DIAGNOSIS SECTION

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1 Types of Diagnoses

This subsystem's diagnostics consist of the five types of test routines listed below. They are selected according to the purpose and the part to be tested.

Table 1-1 Diagnostics Test Routines

Item No.	Type	Diagnosis	Part	Timing
1	CUDG3/ LCDG3/ FCDG3	Initial diagnoses	CHA, DKA, CACHE/SHARED MEMORY	When DKC is powered on or CHA or DKA is replaced or installed(automatic)
2	CUDG4/ LCDG4/ FCDG4	Functional diagnoses executed when the unit is offline	CHA, DKA, CACHE/SHARED MEMORY	During installation (as specified by service personnel)
3	INLINE CUDG	Functional diagnoses executed when the unit is online	CACHE/SHARED MEMORY	When Cache or Shared memory is replaced or installed (automatic)
4	DKU INLINE	DKA-HDU functional (connection) check	DKA, FSW, HDD	When an HDD is replaced (automatic) or during installation (as specified by service personnel)
5	DKU PATH INLINE	↑	DKA, FSW, DKUMN	↑
6	LAN	LAN check between DKC and SVP	SVP, SSVP, DKA, CHA	When LAN communication error or communication time-out error is occurred.

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2 DIAG Details

2.1 CUDG3 (Control Unit Diagnosis 3)/LCDG3 (Link Control module Diagnosis 3)/ FCDG3 (Fiber Channel module Diagnosis 3)

CUDG3/LCDG3/FCDG3 is a collection of test routines that are started at system start time (when the unit power is turned on), prior to the execution of the main program and automatically checks the basic functions of the unit to ensure the normal hardware operation of the system. The CUDG3/LCDG3/FCDG3 routines are listed in Table 2.1.

Table 2.1 CUDG3/LCDG3/FCDG3 Test Routines

Item No.	Routine Name	Function
1	CUDG3B	Local memory/RMC diagnosis
2	CUDG3C1	CHA PCB self-diagnosis
3	CUDG3C2	DKA PCB self-diagnosis
4	CUDG3C3	Shared resource diagnosis by all processors (SMC)
5	CUDG3C4	Shared resource diagnosis by all processors (CACHE)
6	CUDG3C5	Shared resource diagnosis by a delegated processor (SMC)
7	CUDG3C6	Shared resource diagnosis by a delegated processor (CACHE)
8	LCDG3/FCDG3	CS, for Serial/Parallel port, read/write test, internal diagnostic test, communication diagnostic test

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2.2 CUDG4 (Control Unit Diagnosis 4)/LCDG4 (Link Control module Diagnosis 4)/ FCDG4 (Fiber Channel module Diagnosis 4)

CUDG4/LCDG4/FCDG4 supports Cache memory/Shared memory read after full write tests and other tests that cannot be covered by CUDG3/LCDG3/FCDG3. It is executed by the service personnel when the unit is offline. After CUDG4/LCDG4/FCDG4, the subsystem PS OFF/ON is mandatory in order to return to ONLINE status of the subsystem.

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2.2.1 CUDG4

⚠ CAUTION

If CUDG4 is executed, it may become impossible to guarantee the data on Cache Memory / Shared Memory. Be sure to check the validity of CUDG Test to Technical Support Center before CUDG Test.

The CUDG4 test routines are listed in Table 2.2.1-1 .
The CUDG4 run option are listed in Table 2.2.1-2.

Table 2.2.1-1 CUDG4 Test Routines

Item No.	Routine Name	Function
1	P/K test Group	CHA/DKA diagnosis
2	SMC Normal test Group	SMC, SHARED MEMORY diagnosis (Normal test)
3	Cache Normal test Group	CACHE PCB, CACHE MEMORY diagnosis (Normal test)
4	SMC test Group	SMC, SHARED MEMORY diagnosis
5	Cache test Group	CACHE PCB, CACHE MEMORY diagnosis
6	Heatrun test Group	All the above tests are included.

Note 1: When 'Heatrun test Group' is selected, 'Run Option' settings are invalidated and diagnosis is executed under Heatrun mode.
Heatrun mode : Even if an error is detected, the CUDG test continues. And Diag log is mode.

Table 2.2.1-2 CUDG Run Option

Item No.	Run Option	If an error is not detected	If an error is detected
1	Normal	CUDG test will be executed only once.	CUDG test will be terminated when an error is detected. And the error detail will be displayed on the SVP screen. After finishing the CUDG function, please refer to Diag log.
2	Loop	CUDG test will be executed continuously.	CUDG test will be terminated when an error is detected. And the error detail will be displayed on the SVP screen. After finishing the CUDG function, please refer to Diag log.
3	Error Loop	CUDG test will be executed continuously.	CUDG test continues. And an error detail is displayed on the SVP screen. But the CUDG will continues testing.
4	Error Log	CUDG test will be executed continuously.	CUDG test continuous. And an error detail will be displayed on the SVP screen. After finishing the CUDG function, refer to Diag log.

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2.2.2 LCDG4

⚠ CAUTION

If LCDG4 is executed, it may become impossible to guarantee the data on Cache Memory / Shared Memory. Be sure to check the validity of LCDG4 Test to Technical Support Center before LCDG4 Test.

The LCDG4 test routines are listed in Table 2.2.2-1 .
The LCDG4 run option are listed in Table 2.2.2-2.

Table 2.2.2-1 LCDG4 Test Routines

Item No.	Routine No.	Parameter	Contents of Test
1	10	—	(1) LCP Operation (2) LCP Register Test (3) Data Buffer Read/Write (4) SPS Function
2	20	—	(1) LCP-MP Communication Test (2) Data Transfer Test
3	30	CB750F	(1) Serial Channel Wraparound Test
4	40	—	(1) Optical Signal Defect Test
5	50	—	(1) Optical Signal Error Rate Check

Note 1: Routine 30 is used for running a serial channel wraparound test.
To execute Routine 30, the wraparound test connector is required.
Note 2: Routine 40 and Routine 50 are used for checking optical signals for the serial channel.
Note 3: If Routine 40 or Routine 50 is selected, RUN option can select only Normal.

Table 2.2.2-2 LCDG4 Run Option

Item No.	Run Option	Action against Error
1	Normal	LCDG test will be executed only once. LCDG test will be terminated when an error is detected. And the error detail will be displayed on the SVP screen. After finishing the LCDG function, please refer to Diag log.
2	Error Loop	LCDG test continues. And an error detail will be displayed on the SVP screen. But the LCDG test will continue testing.
3	Loop	LCDG test continues. LCDG test will be terminated when an error is detected. And an error detail will be displayed on the SVP screen. After terminated the LCDG function, please refer to Diag log.

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2.2.3 FCDG4

CAUTION

If LCDG4 is executed, it may become impossible to guarantee the data on Cache Memory / Shared Memory. Be sure to check the validity of LCDG4 Test to Technical Support Center before LCDG4 Test.

The FCDG4 test routines are listed in Table 2.2.3-1.
The FCDG4 run option are listed in Table 2.2.3-2.

Table 2.2.3-1 FCDG4 Test Routines

Item No.	Routine No.	Parameter	Contents of Test
1	10	—	(1) Processor Test (2) Register Test (3) Internal LINK Test
2	20	—	(1) HTP-MP Communication Test (2) Data Transfer Test
3	30	CB750F	(1) Single Channel Wraparound Test (Note 1)

Note 1: Routine 30 is used for running Fibre Channel wraparound test.
To execute Routine 30, the wraparound test connector is required.

