

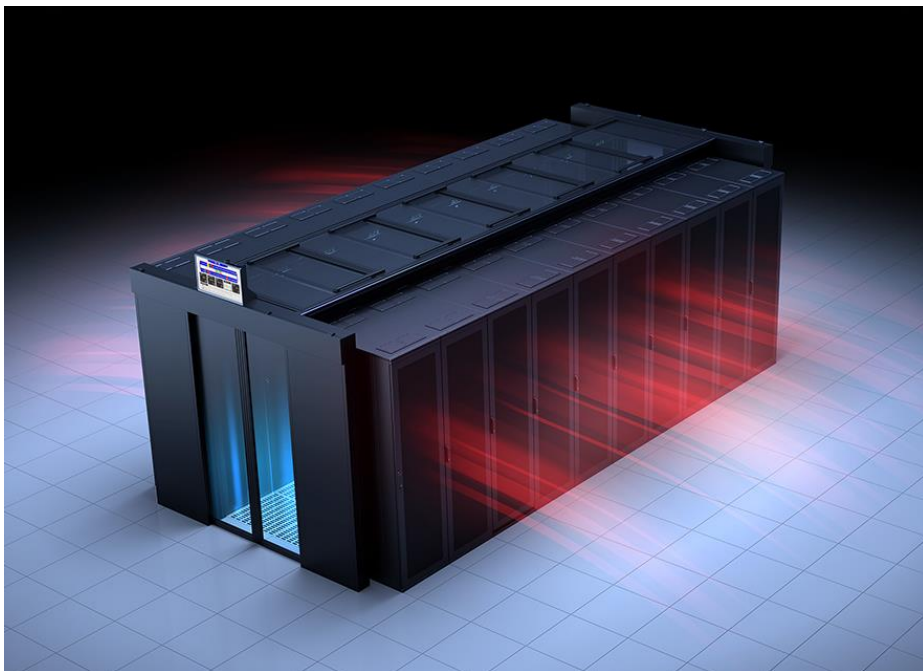
Smart Containment



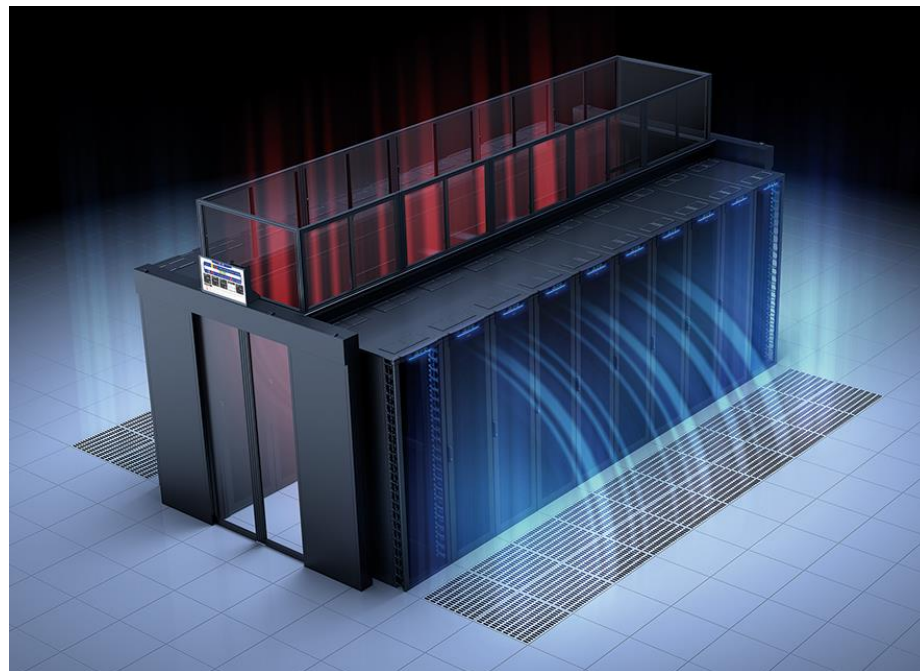
Smart Containment

POS's Smart Containment system is a solution for cooling energy savings in data centers.

