CLAIMS

1. A vehicle door unlocking control method, comprising:

obtaining an acquisition trigger signal;

controlling, based on the acquisition trigger signal, a first camera assembly disposed on a vehicle to acquire a first face image of a user;

performing feature matching between the first face image and a pre-stored second face image;

performing a living body detection on the first face image; and

sending a vehicle door unlocking instruction to at least one vehicle door lock of the vehicle in response to successful feature matching and successful living body detection.

2. The method according to claim 1, wherein the obtaining an acquisition trigger signal comprises:

obtaining the acquisition trigger signal by an acquisition apparatus disposed on the vehicle,

wherein the acquisition apparatus comprises a contact type acquisition apparatus or a non-contact type acquisition apparatus,

wherein the contact type acquisition apparatus is disposed on at least one of the following locations: a pillar B of the vehicle, at least one vehicle door handle, at least one vehicle door, and at least one rear-view mirror, and the non-contact type acquisition apparatus is disposed on at least one of the following locations: the pillar B of the vehicle, at least one vehicle door, or at least one rear-view mirror.

3. The method according to claim 2, wherein the contact type acquisition apparatus comprises a fingerprint acquisition apparatus, and the acquisition trigger signal comprises fingerprint data, and the controlling, based on the acquisition trigger signal, a first camera assembly disposed on a vehicle to acquire a first face image of a user

comprises:

controlling, if the fingerprint data acquired by the fingerprint acquisition apparatus matches pre-stored fingerprint data, the first camera assembly to acquire the first face image of the user.

4. The method according to claim 2, wherein the non-contact type acquisition apparatus comprises a first camera, and the acquisition trigger signal comprises gesture information, wherein the first camera is any camera in the first camera assembly,

wherein the controlling, based on the acquisition trigger signal, a first camera assembly disposed on a vehicle to acquire a first face image of a user comprises:

controlling, if the gesture information acquired by the first camera matches pre-stored gesture information, the first camera assembly to acquire the first face image of the user,

wherein the sampling frequency of the first camera is lower than a preset sampling frequency.

5. The method according to claim 2, wherein the non-contact type acquisition apparatus comprises a voice acquisition apparatus, and the acquisition trigger signal comprises voice information, and

the controlling, based on the acquisition trigger signal, a first camera assembly disposed on a vehicle to acquire a first face image of a user comprises:

controlling, if the voice information acquired by the voice acquisition apparatus matches pre-stored voice information, the first camera assembly to acquire the first face image of the user.

6. The method according to any one of claims 1 to 5, wherein the obtaining an acquisition trigger signal comprises:

receiving a control instruction sent by a terminal device communicationally

connected to the vehicle, the acquisition trigger signal comprising the control instruction.

7. The method according to claim 2, wherein before the obtaining the acquisition trigger signal by an acquisition apparatus disposed on the vehicle, the method further comprises:

controlling the acquisition apparatus to be turned on, if it is detected that a vehicle engine is off or the duration during which the vehicle engine is off exceeds a preset duration, the vehicle engine is off and the vehicle door is locked, or, a start control signal of the acquisition apparatus is received

8. The method according to any one of claims 2 to 7, wherein after the sending a vehicle door unlocking instruction to at least one vehicle door lock of the vehicle in response to successful feature matching and successful living body detection, the method further comprises:

controlling the acquisition apparatus to be turned off.

9. The method according to any one of claims 1 to 8, wherein before the obtaining an acquisition trigger signal, the method further comprises:

receiving a monitoring instruction sent by a monitoring apparatus disposed on the vehicle, the monitoring instruction being sent by the monitoring apparatus when monitoring that the duration during which a human body stays in front of the vehicle door is greater than a preset value;

controlling, according to the monitoring instruction, the first camera assembly to perform photographing, to obtain monitoring data; and

saving the monitoring data.