Table 2.2.3-2 FCDG4 Run Option

Item No.	RUN Option	Meaning
1	Normal	FCDG test will be executed once. If an error is detected, error detail will be displayed on the screen . And Diag log is created.
2	Error Loop	Continuous execution of FCDG test. The test is continued even when an error is detected. The error detail will be displayed on the screen.
3	Loop	FCDG test will be executed for the specified times. The test will be terminated when an error is detected. And an error detail will be displayed on the screen.

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2.3 INLINE CUDG(INLINE Control Unit Diagnosis)

INLINE CUDG checks the validity of Cache memory and Shared memory when the entire disk subsystem is running normally. The INLINE CUDG test routines are listed in Table 2.3.

Table 2.3 INLINE CUDG Test Routines

Item No.	Routine Name	Function
1	Cache memory system	CACHE PCB, CACHE MEMORY diagnosis
2	Shared memory system	SMC (Shared Memory Control) diagnosis

2.4 DKU INLINE

The DKU INLINE of test routines are used to ensure that the HDD is accessible to the Disk Controller when one is installed (a new or as an additional unit). This INLINE facility is also executed when a HDD is replaced during online processing as part of the recovery procedure to ensure that the HDD is normal. In this case, this INLINE facility runs automatically (with no SVP manipulation). The test routines are listed in Table 2.4.1.

Table 2.4 DKU INLINE Test Routines

Routine ID	Test Name	Function
C1	TEST UNIT READY & REQ.SENSE	Issues the TEST UNIT READY to the HDD and verifies that the status is GOOD or CHECK.
C2	INQUIRY	Checks the HDU-specific information.
C3	START/STOP TEST	Issues the STOP command to the HDD and verifies that the command terminates normally. In 10 seconds, the test routine issues the START command and verifies that normal status is returned.
C4	HDU SELF TEST	Issues the SEND DIAG(Self Test) command to the HDD and verifies that the terminates normally.

Notes:
1. All logical devices must be in the “BLOCKED” state. If not, the test routine will error-terminate. Refer to from SVP02-730 of SVP SECTION for all logical devices blocked.
2. The previous test routines must have been terminated normally before the pertinent test routine is started.
3. The Disk Controller should have been powered on normally.

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2.5 DKU PATH INLINE

The DKU Path Inline is used to check that the connection between the DKA and the HDU is correct. The DKU path inline test routines are shown in Table 2.5

Table 2.5 DKU PATH INLINE Test Routine

Routine ID	Test Name	Function	Maximum execution time (1 PORT)		
			12HDD	24HDD	32HDD
A0	Path Address TEST1	Checks whether the selected DKA and HDU are correctly connected.	50 sec.	1 min. 40 sec.	2 min. 20 sec.
A2	Failed HDD detection test	Detects the failed HDD and recovers it by using the reset function when an A0 10 or A0 20 error occurs.	1 min.	2 min.	2 min. 40 sec.
A3	HDD READ TEST	Executes the read test of the mounted HDD is executed.	2 min.	4 min.	5 min. 20 sec.
A8	Failed HDD detection test 2	Extension of A2 routine.	2 min.	4 min.	5 min. 20 sec.

Notes:
1. The routine A2(A8) forcibly blocks the port of the HDD by using the individual SCSI RESET function for the HDD connected to the designated port of the selected DKA. Therefore, you must not do this operation expect for finding the factor of A010/A020 error.
2. The maximum execution times here is the time when communication is normal. Communication time-out, is 3 minutes puls the above time. (Only 12 HDD is applied for Single Cabinet Model.)
3. The routine A3 executes Read Test to all equipped HDD. Therefore, you must not execute this operation during ONLINE.
4. If the target Port (MP) is not blocked, the routine A8 cannot be executed.

2.6 LAN Checker

LAN checker analyses the LAN connection between DKC and SVP to determine whether the LAN error is caused by the physical connection or the communication software.

Table 2.6 LAN Checker Test

#	Test Name	Function	Maximum execution time
1	Hardware check	Checker executes “Ping” to all MPs. If the result is “no-response”, for an MP, the physical connection error has occurred between the MP and SVP.	2 min. (1 MP)
2	Software check	Checker executes the communication between SVP and MPs whose result of #1 is “responded”.	

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3 DIAG Parts

The parts that are diagnosed by the DIAG test routines are shown in Figs. 3-1 through 3-5.