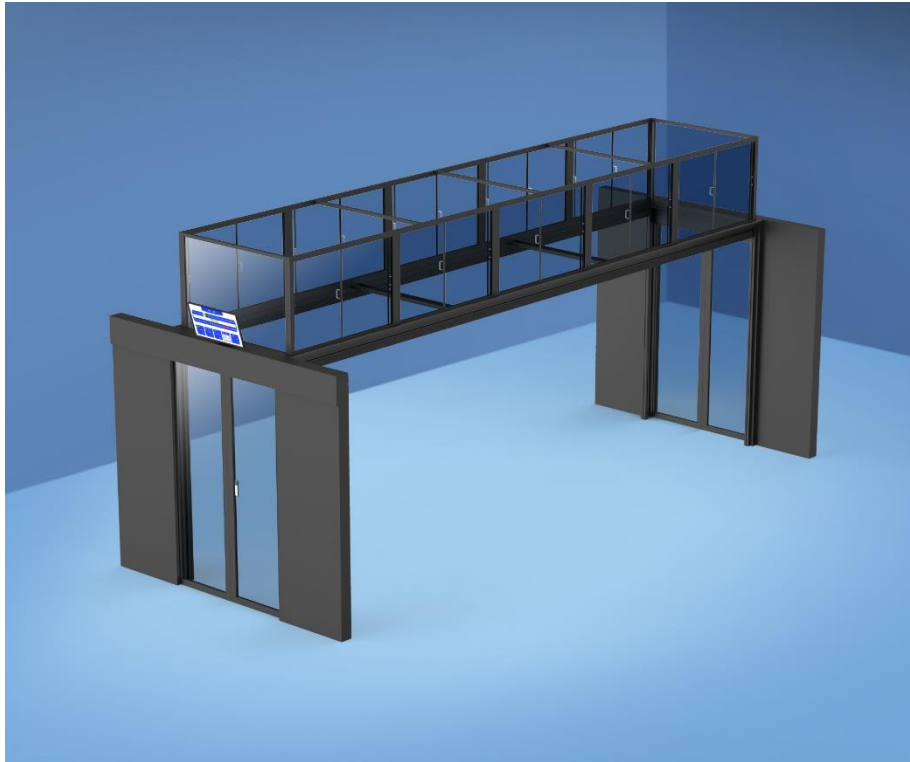
It consists of automatic doors and top window system for fire protection and a gateway system for comprehensive management of racks in containment, providing operational convenience.



Cold Aisle + RACK



Hot Aisle + RACK



Smart Containment – Hot Aisle

- Air inflow/outflow through the top of containment
- Automatic door connected to firefighting equipment.
Automatic opening / closing
- Top windows connected to firefighting equipment.
Automatic opening / closing
- Air Block Brush features are applied to block air outflow after rack installation.
- Comprehensive management and monitoring alarm via Gateway System provides preemptive protection and operational convenience.

