Solution Provider

KYODO
INTERNATIONAL INC.

Full compatible data storage medium
to replace
discontinued SCSI type
FDD（Floppy Disk Drive）

【Contact】

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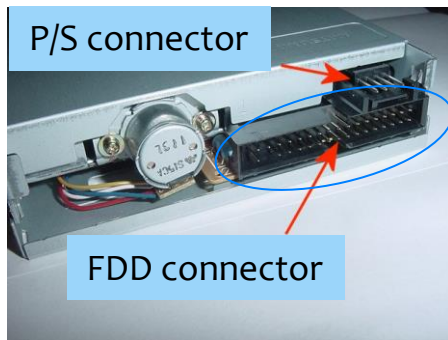TEL:+81-44-852-7575 FAX:+81-44-854-1979

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What is standard FDD mounted in semiconductor manufacturing equipment?

FDD mounted on typical semiconductor manufacturing system (especially sputtering and CVD) is SCSI type which differs from general ATAPI FDD available in the market
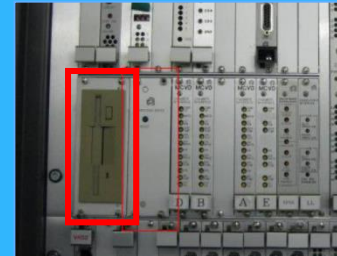
General FDD

P/S connector

FDD connector

ATAPI communication standard
（34 pin connector）

SCSI type FDD
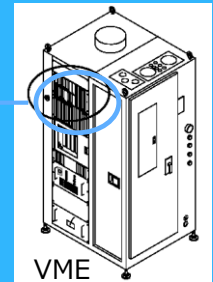（Reference：Mounted in principal equipment maker A）

SCSI communication standard
（50 pin connector）

Discontinued !

FDD installation position
（Ref. PVD equipment E、
CVD equipment C）

VME

FDD installation position
（Ref. CVD equipment P）

Current issues of SCSI type FDD

1. Already discontinued ⇒ Unavailable in the market

FD Drive
（SCSI type）

3.5" Floppy
（Medium）

Discontinued

Discontinued

2. Slower Access speed ⇒ It takes a lot of time for data backup.

※The more data files like recipe and sequence exist, the longer back-up time is needed.

(It is quote common that back-up takes more than one hour)

3. Breakable ⇒ Failure of unit recognition occurs frequently.

Unit is easy to break when user merely boots equipment. However, alternative unit is no longer possible to procure.

Proposal of SCSI type CF (Compact Flash) unit for major semiconductor manufacturing systems

Full compatible CF unit to SCSI type FDD

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1. **Easy installation**

   Installation is quite easily!

   ※Modification of equipment or change of program is unnecessary.

2. **Operation is exactly same as FDD.**

   ※Process of writing and reading of data is operated under the

   same command as FDD.

3. **Fast access speed**

   ※Compared with FDD, access speed is remarkably fast.
   Back-up time of data is largely reduced ⇒ work efficiency improved
   ※Ref. Back-up time reduction : FDD／approximately 60min ⇒ CF／app. 3min

SCSI type FDD full compatible
CF（Compact Flash）unit

Model：ACD-73100

The reason why we say it is completely compatible :

※The unit name in the system is defined as "TEAC TC-1" which is a model name of standard FDD.
When the system is booted, BIOS recognized the unit under the name of "FC-1".
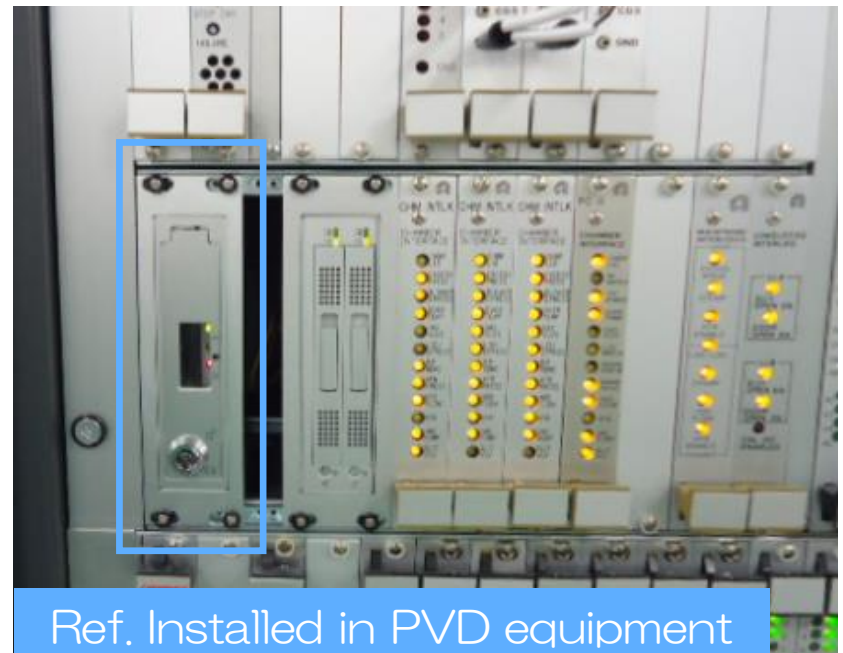
Pics of installed unit