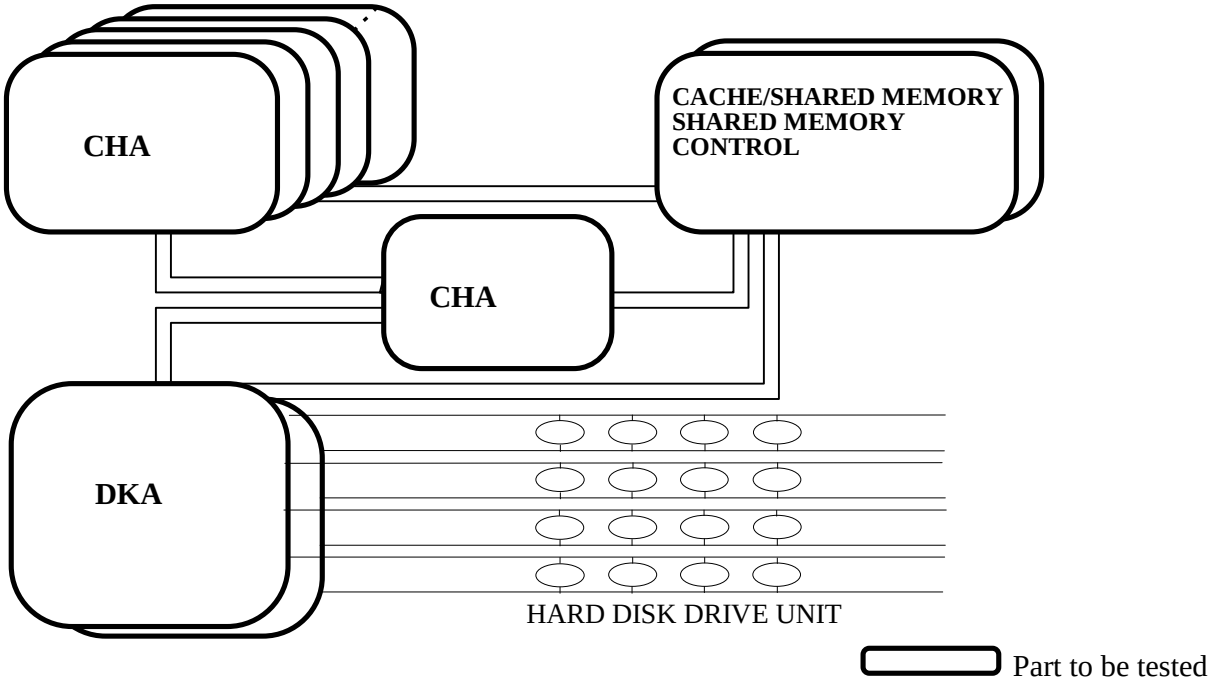

Fig. 3-1 Parts Subject to CUDG3/CUDG4 Tests

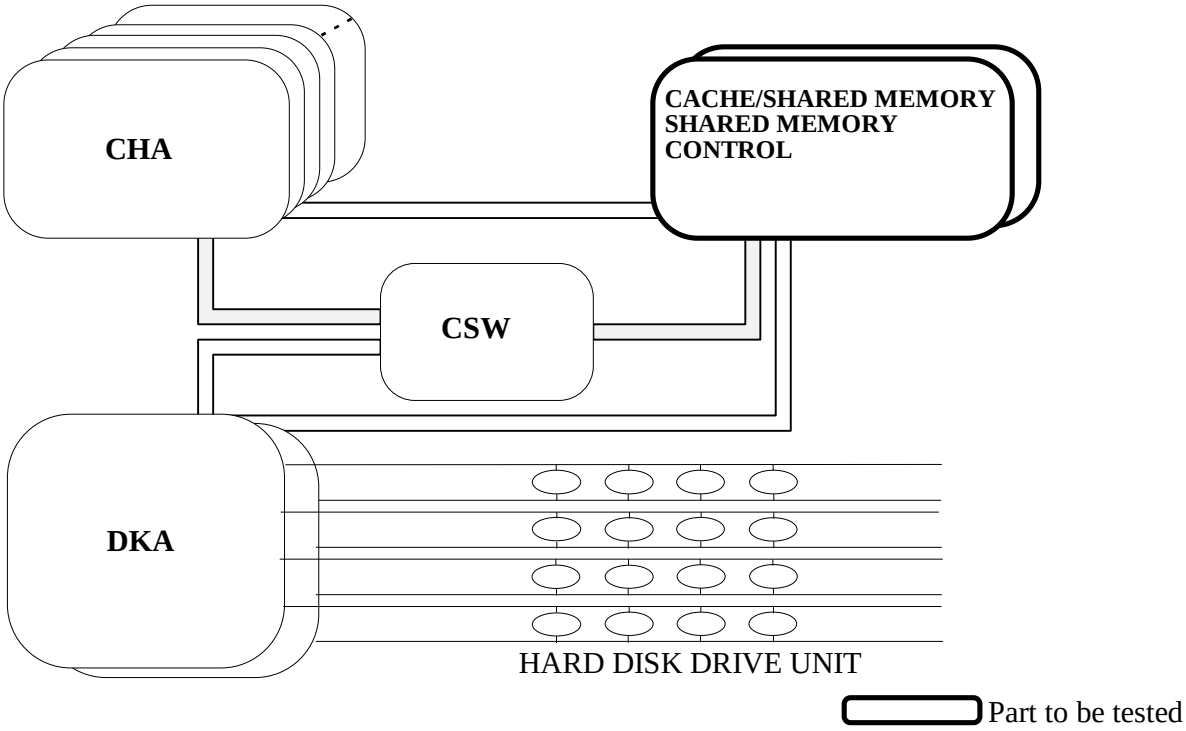

Fig. 3-2 Parts Subject to INLINE CUDG Tests

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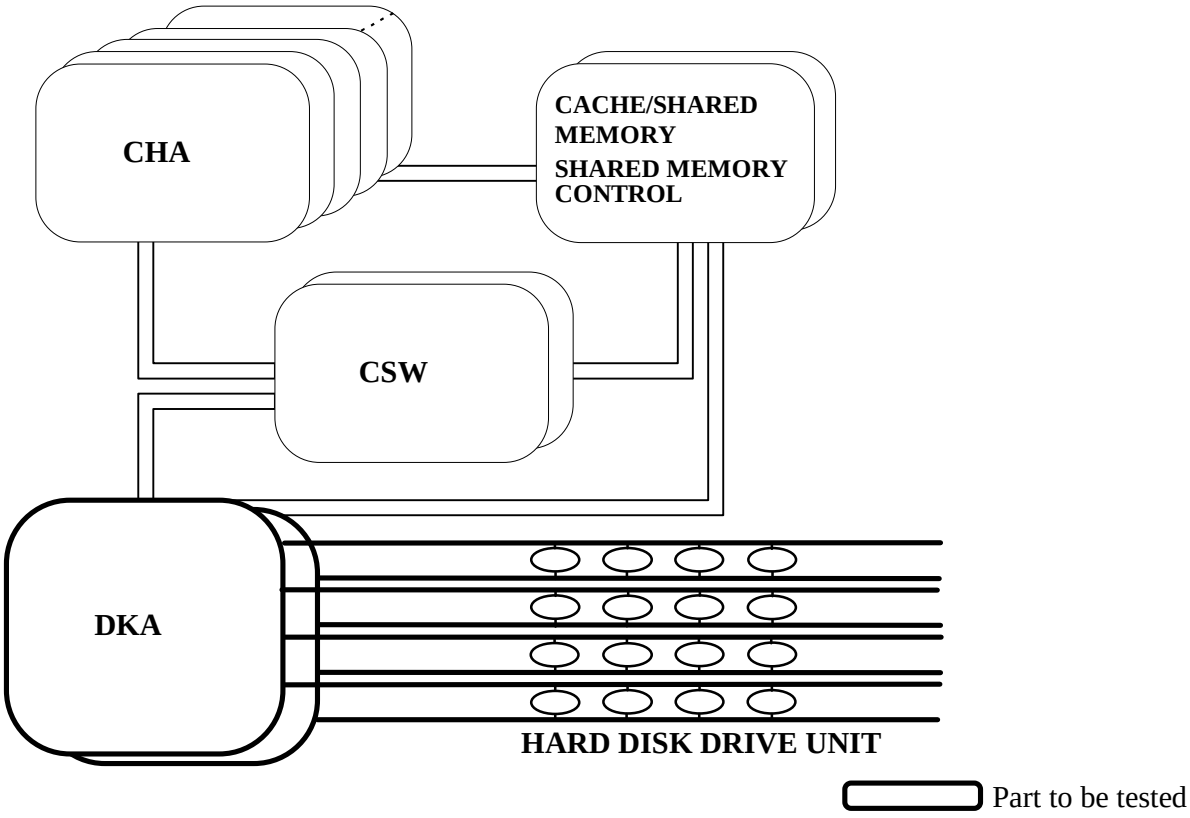