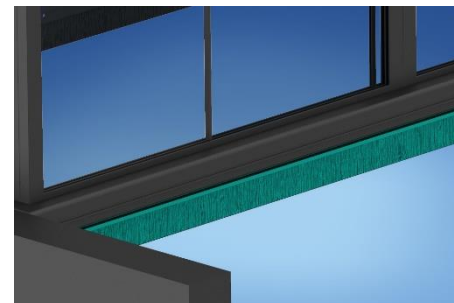
■ Auto/Semi-Auto Sliding Door



■ Firefighting/Standard Window



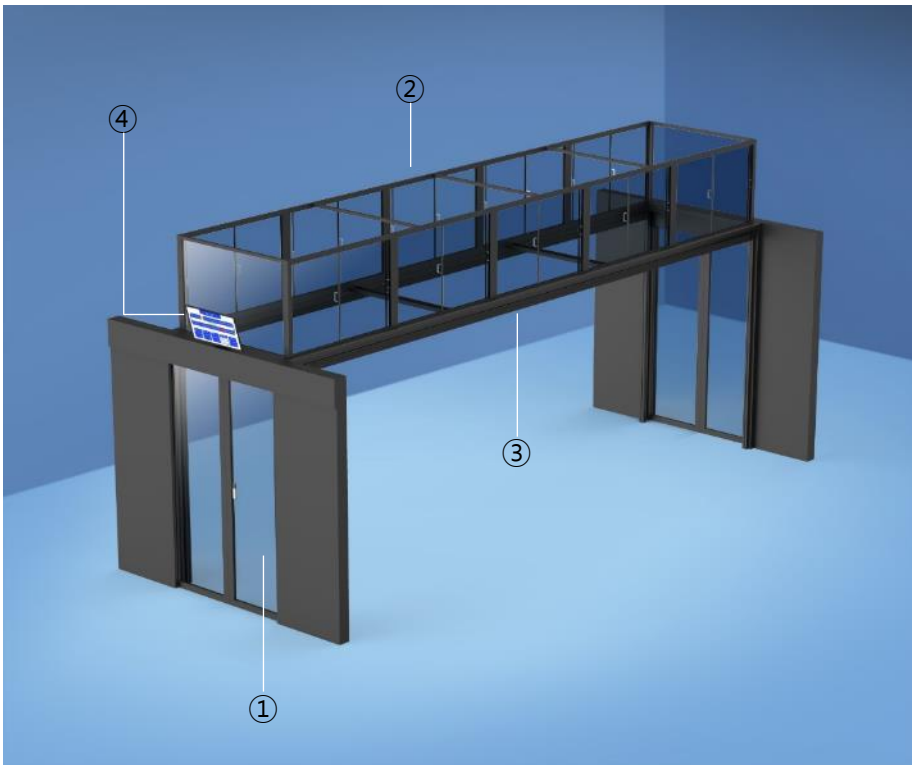
■ Air Block Brush



■ Gateway



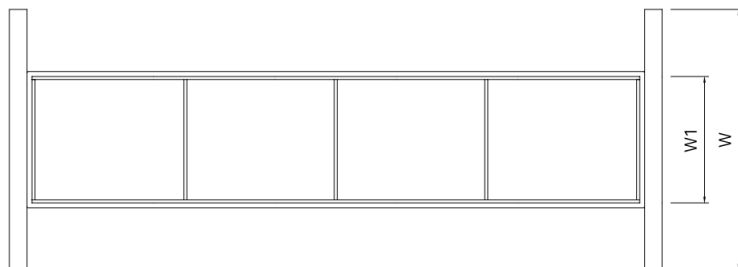
Smart Containment – Hot Aisle



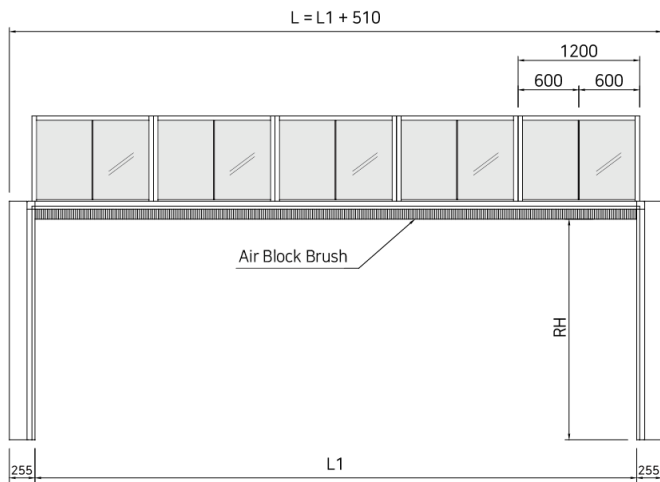
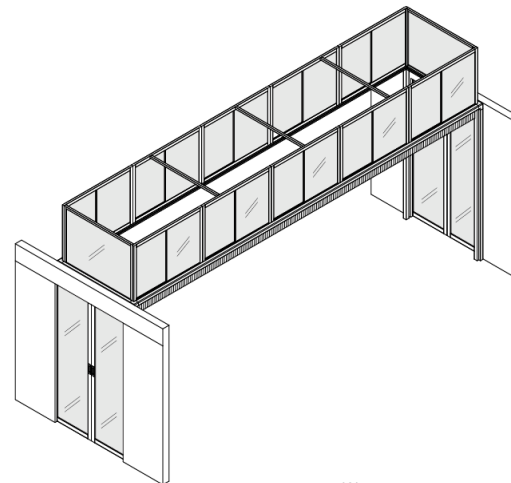
Features

No.	Unit	Spec
①	Auto / Semi-Auto Sliding Door	AL Frame + PC 5T Size : H2120 x W1200 mm (Door) H2380 x W2600 mm (Frame)
②	Firefighting / Standard Top Window	AL Frame + PC 5T Size : H800~1000 x W1260 mm
③	Air Block Brush	It blocks airflow and is made of flame-retardant material Size : H100~300 x W600~800 mm

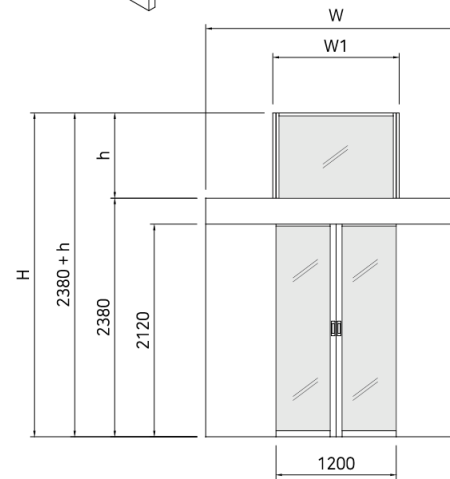
No.	Unit	Function
④	Gateway	<ul style="list-style-type: none"> Comprehensive management system for racks Rack : Max. 40Set PDU : Max. 160Set Network : Ethernet Protocol : SNMP,TCP-IP