We have already installed a lot of CF units in major semiconductor manufacturing equipment in Japan. These customers are all satisfied with the performance of the unit in data access speed and easiness of operation.

Ref. Installed in CVD equipment

Ref. Installed in PVD equipment

※User can install CF by using 148mm special installation fixture (option).

※Installed by standard fixture attached with CF unit.

Procedure of CF unit installation

（Equipment power OFF）

↓

1．Detachment of OEM FDD

↓

2．D/S setup of CF unit
　　※SCSI ID setup, Terminator setup

↓
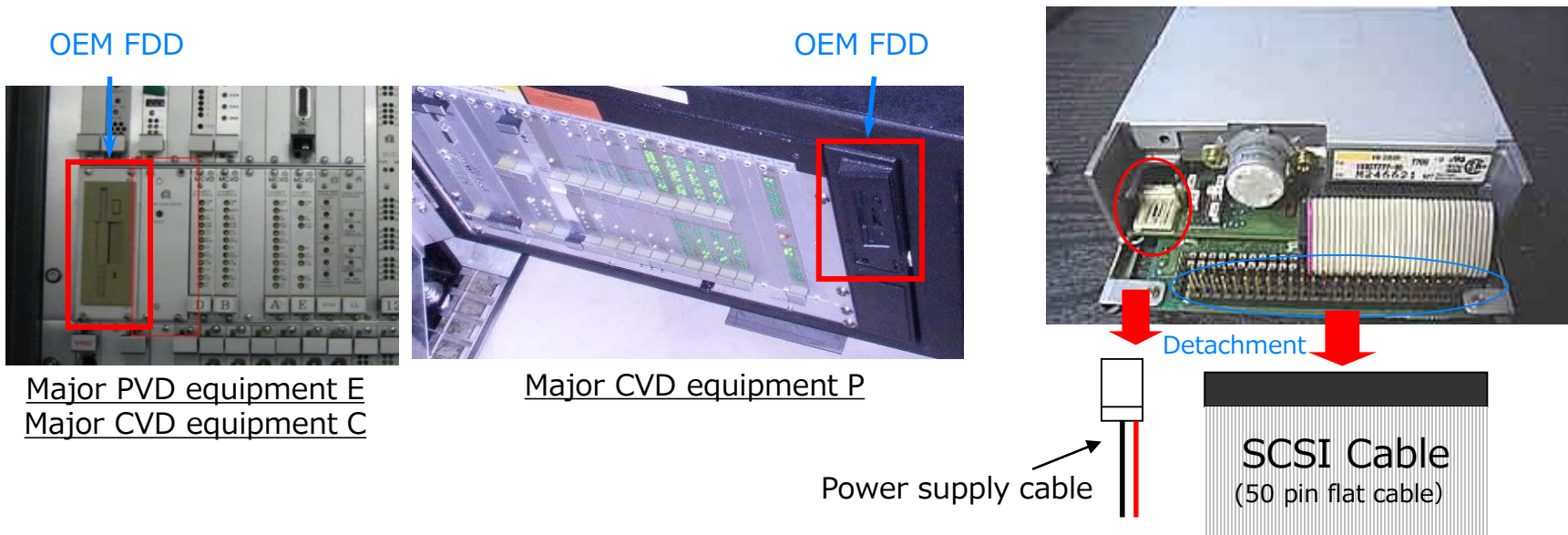
3．Installation of CF unit

↓

（Equipment power ON）

↓

4．Format of CF Medium

1. Detachment of OEM FDD

◆At first, detach both SCSI (50 pins flat cable) and power supply cables which are connected to OEM FDD under a condition of "machine power-off".

