WHAT IS CLAIMED IS:

1. A distribution robot, comprising:

a distribution robot body,

a gravity sensing device arranged below a top plane of the distribution robot body,

a touch screen vertically arranged on one side of the top plane of the distribution robot body, and

a package contour detection unit for detecting whether an external contour of a package to be delivered exceeds a maximum external contour of a deliverable package, which is arranged on the top plane and on the touch screen of the distribution robot body.

2. The distribution robot according to claim 1, wherein the package contour detection unit comprises:

one or more of a first infrared sensing device or first contour identification information arranged along a contour line of a maximum area at a bottom of the deliverable package on the top plane of the distribution robot body, and

one or more of a second infrared sensing device or second contour identification information arranged along a contour line of a maximum area on a side of the deliverable package on the touch screen.

3. The distribution robot according to claim 1, wherein the touch

screen is a liftable touch screen.

4. The distribution robot according to claim 3, further comprising a processor configured to control the touch screen to rise until a portion of the package contour detection unit located at a position of lowermost contour line of the maximum area on the side of the deliverable package on the touch screen is flush with the top plane of the distribution robot body after the gravity sensing device senses the package to be delivered.

5. The distribution robot according to claim 1, wherein the touch screen comprises one or more of a first display area for whether a size of a package exceeds a range, a second display area for package weight information sensed by the gravity sensing device, a third display area for package weighing and pricing information, and a control button area for package delivery or distribution.

6. The distribution robot according to claim 1, further comprising a communication unit configured to send package distribution information to a target user.

7. The distribution robot according to claim 1, further comprising a processor configured to control a control button of Start Delivery to be displayed on the touch screen if a size of the package to be

delivered does not exceed a range and a total weight of the package to be delivered and delivered packages does not exceed a maximum carrying weight, control an idle compartment to be opened to deliver the package to be delivered after detecting that a user taps the control button of Start Delivery, control a control button of Start Distribution to be displayed on the touch screen when detecting that the compartment is closed, and control the distribution robot to start distribution after detecting that the user taps the control button of Start Distribution.

8. A control method of a distribution robot, comprising:

sensing that a package to be delivered is placed on a top plane of a distribution robot body by a sensing data of a gravity sensing device arranged below the top plane of the distribution robot body;

judging whether a size of the package to be delivered exceeds a range by a package contour detection unit arranged on the top plane and on a touch screen of the distribution robot body, wherein the touch screen is vertically arranged on one side of the top plane of the distribution robot body;

judging whether a total weight of the package to be delivered and delivered packages exceeds a maximum carrying weight according to a weight of the package to be delivered currently sensed by the gravity sensing device and a weight of delivered packages previously sensed and recorded;

controlling an idle compartment to be opened to deliver the package to be delivered if the size of the package to be delivered does not exceed the range and the total weight of the package to be delivered and the delivered packages does not exceed the maximum carrying weight; and

controlling the distribution robot to start distribution.

9. The control method according to claim 8, further comprising:

controlling the touch screen to rise until a portion of the package contour detection unit located at a position of lowermost contour line of the maximum area on the side of the deliverable package on the touch screen is flush with the top plane of the distribution robot body after sensing that the package to be delivered is placed on the top plane of the distribution robot body.

10. The control method according to claim 8, wherein the judging whether a size of the package to be delivered exceeds a range comprises:

judging whether the size of the package to be delivered exceeds the range by the sensing data of a first infrared sensing device and a second infrared sensing device in the case that the package contour detection unit comprises the first infrared sensing device arranged along a contour line of a maximum area at a bottom of the deliverable package on the top plane of the distribution robot body and the second

infrared sensing device arranged along a contour line of a maximum area on a side of the deliverable package on the touch screen.

11. The control method according to claim 8, wherein the judging whether a size of the package to be delivered exceeds a range comprises:

judging whether the size of the package to be delivered exceeds the range by a control data of a control button for whether a size of a package exceeds a range on the touch screen in the case that the package contour detection unit comprises first contour identification information arranged along a contour line of a maximum area at a bottom of the deliverable package on the top plane of the distribution robot body and second contour identification information arranged along a contour line of a maximum area on a side of the deliverable package on the touch screen, wherein the control data is obtained by a user controlling the control button for whether a size of a package exceeds a range based on a comparison of an external contour of the package to be delivered with the first contour identification information and the second contour identification information.

12. The control method according to claim 8, further comprising:

calculating a distribution price of the package to be delivered according to the weight of the package to be delivered currently sensed

by the gravity sensing device.

13. The control method according to claim 12, further comprising:

sending one or more of whether the size of the package to be delivered exceeds the range, the weight of the package to be delivered, whether the total weight of the package to be delivered and delivered packages exceeds the maximum carrying weight, and the distribution price of the package to be delivered to the touch screen for display.

14. The control method according to claim 8, further comprising:

sending package distribution information to a target user by a communication unit, the package distribution information comprising one or more of a pickup point, a distribution vehicle number, express delivery information, a pickup code, a compartment number, and a distribution status.

15. A control device of a distribution robot, comprising:

a memory; and a processor coupled to the memory, the processor being configured to perform the control method of a distribution robot according to any of claims 8 to 14 based on instructions stored in the memory.

16. A non-transitory computer-readable storage medium stored a computer program which implements the steps of the control method

of a distribution robot according to any of claims 8 to 14 when executed by a processor.