Top View



Side View



Front View

■ SPECIFICATIONS ■

L	L1	RH	W1	W	H	Remarks
12510	12000	2200	1260	2600	2380 + h	R20 x 2
10110	9600	2070	1860			R16 x 2
6510	6000	2000				R10 x 2



MODEL

Smart Containment – Hot Aisle



Gateway Unit is a solution that comprehensively manages the information of racks installed in Containment



Gateway Unit Screen Layout

RACK Alarm Indication

■ Normal
 ■ Caution Alarm
 ■ Warning Alarm
■ Disconnected to Network

CONTAINMENT Identification Number and Alarm Indication

■ Normal
 ■ Caution Alarm
 ■ Warning Alarm

01 - 01

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A Line																			
B Line																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

CURRENT

Total: 2300.0 A

A Line: 1200.0
B Line: 1100.0

ACTIVE POWER

Total: 506.00 kW

A Line: 264.00
B Line: 242.00

ENERGY

Total: 182.160 MWh

A Line: 95.040
B Line: 87.120

TEMPERATURE

A Line: Max 25.0 °C No. 05
Min 22.0 °C No. 15

B Line: Max 28.0 °C No. 14
Min 22.0 °C No. 02

HUMIDITY

Average: 50.0 %

A Line: 55.0
B Line: 45.0

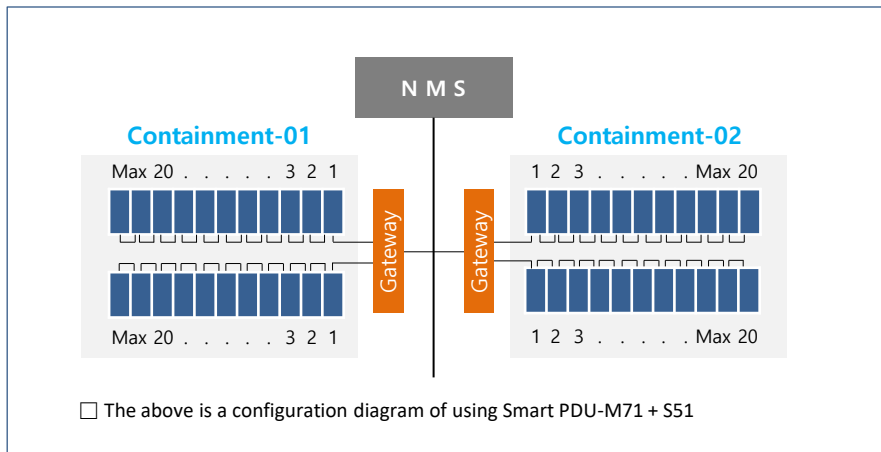
ALARM MESSAGE

03. ■ Current Alarm / Rack#A-07 / PDU#3-B / 20.0A(setup 16.5A) / 2022-05-05 / 12:33:55

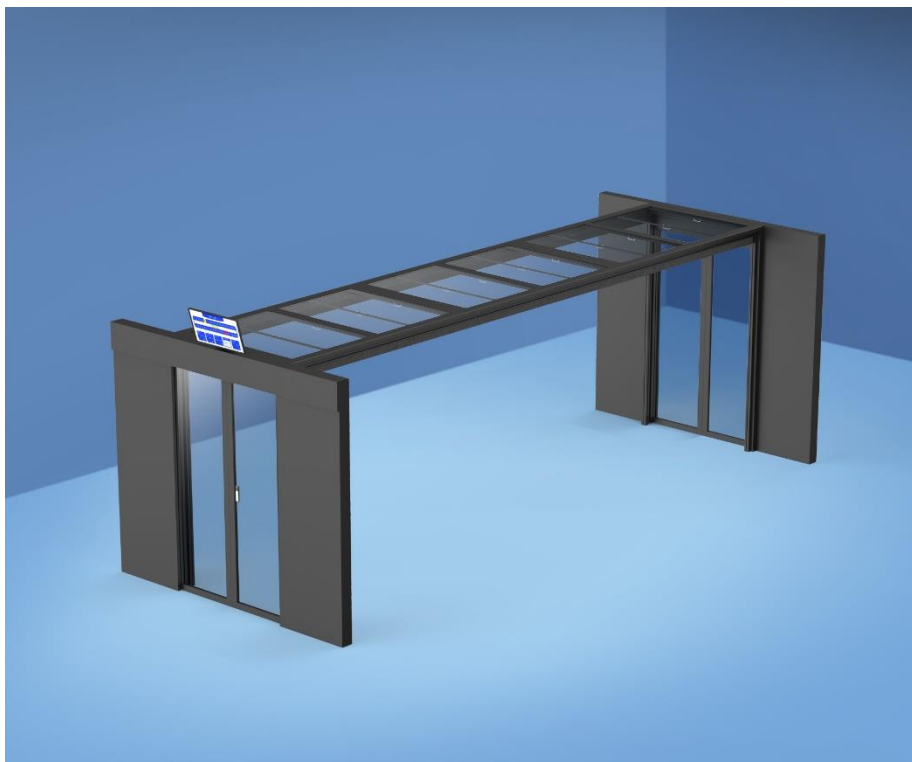
02. ■ Temp Alarm / Rack#A-05 / Temp. #1 / 37.5°C(setup 37.0°C) / 2022-05-05 / 12:30:38