OEM FDD

OEM FDD

Major PVD equipment E
Major CVD equipment C

Major CVD equipment P

Detachment

Power supply cable

SCSI Cable
(50 pin flat cable)

In this case, please check where in SCSI cable the OEM FDD is connected to.
※Check whether it is connected to tip of connector of cable or connector located in the center of cable. D/S setup shown in next page is implemented in accordance to the connection points.

2．D/S setup of CF unit

Operator setup D/S (DIP Switch) located at the bottom of CF unit.

1．Set-up of SCSI ID (Setup SW1, SW2, SW3)

Generally, in case of major semiconductor manufacturing equipment, operator sets SCSI ID as "1"
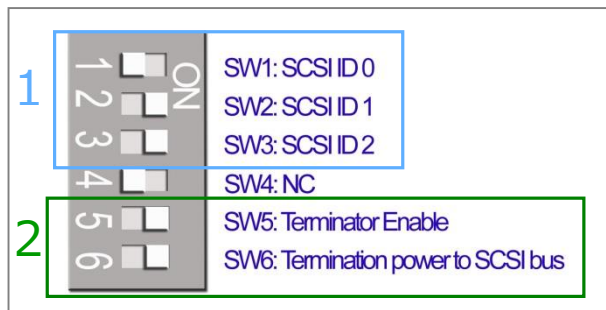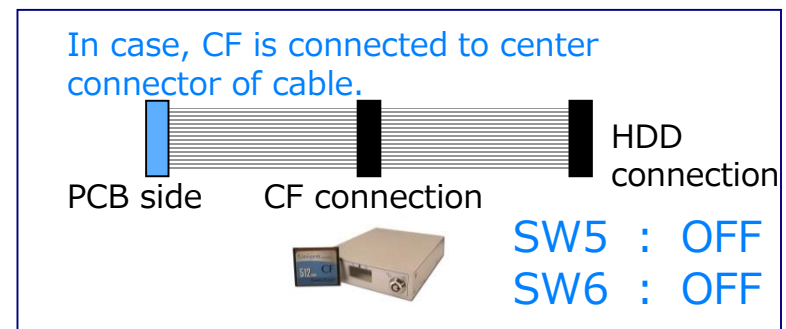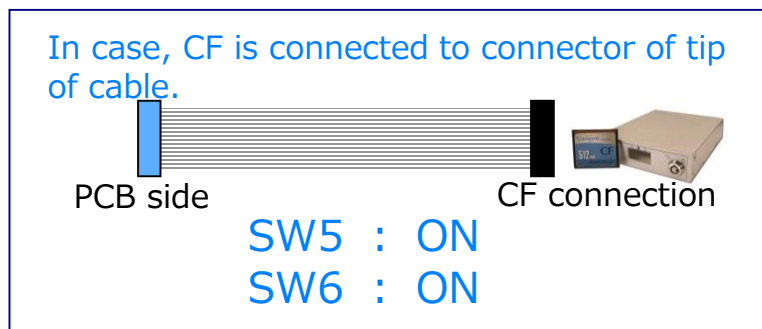

ID	0	1	2	3	4	5	6	7
SW1	OFF	ON	OFF	ON	OFF	ON	OFF	ON
SW2	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SW3	OFF	OFF	OFF	OFF	ON	ON	ON	ON

※ In the event of setting SCSI ID to [1」, SW1 must be [ON], SW2 and 3 have to be [OFF].
Left figure（D/S）is a case that SCSI is [6] so please be careful.

2．Setup terminator   (Setup of SW5, SW6)

Operator sets-up D/S by checking as SCSI cable is surely fitted to correct position.

In case, CF is connected to connector of tip of cable.

PCB side   CF connection

SW5 ： ON
SW6 ： ON

In case, CF is connected to center connector of cable.

PCB side   CF connection   HDD connection

SW5 ： OFF
SW6 ： OFF

3．Installation of CF unit

◆Connect both SCSI cable and 4 pin power supply cable to CF unit at first and mount the CF onto equipment.