10. The method according to any one of claims 1 to 9, wherein after the sending a vehicle door unlocking instruction to at least one vehicle door lock of the vehicle in

response to successful feature matching and successful living body detection, the method further comprises:

controlling a second camera to acquire a third face image of a driver, the second camera being disposed inside the vehicle;

performing feature matching between the third face image and a pre-stored driver image; and

sending, if the facial features of the third face image do not match the facial features of the driver image, a vehicle start stopping instruction to a vehicle starting apparatus.

11. The method according to any one of claims 1 to 10, wherein the first camera assembly comprises a plurality of cameras at different heights,

wherein the first camera assembly comprises at least one 3D depth camera; and/or

the first camera assembly comprises at least one RGB camera or infrared camera,

wherein the first camera assembly comprises at least one camera disposed inside the vehicle; and/or

the first camera assembly comprises at least one camera disposed at the pillar B of the vehicle, the vehicle door, or the rear-view mirror.

12. The method according to any one of claims 1 to 11, wherein the method further comprises:

displaying, by a display device, at least one of the following information: the image acquisition result of the first camera assembly, the operating state of the vehicle, and the feature matching results of the first face image and the second face image, the living body detection result of the first face image, the unlocking result of the vehicle door, or the obtaining result of the acquisition trigger signal.

13 The method according to claim 12 wherein the display device is disposed on at

least one of the following locations: the pillar B of the vehicle, the vehicle door of the vehicle, or the rear-view mirror of the vehicle,

wherein at least camera in the first camera assembly is disposed on the display device.

14. A vehicle, comprising: a vehicle body, wherein the vehicle body is provided with a first camera assembly and a vehicle door unlocking controller; the vehicle door unlocking controller comprises a face comparator, a living body detector, and an unlocking controller; the face comparator is connected to the first camera assembly and the unlocking controller; the living body detector is connected to the first camera assembly and the unlocking controller; and the unlocking controller is connected to at least one vehicle door lock of the vehicle body.

15. The vehicle according to claim 14, wherein the vehicle body is further provided with a contact type acquisition apparatus or a non-contact type acquisition apparatus,, the contact type acquisition apparatus being connected to the first camera assembly and configured to acquire the acquisition trigger signal for triggering the first camera assembly to work, and the non-contact type acquisition apparatus being connected to the first camera assembly and configured to acquire the acquisition trigger signal for triggering the first camera assembly to work,

wherein the contact type acquisition apparatus is disposed on at least one of the following locations: a pillar B of the vehicle, at least one vehicle door handle, at least one vehicle door, and at least one rear-view mirror, and the non-contact type acquisition apparatus is disposed on at least one of the following locations: the pillar B of the vehicle, at least one vehicle door, and at least one rear-view mirror.

16. The vehicle according to claim 15, wherein the contact type acquisition apparatus comprises a fingerprint acquisition apparatus disposed on an outdoor part of the vehicle body, and a touch sensor disposed on the outdoor part of the vehicle body.

17. A vehicle door unlocking control apparatus, comprising:

an obtaining module, configured to obtain an acquisition trigger signal;

a control module, configured to control, based on the acquisition trigger signal, a first camera assembly disposed on a vehicle to acquire a first face image of a user;

a face matching module, configured to perform feature matching between the first face image and a pre-stored second face image;

a living body detection module, configured to perform a living body detection on the first face image; and

an unlocking module, configured to send a vehicle door unlocking instruction to at least one vehicle door lock of the vehicle in response to successful feature matching and successful living body detection.

18. A vehicle door unlocking control apparatus, comprising:

a memory, configured to store a computer program; and

a processor, configured to execute the computer program, to implement the vehicle door unlocking control method according to any one of claims 1 to 13.

19. A computer-readable code, comprising a computer-readable code, wherein the computer-readable code, when being executed in a device, causes a processor in the device to executes instructions for implementing the vehicle door unlocking control method according to any one of claims 1 to 13.

20. A computer-readable storage medium, configured to store computer-readable instructions, wherein the instructions, when being executed, causes to implement the operations in the vehicle door unlocking control method according to any one of claims 1 to 13.