01. ■ E-3 Alarm / Rack#B-05 / PDU#1-L1 / 2022-05-05 / 12:30:37

Containment Configuration Diagram



Specification	
Rated Voltage	AC 100 ~ 250VAC
Network	Ethernet
Measurement and Notification	Voltage, Current, Power, Temperature and Humidity
Display	24" Monitor



Smart Containment – Cold Aisle

- Cold air inflow through the bottom of containment
- Automatic door connected to firefighting equipment.
Automatic opening / closing
- Top windows connected to firefighting equipment.
Automatic opening / closing
- Air Block Brush features are applied to block air outflow after rack installation.
- Comprehensive management and monitoring alarm via Gateway System provides preemptive protection and operational convenience.

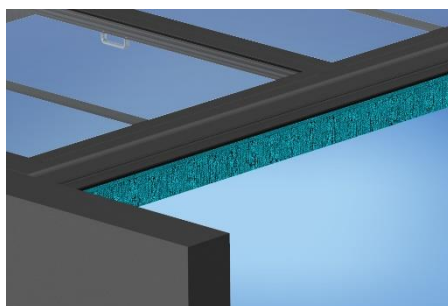
■ Auto/Semi-Auto Sliding Door



■ Firefighting/Standard Window



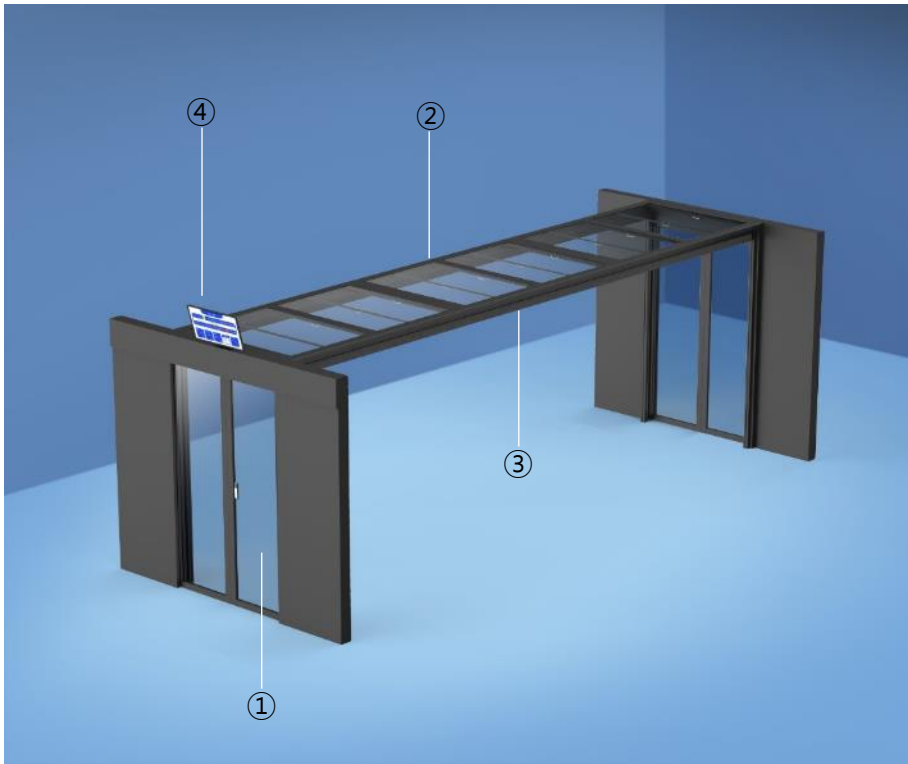
■ Air Block Brush



■ Gateway



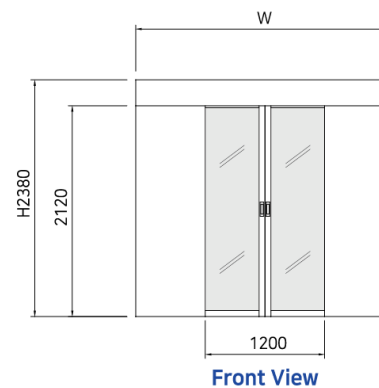
