact are signal contacts used for an I2C communication.

[CLAIM 6]

The electronic apparatus according to any one of claims 1 to 5, comprising a

fourth signal contact used to transmit a control signal for controlling a light emission of an illumination unit from the electronic apparatus on an opposite side of the first signal contact with respect to the second signal contact,

wherein the control signal is transmitted before or after the communication via the first signal contact and the second signal contact.

[CLAIM 7]

The electronic apparatus according to claim 1, comprising, on an opposite side of the first signal contact with respect to the third signal contact, a fifth signal contact, a sixth signal contact, a seventh signal contact, and an eighth signal contact in this order,

wherein in response to the communication request transmitted to the accessory via the fifth signal contact, at least one of a reception of the data signal via the sixth signal contact and a transmission of the data signal via the seventh signal contact is executed in synchronization with the clock signal transmitted to the accessory via the eighth signal contact.

[CLAIM 8]

The electronic apparatus according to claim 7, wherein the communication of the data signal via the sixth signal contact and the seventh signal contact is faster than the communication of the data signal via the first signal contact.

[CLAIM 9]

The electronic apparatus according to claim 7 or 8, wherein an open drain communication is executed via the first signal contact, and

wherein a communication by a CMOS output is executed via the sixth signal contact and the seventh signal contact.

[CLAIM 10]

The electronic apparatus according to any one of claims 1 to 9, further comprising a communication controller configured to control the communication with the accessory.

[CLAIM 11]

The electronic apparatus according to any one of claims 1 to 10, wherein the electronic apparatus is an image pickup apparatus.

[CLAIM 12]

An accessory detachably attached to an electronic apparatus via an accessory shoe, the accessory comprising a plurality of contacts electrically connectable to the accessory shoe of the electronic apparatus and arranged in a row,

wherein the plurality of contacts include:

a first signal contact used to transmit a data signal in a

communication between the electronic apparatus and the accessory;

a second signal contact used to receive a clock signal in synchronization with the data signal in the communication; and

a third signal contact used to transmit a communication request signal to the electronic apparatus,

wherein the first signal contact and the second signal contact are arranged next to each other,

wherein the third signal contact is disposed on an opposite side of the second signal contact with respect to the first signal contact, and

wherein a reception of the data signal via the first signal contact is executed in response to a transmission of the communication request signal via the third signal contact.

[CLAIM 13]

The accessory according to claim 12, wherein during the communication via the first signal contact, no communication is performed except for the clock signal from the electronic apparatus via the second signal contact and the communication request signal to the electronic apparatus via the third signal contact.

[CLAIM 14]

The accessory according to claim 12 or 13, wherein an open drain communication is executed via the first signal contact and the second signal contact.

[CLAIM 15]

The accessory according to any one of claims 12 to 14, wherein an open drain communication is executed via the third signal contact.

[CLAIM 16]

The accessory according to any one of claims 12 to 15, wherein the first signal contact and the second signal contact are signal contacts used for an I2C communication.

[CLAIM 17]

The accessory according to any one of claims 12 to 16, comprising a fourth signal contact used to receive a control signal for controlling a light emission of an illumination unit from the electronic apparatus on an opposite side of the first signal contact with respect to the second signal contact, and

wherein the control signal is received before or after the communication via the first signal contact and the second signal contact.

[CLAIM 18]

The accessory according to claim 12, comprising, on an opposite side of the

first signal contact with respect to the third signal contact, a fifth signal contact, a sixth signal contact, a seventh signal contact, and an eighth signal contact in this order,

wherein in response to the communication request received from the electronic apparatus via the fifth signal contact, at least one of a transmission of the data signal via the sixth signal contact and a reception of the data signal via the seventh signal contact is executed in synchronization with the clock signal received from the electronic apparatus via the eighth signal contact.

[CLAIM 19]

The accessory according to claim 18, wherein the communication of the data signal via the sixth signal contact and the seventh signal contact is faster than the communication of the data signal via the first signal contact.

[CLAIM 20]

The accessory according to claim 18 or 19, wherein an open drain communication is executed via the first signal contact, and

wherein a communication by a CMOS output is executed via the sixth signal contact and the seventh signal contact.

[CLAIM 21]

The accessory according to any one of claims 12 to 20, wherein the plurality of contacts are arranged in a first direction orthogonal to an attachment direction of the accessory to the electronic apparatus,

wherein the accessory comprises a connector having a protrusion that protrudes in a direction of attaching to the electronic apparatus and a direction orthogonal to the first direction at a position on both outer sides of the plurality of contacts in the first direction,

wherein the plurality of contacts include a reference potential contact connected to a reference potential on at least one of both ends, and

wherein the protrusion includes a slope portion on a side not facing the plurality of contacts so that a width in the first direction of a tip in a protruding direction is smaller than that at a position away from the tip.

[CLAIM 22]

The accessory according to any one of claims 12 to 21, comprising a communication controller configured to control the communication with the electronic apparatus.

[CLAIM 23]

The accessory according to any one of claims 12 to 22, wherein the electronic apparatus is an image pickup apparatus.