[0090]

The sub-housing 36 includes a door 36d on a side opposite to a side at which the sub-housing 36 is connected to the main housing 35. Thus, the transfer system 1 can easily access the inside of the loader module 30 and can efficiently perform maintenance and the like.

[0091]

The plurality of processing modules (inspection devices 50) are connected to both sides of the transfer module 40 in the second direction. Thus, the transfer system 1 can install a large number of processing modules to the transfer module 40, and further improve the space efficiency.

[0092]

The plurality of processing modules are inspection devices 50 configured to inspect a substrate W as a transfer target. Thus, the transfer system 1 can efficiently inspect the substrate W by the inspection devices 50.

[0093]

A second aspect of the present disclosure is the transfer method of a transfer system 1 that includes the transfer module 40 extending along a first direction, the plurality of processing modules (inspection devices 50) connected to the transfer module 40 and provided along a direction in which the transfer module 40 extends, and the loader module 30 connected to the transfer module 40 and extending along a second direction orthogonal to the first direction, and the method includes (A) conveying the carrier C configured to accommodate a substrate W along a direction parallel to the second direction by the carrier conveyance line (rail 11) and placing the carrier C on the load port 31 provided in the main housing 35 of the loader module 30; (B) after the (A), unloading the substrate W from the carrier C placed on the load port 31, transferring the substrate W to the sub-housing 36 formed separately from the main housing 35, the sub-housing 36 being smaller than the main housing 35, connected to the second direction of the main housing 35, and connected to the transfer module 40, and loading the substrate W into the transfer module 40; and (C) after the (B), transferring the substrate W loaded in the transfer module 40 and transferring the substrate W to any one of the plurality of processing modules (inspection device 50). Even in this case, the transfer method can efficiently transfer the substrate W

to a plurality of processing modules and can improve the space efficiency.

[0094]

The transfer system 1 and the transfer method according to the embodiments disclosed herein are exemplary and not restrictive in all respects. The embodiments can be modified and improved in various forms without departing from the scope and gist of the appended claims. The matters described in the above embodiments can be constructed in other ways without contradiction and can be combined without contradiction.

[0095]

The present application claims priority to Japanese Patent Application No. 2023-196164, filed in the Japanese Patent Office on November 17, 2023, and Japanese Patent Application No. 2024-110534, which is an application claiming national priority, filed in the Japanese Patent Office on July 9, 2024, the entire contents of which are incorporated herein by reference.

REFERENCE SIGNS LIST

[0096]

1	Transfer system
11	Rail
30	Loader module
35	Main housing
36	Sub-housing
40	Transfer module
50	Inspection device
W	Substrate

CLAIMS

[Claim 1]

A transfer system comprising:

a transfer module extending along a first direction;

a plurality of processing modules connected to the transfer module and provided along a direction in which the transfer module extends; and

a loader module connected to the transfer module and extending along a second direction orthogonal to the first direction, wherein

the loader module includes

a main housing having a load port configured to load a transfer target into the loader module; and

a sub-housing formed separately from the main housing and smaller than the main housing and connected to the transfer module in the second direction of the main housing, and

the second direction is a direction parallel to a carrier conveyance line for conveying a carrier configured to accommodate the transfer target.

[Claim 2]

The transfer system according to claim 1, wherein

the carrier conveyance line extending along the second direction, and

the transfer module, the plurality of processing modules, and the loader module form a unit, and a plurality of such units are provided at positions on both sides of the carrier conveyance line.

[Claim 3]

A transfer system according to claim 1 or 2, wherein

the sub-housing includes an aligner configured to adjust a displacement or attitude of the transfer target.

[Claim 4]

The transfer system according to claim 1 or 2, wherein

the sub-housing includes a control panel operable by an operator on a side opposite to a side at which the sub-housing is connected to the main housing.

[Claim 5]

The transfer system according to claim 1 or 2, wherein

the sub-housing includes a door on a side opposite to a side at which the sub-housing is connected to the main housing.

[Claim 6]

The transfer system according to claim 1 or 2, wherein

the plurality of processing modules are connected to both sides of the transfer module in the second direction.

[Claim 7]

The transfer system according to claim 1 or 2, wherein

the plurality of processing modules are inspection devices configured to inspect a substrate as the transfer target.

[Claim 8]

A transfer method of a transfer system, the transfer system including

a transfer module extending along a first direction;

a plurality of processing modules connected to the transfer module and provided along a direction in which the transfer module extends; and

a loader module connected to the transfer module and extending along a second direction orthogonal to the first direction, the method comprising:

(A) conveying a carrier configured to accommodate a transfer target along a direction parallel to the second direction by a carrier conveyance line and placing the carrier on a load port provided in a main housing of the loader module;

(B) after the (A), unloading the transfer target from the carrier placed on the load port, transferring the transfer target to a sub-housing formed separately from the main housing, the sub-housing being smaller than the main housing, connected to the second direction of the main housing, and connected to the transfer module, and loading the transfer target into the transfer module; and

(C) after the (B), transferring the transfer target loaded in the transfer module and transferring the transfer target to any one of the plurality of processing modules.