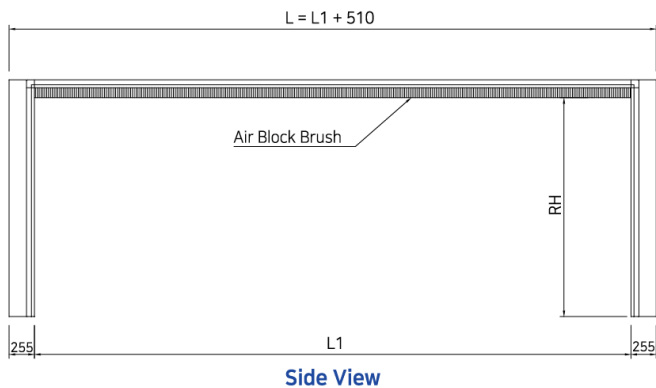
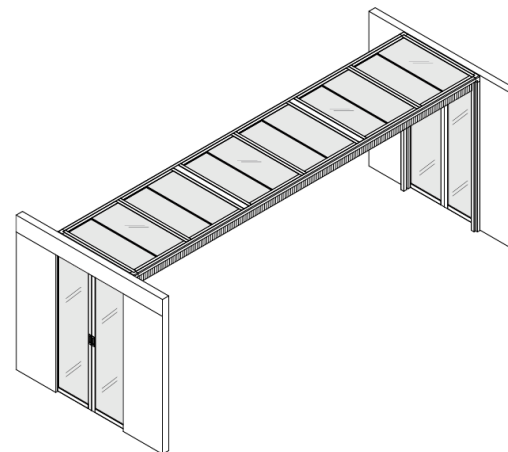
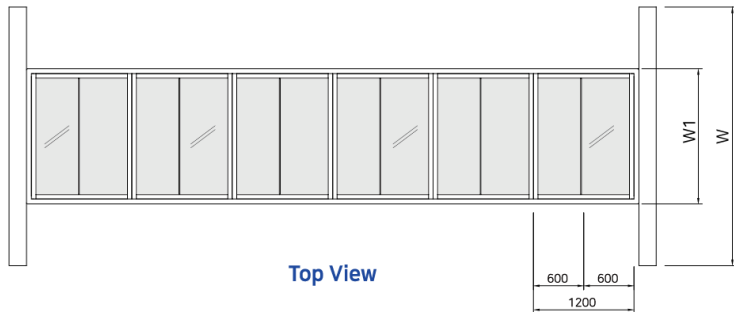
Smart Containment – Cold Aisle



Features

No.	Unit	Spec
①	Auto / Semi-Auto Sliding Door	AL Frame + PC 5T Size : H2120 x W1200 mm (Door) H2380 x W2600 mm (Frame)
②	Firefighting / Standard Top Window	AL Frame + PC 5T Size : W1360 mm
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No.	Unit	Function
④	Gateway	<ul style="list-style-type: none"> Comprehensive management system for racks Rack : Max. 40Set PDU : Max. 160Set Network : Ethernet Protocol : SNMP,TCP-IP



■ SPECIFICATIONS ■

L	L1	RH	W1	W	H	Remarks
12510	12000	2200	1360	2600	2380	R20 x 2
10110	9600	2070	1960			R16 x 2
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MODEL

Smart Containment – Cold Aisle



Gateway Unit is a solution that comprehensively manages the information of racks installed in Containment