Fig. 3-3 Parts Subject to DKU INLINE Tests

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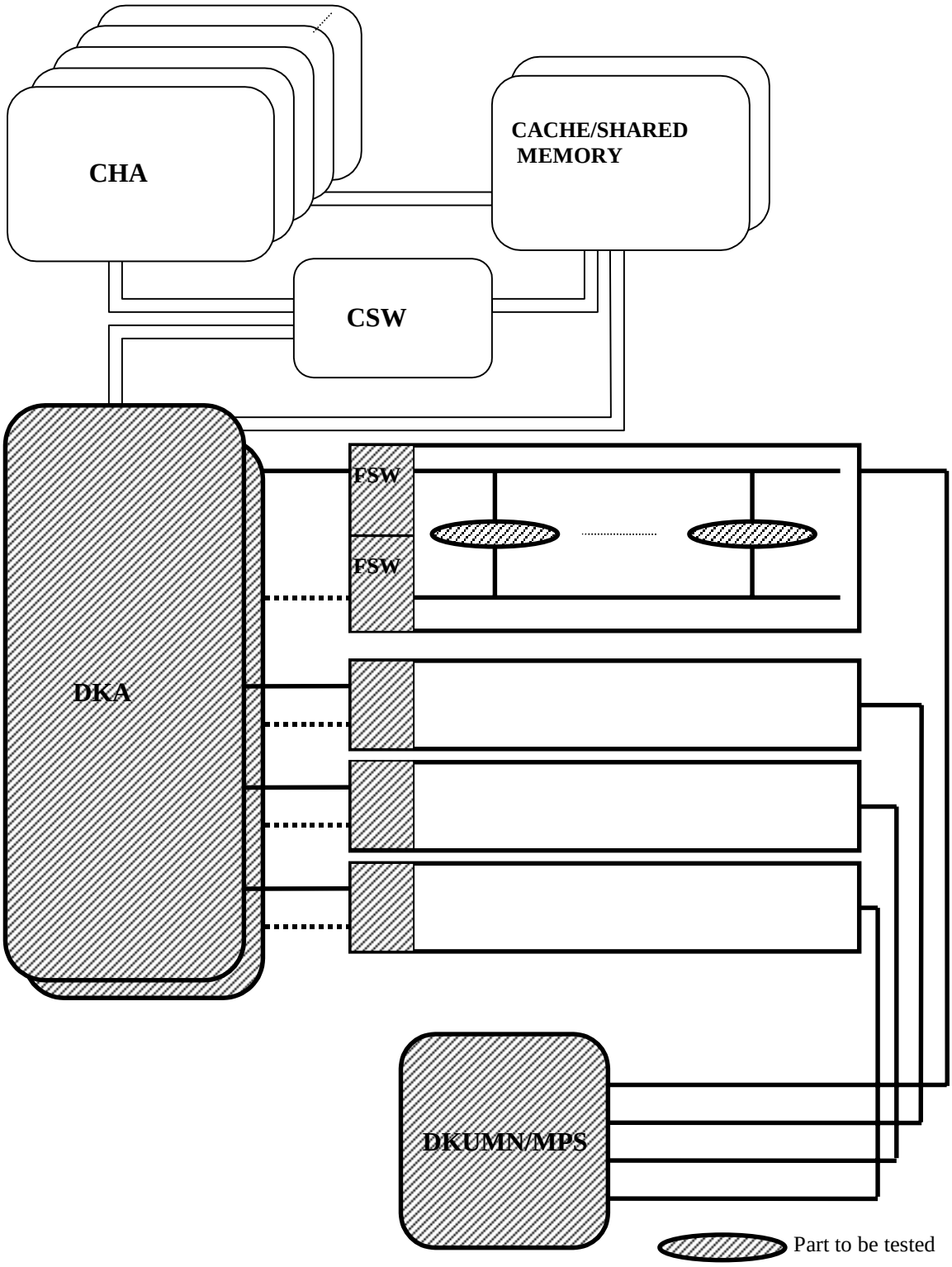

Fig. 3-4 Parts Subject to DKU PATH INLINE Tests

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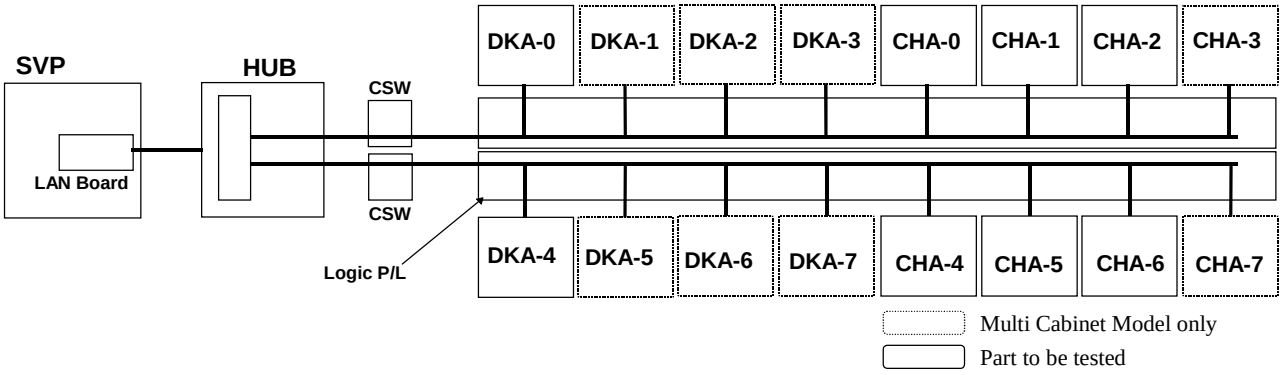

