

What is claimed is:

1. A substrate cleaning device comprising:

a substrate holding unit configured to hold a substrate, the substrate having a first
5 surface and a second surface, the second surface opposite to the first surface;

a first cleaning unit having a first cleaning member, the first cleaning member caused
to come into contact with the first surface of the substrate held by the substrate holding unit to
clean the first surface;

a second cleaning unit having a second cleaning member, the second cleaning
10 member caused to come into contact with the first surface of the substrate held by the substrate
holding unit to clean the first surface;

a controller configured to control the first cleaning unit and the second cleaning unit
so that, when any one of the first cleaning member and the second cleaning member cleans the
first surface of the substrate held by the substrate holding unit, the other cleaning member is at
15 a position apart from the substrate held by the substrate holding unit; and

a pre-cleaning unit configured to clean the first cleaning member and the second
cleaning member before being providing for cleaning the first surface,

wherein the controller is configured to control the first cleaning unit and the second
cleaning unit so that one of the first cleaning member and the second cleaning member, which
20 is not used for cleaning the first surface of the substrate held by the substrate holding unit, is
cleaned by the pre-cleaning unit;

the substrate cleaning device further comprising:

a chamber configured to accommodate the substrate holding unit, the first cleaning
unit, the second cleaning unit, and the pre-cleaning unit therein; and

25 a pulling-out mechanism capable of pulling out at least one of the first cleaning
member and the second cleaning member, and the pre-cleaning unit with respect to the
chamber.

2. The substrate cleaning device according to Claim 1,

30 wherein the first cleaning unit and the second cleaning unit are configured so that a

cleaning level when the first surface is cleaned by the second cleaning member is higher than a cleaning level when the first surface is cleaned by the first cleaning member.

3. The substrate cleaning device according to Claim 1 or 2,

5 wherein the controller controls the substrate holding unit, the first cleaning unit, and the second cleaning unit so that, after the substrate is held by the substrate holding unit, the first surface is cleaned by the first cleaning member, the first surface is then cleaned by the second cleaning member, and the holding of the substrate by the substrate holding unit is maintained from the start of the cleaning of the first surface by the first cleaning member to
10 the completion of the cleaning of the first surface by the second cleaning member.

4. A substrate cleaning device comprising:

a substrate holding unit configured to hold a substrate, the substrate having a first surface and a second surface, the second surface opposite to the first surface;

15 a first cleaning unit having a first cleaning member, the first cleaning member caused to come into contact with the first surface of the substrate held by the substrate holding unit to clean the first surface;

a second cleaning unit having a second cleaning member, the second cleaning member caused to come into contact with the first surface of the substrate held by the substrate
20 holding unit to clean the first surface;

a chamber configured to accommodate the substrate holding unit, the first cleaning unit, and the second cleaning unit therein;

a pulling-out mechanism capable of pulling out at least one of the first cleaning member and the second cleaning member with respect to the chamber; and

25 a controller configured to control the first cleaning unit and the second cleaning unit so that, when any one of the first cleaning member and the second cleaning member cleans the first surface of the substrate held by the substrate holding unit, the other cleaning member is at a position apart from the substrate held by the substrate holding unit.

30 5. A substrate cleaning apparatus comprising:

a plurality of the substrate cleaning devices according to any one of Claims 1 to 4;

wherein a first substrate cleaning device of the plurality of substrate cleaning devices is arranged on a first cleaning line and a second substrate cleaning device of the plurality of substrate cleaning devices is arranged on a second cleaning line separate from the first cleaning line;

the substrate cleaning apparatus further comprising:

a first additional substrate processing section arranged on the first cleaning line; and

a second additional substrate processing section arranged on the second cleaning line.

6. A method for manufacturing a cleaned substrate as the substrate after cleaning by cleaning a pre-cleaning substrate as the substrate before the cleaning using the substrate cleaning device according to any one of Claims 1 to 4, the method comprising:

a substrate holding step of holding the substrate with the substrate holding unit;

a first cleaning step of cleaning the substrate held by the substrate holding unit with the first cleaning member;

a withdrawal step of withdrawing the first cleaning member from the substrate by pulling out with the pulling-out mechanism while the substrate holding unit holds the substrate after the first cleaning step; and

a second cleaning step of cleaning the substrate held by the substrate holding unit with the second cleaning member after the withdrawal step.

7. A substrate processing apparatus comprising:

the substrate cleaning device according to any one of Claims 1 to 4; and

a substrate processing device configured to process a substrate before cleaning in the substrate cleaning device.