Gateway Unit Screen Layout

RACK Alarm Indication

- Normal
- Caution Alarm
- Warning Alarm
- Disconnected to Network

CONTAINMENT Identification Number and Alarm Indication

- Normal
- Caution Alarm
- Warning Alarm

01 - 01

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

A Line

B Line

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

CURRENT

Total 2300.0 A

A Line 1200.0

B Line 1100.0

ACTIVE POWER

Total 506.00 kW

A Line 264.00

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ENERGY

Total 182.160 MWh

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TEMPERATURE

A Line Max: 25.0 °C No: 05
Min: 22.0 °C No: 15

B Line Max: 28.0 °C No: 14
Min: 22.0 °C No: 02

HUMIDITY

Average 50.0 %

A Line 55.0

B Line 45.0

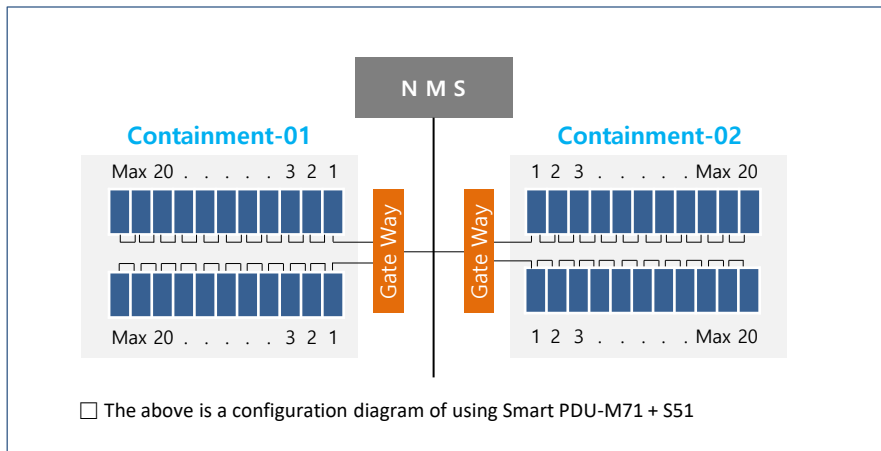
ALARM MESSAGE

03. ■ Current Alarm / Rack#A-07 / PDU#3-B / 20.0A(setup 16.5A) / 2022-05-05 / 12:33:55

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01. ■ E-3 Alarm / Rack#B-05 / PDU#1-L1 / 2022-05-05 / 12:30:37

Containment Configuration Diagram



Specification

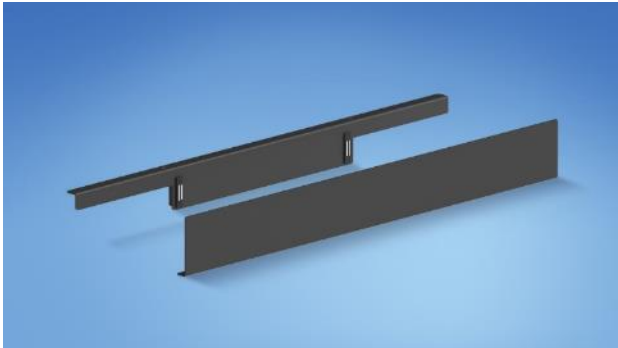
Rated Voltage	AC 100 ~ 250VAC
Network	Ethernet
Measurement and Notification	Voltage, Current, Power, Temperature and Humidity
Display	24" Monitor

Accessories



Blank Slot Panel

- Used to block and fill in free space spared by certain causes, such as rack re-location within Containment
- Material : AL Frame + PC 5T(Transparent)



Rack Caster Cover

- Used as Air Block with a rack on which caster is installed
- Magnetic Type – easy to attach and detach



Rack Blank Panel

- Used for finish-touch of free space after installing equipment / easy to attach and detach without any tools.
- Material: ABS
- Color: Black
- Spec.: 1U