Fig. 3-5 Parts Subjects to LAN check

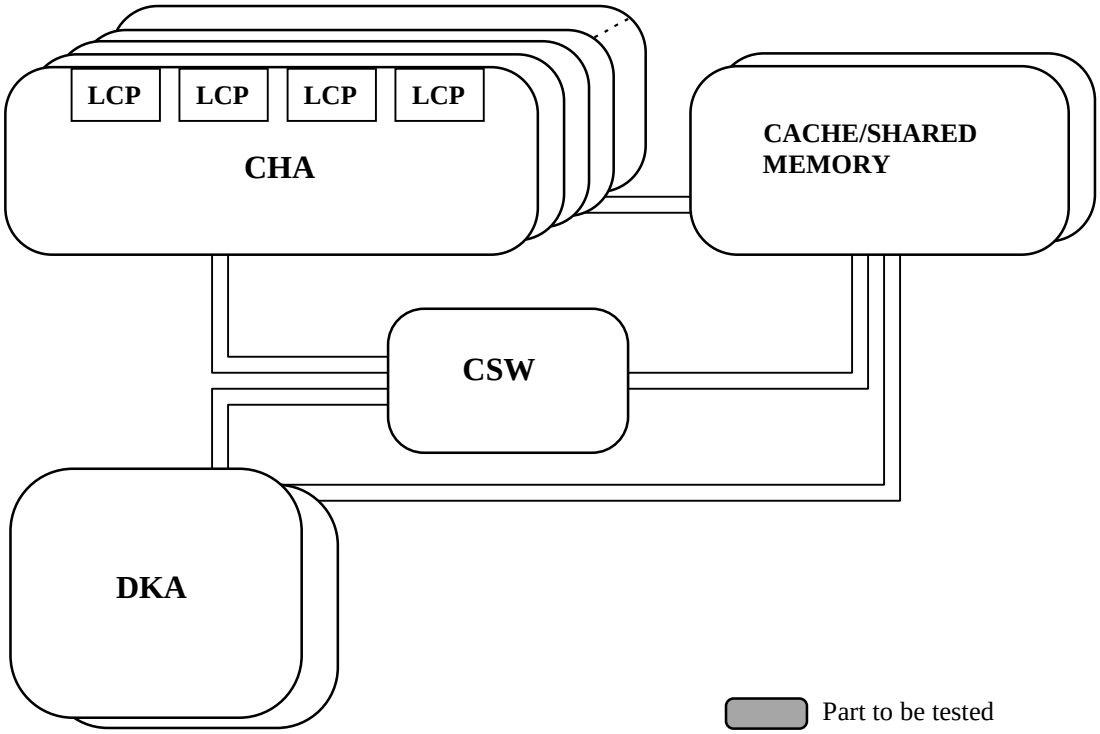

Fig. 3-6 Parts Subject to LCDG4 Tests

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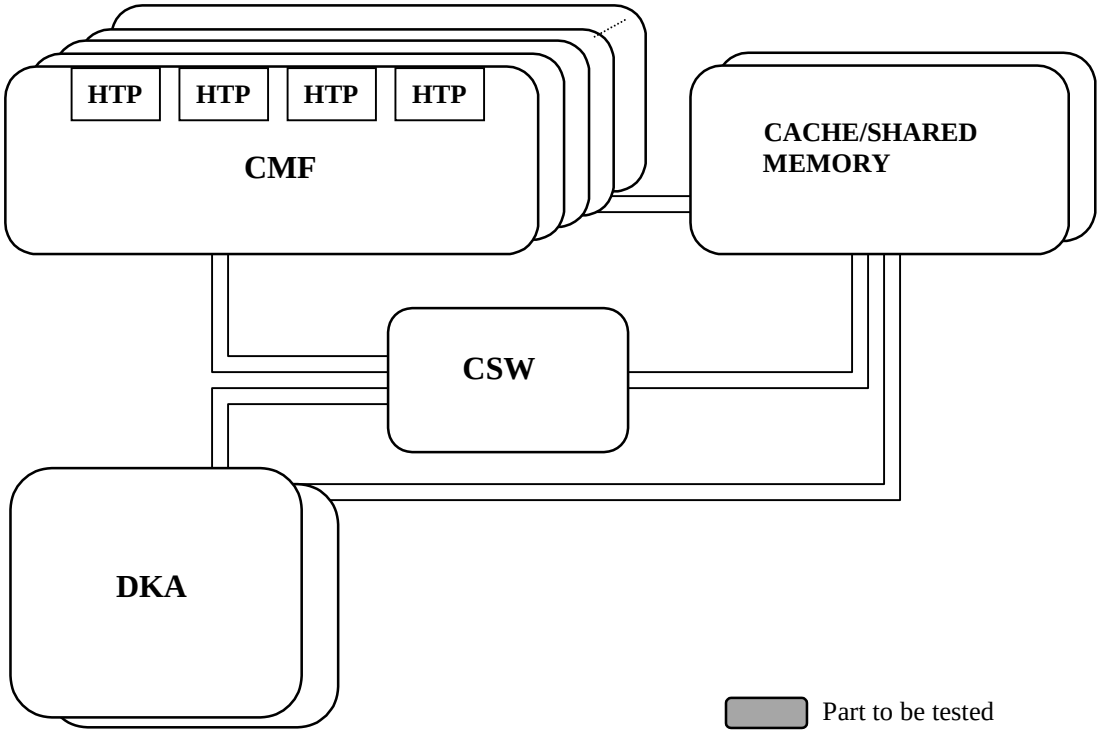

Fig. 3-7 Parts Subject to FCDG4 Tests

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4 DIAG Test Procedures (SVP Operations)

For the explanation of procedure, the SVP screens of Multi Cabinet Model are used.
Some screens of Single Cabinet Model have different location names, but the operations are the same as ones in Multi Cabinet Model.

4.1 CUDG4 Test Procedures

⚠ CAUTION

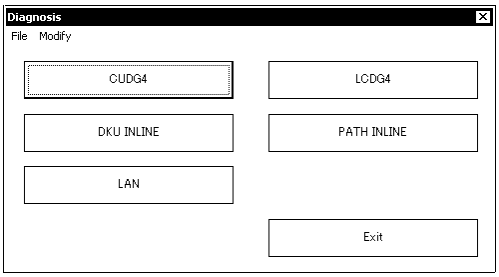
① Powering off/on is required owing to the performance of this operation.

② If CUDG4 is executed, it may become impossible to guarantee the data on Cache Memory / Shared Memory. Be sure to check the validity of CUDG Test to Technical Support Center before CUDG Test.

1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Modify Mode].
   Select (CL) [Diagnosis].

3. <Activating CUDG>
   Select (CL) [CUDG4].



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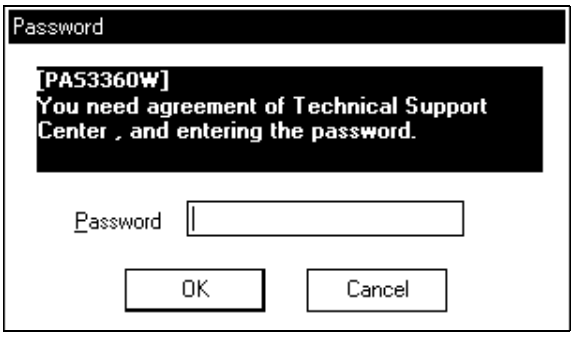
4. <Password>

CAUTION

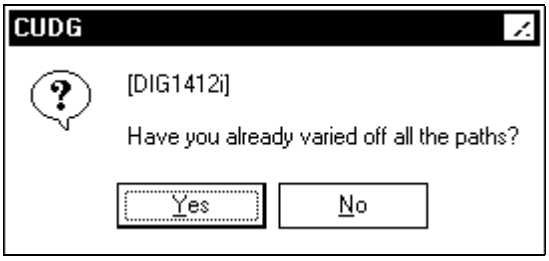
Ask the technical support center about the appropriateness of the operation, and input a password after getting an approval of executing the operation.

If you want to continue this process, enter the password, and select (CL) [OK].



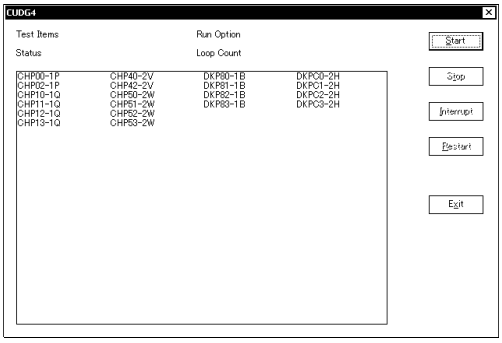
5. <Confirming that the channel path has been varied off>

An inquiry “Have you already varied off all paths?” is displayed.
Vary off the channel path, then select (CL) the [Yes] button.



6. <Start of CUDG4 test>

Select (CL) [Start].



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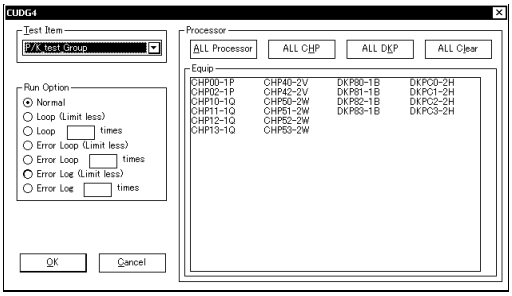
7. <Setting test parameters>

Select a test item, a test execution type, and a test object processor from Test Item, Run Option, and Processor respectively.
Select (CL) the [OK] button after all the above selections are made.



[Test items]

P/K test Group	: Diagnosis on the CHA PCBs or DKA PCBs
SMC Normal test Group	: Diagnosis on the shared memory control (test on the normal system)
Cache Normal test Group	: Diagnosis on the cache platter (test on the normal system)
SMC test Group	: Diagnosis on the shared memory control
Cache test Group	: Diagnosis on the cache platter
Heatrun test Group	: All the above tests are included

Note 1: When 'Heatrun test Group' is selected, 'Run Option' settings are invalidated and diagnosis is executed under Heatrun mode.

[Run option (test execution types)]
Refer to DIAG01-10.

[Test object processors]

ALL Processor	: The test is executed on all the processors in the configuration.
ALL CHP	: The test is executed on all the CHPs in the configuration.
ALL DKP	: The test is executed on all the DKPs in the configuration.
ALL Clear	: Release of processor selection.