※Please use attached conversion cable (power supply cable of 4 pin small⇒4 pin large)

Conversion cable（Attached）　　Power supply cable

CF unit

50pin SCSI cable

Ref. Installed at major CVD equipment P
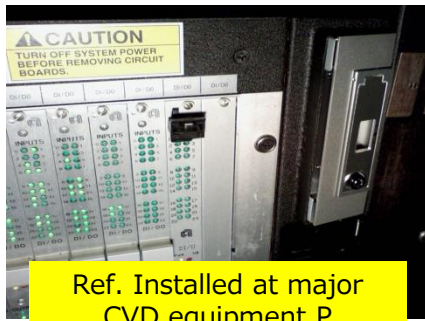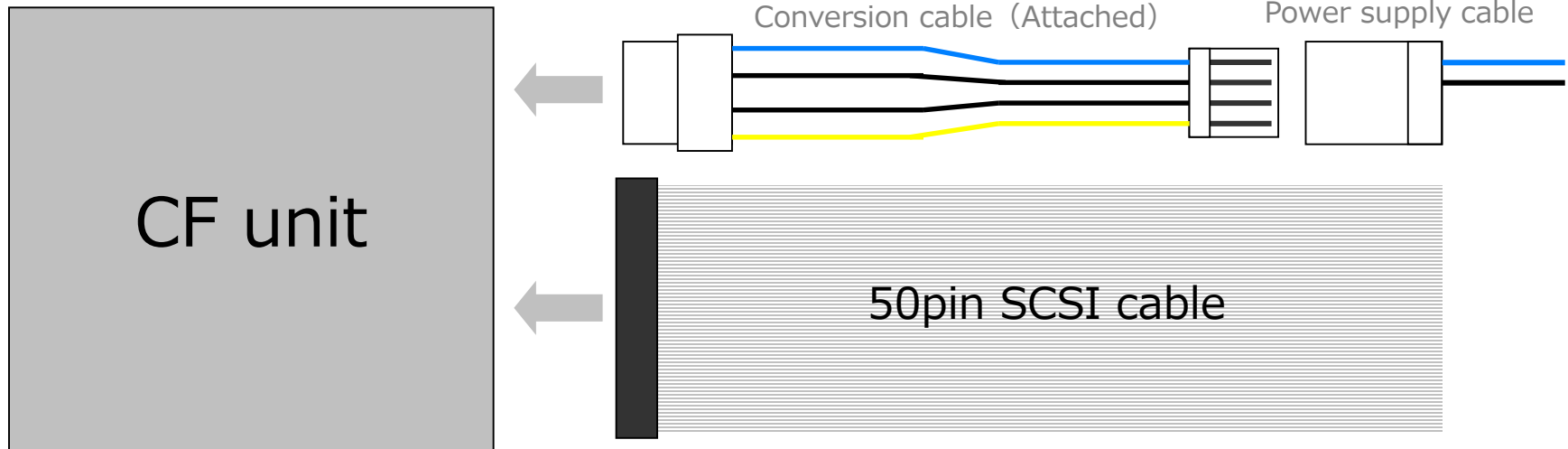
※Installation of CF unit
In case of VME rack such as CVD equipment C and PVD machine E, please mount attached 128mm panel onto CF unit. For CVD tool P, accurate installation can be done by using 148mm panel (sold in option. See left picture).

After CF unit is mounted , power-ON the system and check if the equipment surely recognizes the CF unit. If monitor of the system displays unit name as "FC-1", the recognition is done successfully.

4．Format of CF Medium

CF unit (ACD-73100) includes 6 pieces of CF medium. For equipment maker A, the CF unit is only recognized up to 1.44MB as same as FDD so user has to format attached CF medium by "format U2:" command at first.

※Format of CF medium is completed within a few second (approximately 3 seconds).

After the format completes, use the CF unit like as legacy FDD.

< **Explanation about indicator** >

Power supply indicator (Green)	Access indicator (Yellow-brown)	CF Medium condition indicator (red)	CF unit condition
ON	OFF	OFF	CF medium activates normally
ON	OFF	ON	CF medium is not inserted or medium becomes abnormal (FAIL).
ON	ON/Flash	OFF	CF medium is just in access.

Why don't you try
an unit for evaluation?

- *Installation and setup is very easy!*

- *Easily applicable to multiple equipment!*

Therefore,

It is possible to back-up data by installing this product whenever necessary.

*) The CF unit is compatible to limited semiconductor equipment (PVD, CVD) only.

Dramatically reduce back-up process and time before cessation of equipment.