Cold Aisle

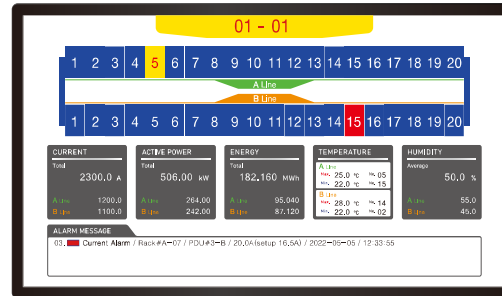


Gateway



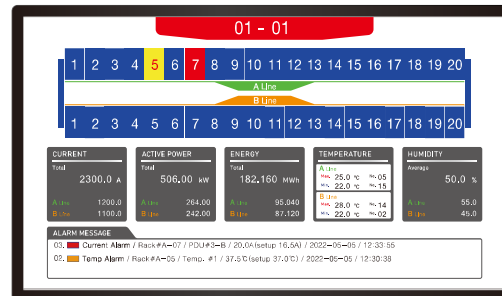
Blue: Normal

Hot Aisle



Yellow: Warning Alarm

Cold Aisle + Rack



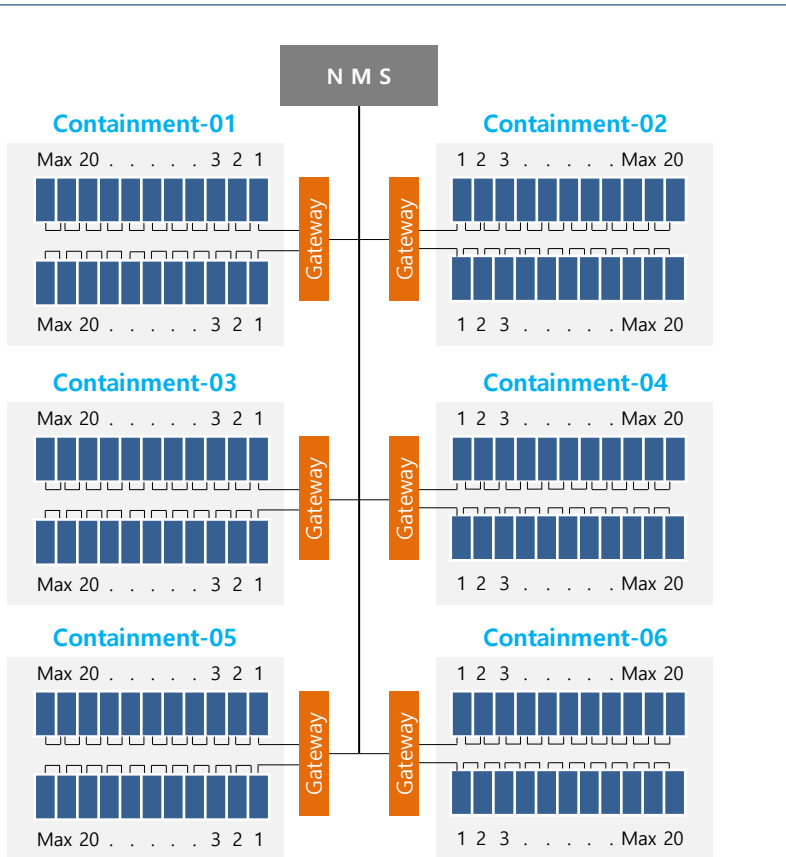
Red: Critical Alarm

Hot Aisle + Rack



Gateway System is a solution that comprehensively manage the information of racks installed in Containment

Containment Configuration Diagram



The above is a configuration diagram of using Smart PDU-M71 + S51

Gateway Screen Layout

RACK Alarm Indication

- Normal
- Caution Alarm
- Warning Alarm
- Disconnected to Network

CONTAINMENT Identification Number and Alarm Indication

- Normal
- Caution Alarm
- Warning Alarm

The screen displays '01 - 01' at the top. Below it is a rack layout with 20 slots. Slot 5 is yellow (Caution Alarm), slot 7 is red (Warning Alarm), and slot 15 is red (Warning Alarm). Below the rack are two lines, 'A Line' and 'B Line'. At the bottom, there are five monitoring panels: CURRENT (Total 2300.0 A), ACTIVE POWER (Total 506.00 kW), ENERGY (Total 182.160 MWh), TEMPERATURE (A Line Max 25.0 °C, B Line Max 28.0 °C), and HUMIDITY (Average 50.0 %). An ALARM MESSAGE section lists three messages: 03. Current Alarm / Rack#A-07 / PDU#3-B / 20.0A(setup 16.5A) / 2022-05-05 / 12:33:55; 02. Temp Alarm / Rack#A-05 / Temp. #1 / 37.5 °C(setup 37.0 °C) / 2022-05-05 / 12:30:38; 01. E-3 Alarm / Rack#B-05 / PDU#1-L1 / 2022-05-05 / 12:30:37.

Specification	
Rated Voltage	AC 100 ~ 250VAC
Network	Ethernet
Measurement and Notification	Voltage, Current, Power, Temperature and Humidity
Display	24" Monitor



1. Smart RACK

- RACK comes with a complimentary 2-year warranty period from the date of purchase.
-

2. Smart PDU

- RACK PDU has an error range of $\pm 3\%$ for voltage, current and temperature measurements and an error range of $\pm 5\%$ for humidity measurements. (Not recommended for precision measurement purposes)
 - Operating RACK PDU beyond its rated load can pose a danger such as a fire hazard due to overload. The recommended safety load is 2/3 of the rated load, and when using redundancy, it is 1/3 of the rated load.
 - When operating in enclosed areas or locations with multiple RACKs installed, ensure that the ambient temperature of RACK PDU does not exceed the safe operating temperature range of PDU, $-5\sim 40\text{ }^{\circ}\text{C}$.
 - Do not operate PDU without PDU cover in place.
 - Avoid working in hazardous situations or working alone when dealing with PDU.
 - PDU comes with a complimentary 2-year warranty period from the date of purchase.
-

3. Smart Containment

- Containment comes with a complimentary 2-year warranty period from the date of purchase.
-

4. Other Products

- Other Products come with a complimentary 2-year warranty period from the date of purchase.



Innovative Technologies and Passion
– The Philosophy of POS

Thank you



www.pos-rack.com