The mounted processor is displayed on Equip.
Selected processor is displayed in reverse video.
When you want to select a specified processor in the configuration , Select a processor directly.

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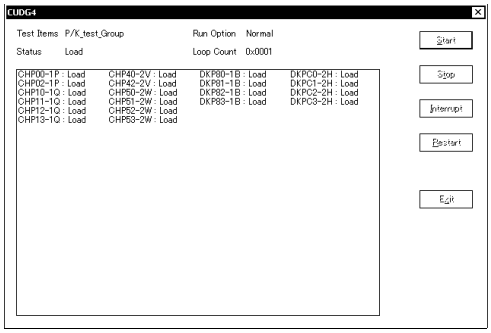
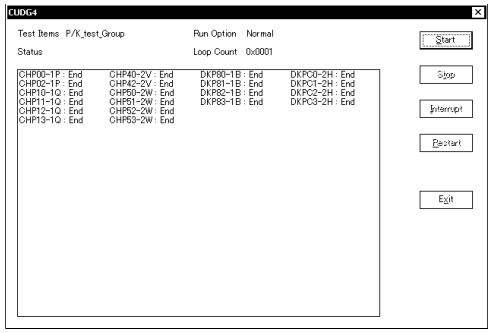
8. <Displaying CUDG4 loading>

Statuses of Init, Load, and Wait are displayed on the 'CUDG4' screen.
The illustration on the right shows the screen when the CUDG4 is being loaded.



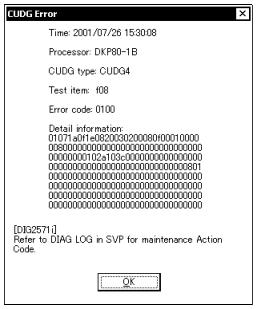
9. <Displaying Run>

State of the run is displayed on the 'CUDG4' screen.
The illustration on the right shows the screen when the CUDG4 test is being executed.
Normal end ---------- Go to step 11.
Abnormal end -------- Go to step 10.



10. <Displaying error>

If an error occurs in CUDG4 test, the CUDG Error window is displayed.



To execute CUDG4 again, go to step 6.
To terminate CUDG4, go to step 12.
To display DIAG LOG, see SVP02-140.

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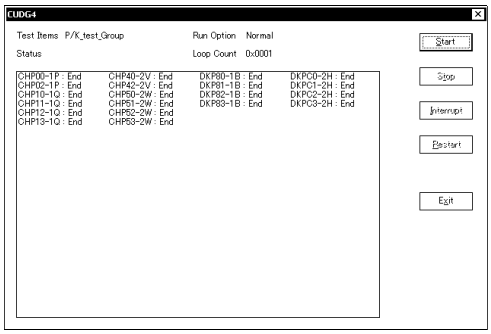
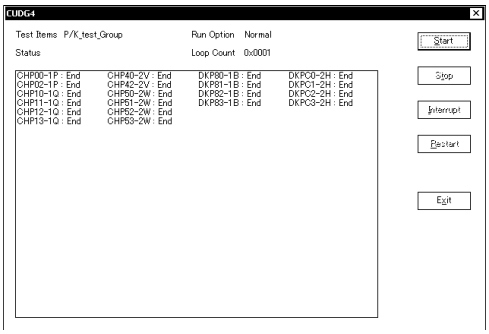
11. <Displaying End>

Status 'End' is displayed for the processor that CUDG4 test ends.
To continue CUDG4, go to step 6.
To terminate CUDG4, go to step 12.



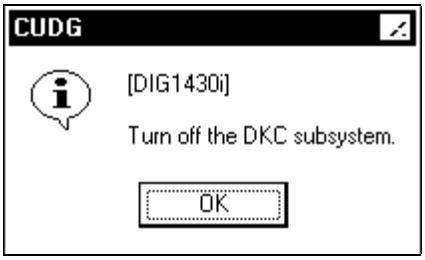
12. <Displaying Exit>

Select (CL) [Exit].



13. <PS-OFF>

Turn off the DKC subsystem by performing the PS-OFF operation following the displayed instruction "Turn off the DKC subsystem", then select (CL) the [OK] button.
If the power is not turned off after PS-OFF operation, immediately turn off the breaker.

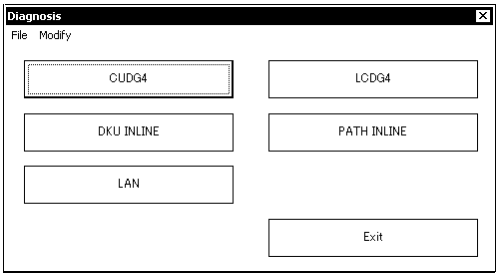


14. <Reboot the PC and PS-ON>

[Diagnosis] window is displayed.

- Close the window
- Reboot the PC
- PS-ON

End of CUDG4 operation.



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4.2 LCDG4/FCDG4 Test Procedures

CAUTION

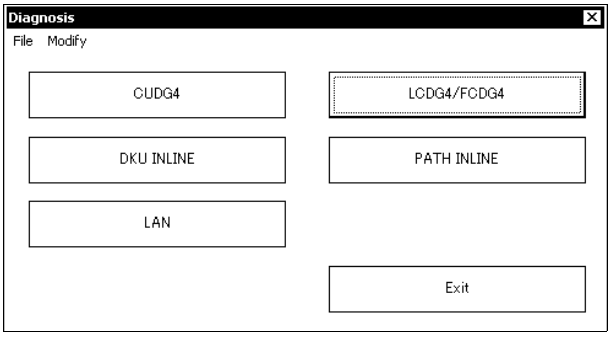
① Powering off/on is required owing to the performance of this operation.

② If LCDG4/FCDG4 is executed, it may become impossible to guarantee the data on Cache Memory / Shared Memory. Be sure to check the validity of LCDG4/FCDG4 Test to Technical Support Center before LCDG4/FCDG4 Test.

1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Modify Mode].
   Select (CL) [Diagnosis].

3. <Activating LCDG/FCDG>
   Select (CL) [LCDG4/FCDG4].



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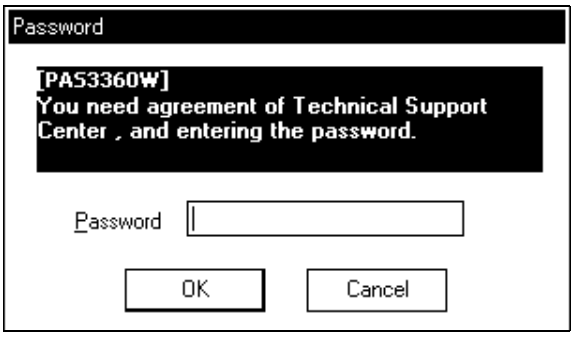
4. <Password>

CAUTION

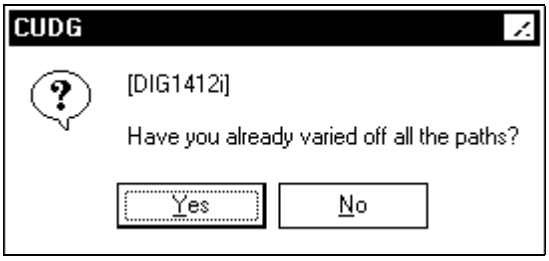
Ask the technical support center about the appropriateness of the operation, and input a password after getting an approval of executing the operation.

If you want to continue this process, enter the password, and select (CL) [OK].



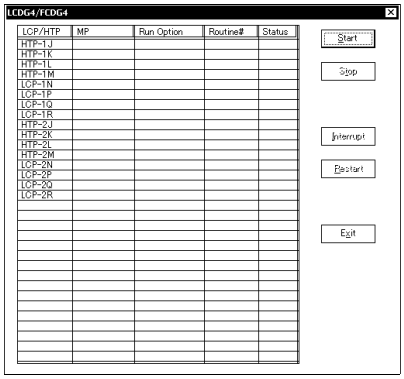
5. <Confirming that the channel path has been varied off>

An inquiry “Have you already varied off all paths?” is displayed.
Vary off the channel path, then select (CL) the [Yes] button.



6. <Start of LCDG4/FCDG4 test>

Select (CL) [Start].



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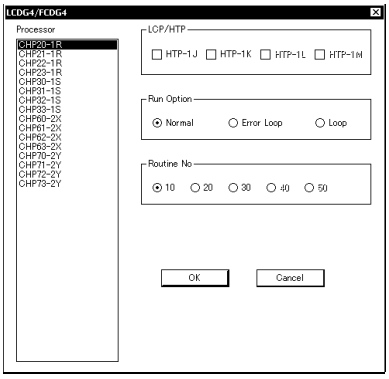
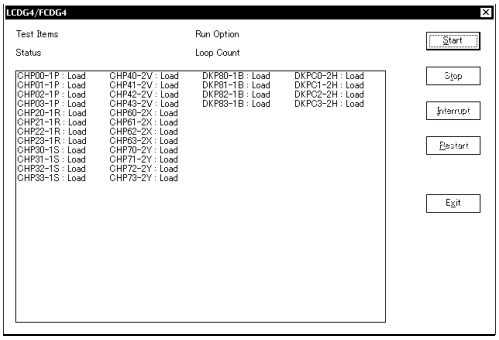
7. <Select [CHA], [LCP/HTP], [Run Option] and [Routine No.]>
Select (CL) [CHA], [LCP/HTP], [Run Option] and [Routine No.] in the 'LCDG4/FCDG4' dialog box.
Select (CL) the [OK] button.
Refer to DIAG02-30.

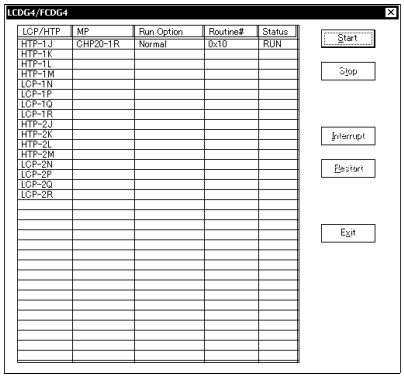


8. <Display of [LOAD]>
Status [Init], [Load], and [Wait] are displayed in the 'LCDG4/FCDG4' dialog box.



9. <Display of [Run]>
Status [Run] is displayed in the 'LCDG4/FCDG4 Status' dialog box.

Go to 10 in the case of Normal End.
Go to 11 in the case of Abnormal End.



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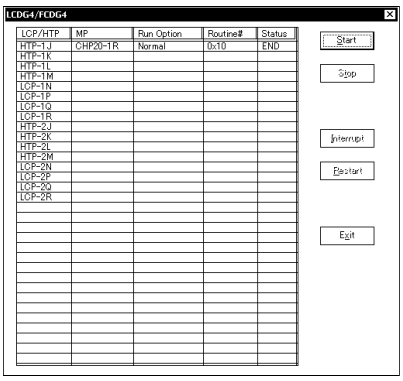
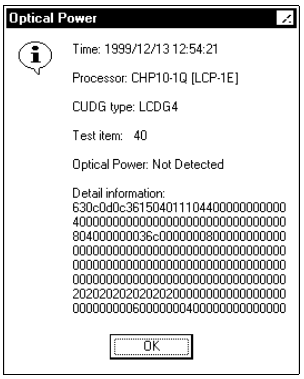
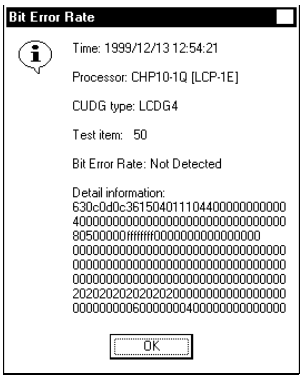
10. <Display of [End]>

Status [End] is displayed in the 'LCDG4/FCDG4 Status' dialog box.
When the routine number is 40, 'Optical Power' is displayed. Select (CL) [OK]. When the routine number is 50, 'Bit Error Rate' is displayed. Select (CL) [OK].
Go to 12.



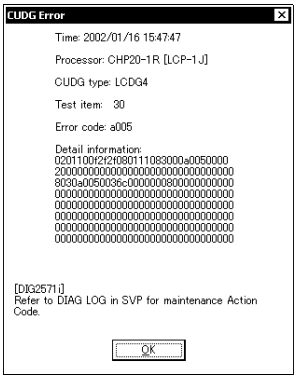


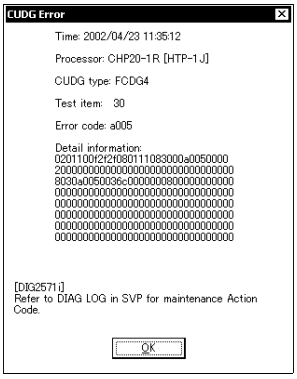


11. <Display of 'CUDG Error'>

After 'CUDG Error' is displayed, select (CL) [OK].

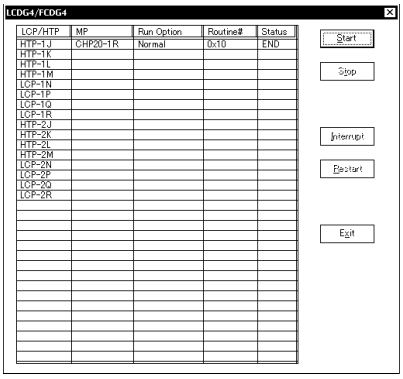
To display DIAG LOG, see SVP02-140.





12. <Selection of continuation/termination of LCDG4/FCDG4>

To continue LCDG4/FCDG4, select (CL) [Start] in the 'LCDG4/FCDG4 Status' dialog box and go to step 7.
To terminate LCDG4/FCDG4, select (CL) [Exit] in the 'LCDG4/FCDG4 Status' dialog box and go to step 13.



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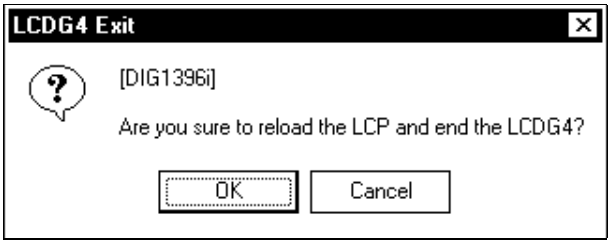
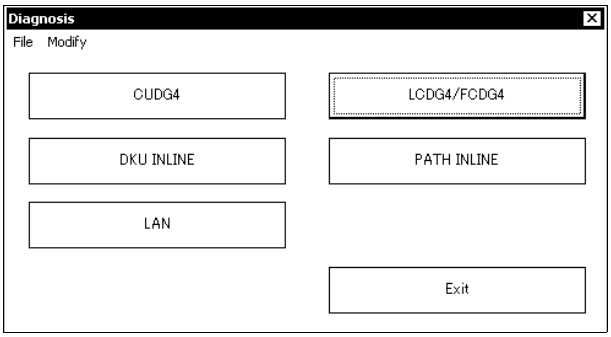
13. <End of LCDG4/FCDG4>

"Are you sure to reload the LCP and end the LCDG4?" is displayed.
Select (CL) [OK].



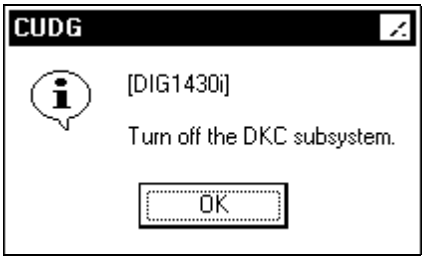
14. <Select [Exit]>

Select (CL) [Exit].



15. <PS-OFF and Reboot the PC>

After "Turn off the DKC subsystem." is displayed, turn off the DKC subsystem by the PS-OFF operation and then select (CL) [OK].

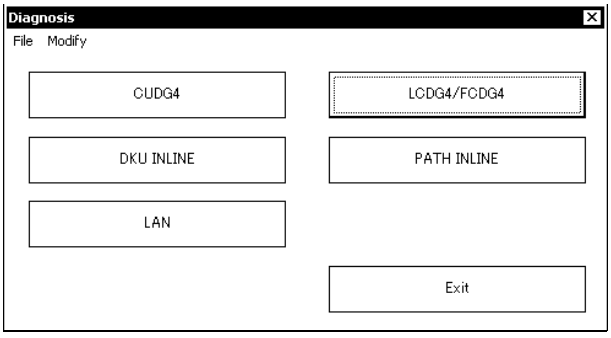


16. < Reboot the PC and PS-ON>

[Diagnosis] window is displayed.

- Close the window
- Reboot the PC
- PS-ON

End of LCDG4/FCDG4 operation.



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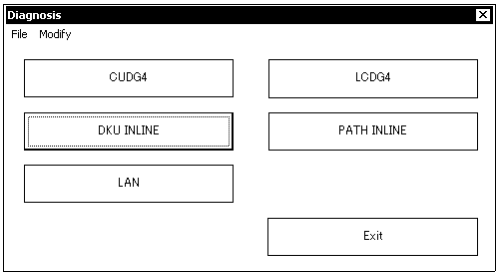
4.3 DKU INLINE Test Procedures

1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Modify Mode].
   Select (CL) [Diagnosis].

3. <Select 'DKU INLINE'>
   The 'Diagnosis' window is displayed.
   And select (CL) [DKU INLINE].



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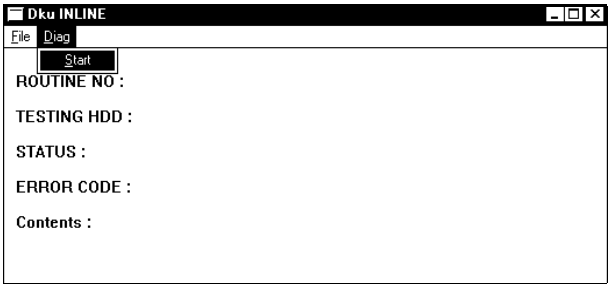
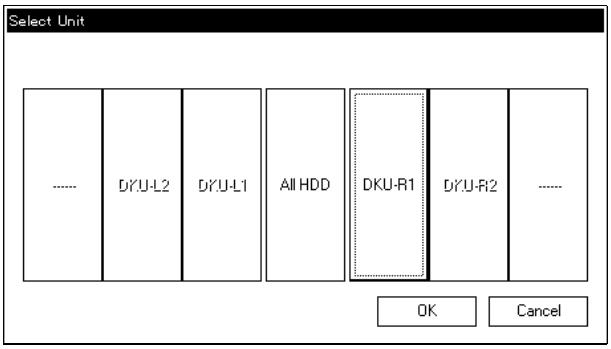
4. <Select [Start]>
Select (DR) [Start] from [Diag].



5. <Select UNIT to be tested>
Select (CL) the UNIT for which the test routine is to be executed from 'Select Unit'.

When selecting each 'UNIT' in Multi Cabinet Model or 'Disk' in Single Cabinet Model, go to 6.
If 'ALL HDD' is selected, go to 9.

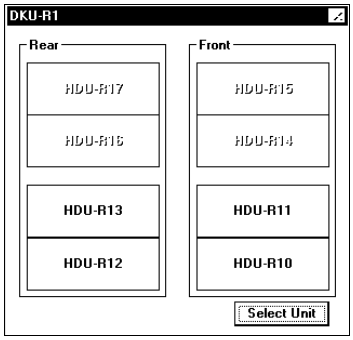


In Single Cabinet Model, "Disk" is displayed instead of "DKU-R1".

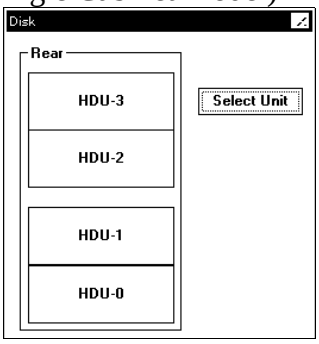
6. <Select HDU Group to be tested>
Select (CL) the HDU Group for which the test routine is to be executed from 'UNIT'.

If [Select UNIT] is selected, go to 5.

(Multi Cabinet Model)



(Single Cabinet Model)



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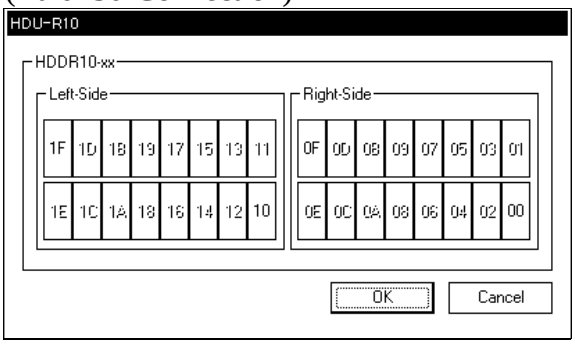
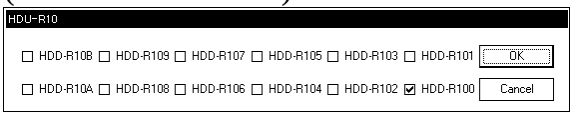
7. <Select HDD to be tested>
Select (CL) HDD for which the test routine is to be executed from 'HDD SELECT'.
Then select (CL) the [OK] button.

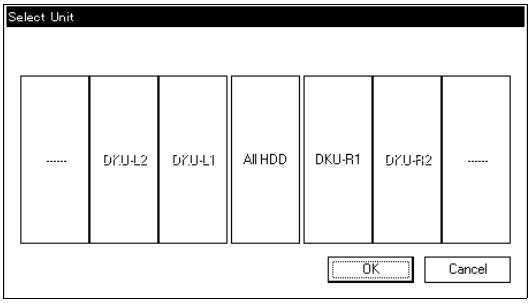
(Raid450-Connection)



(Raid400-Connection)



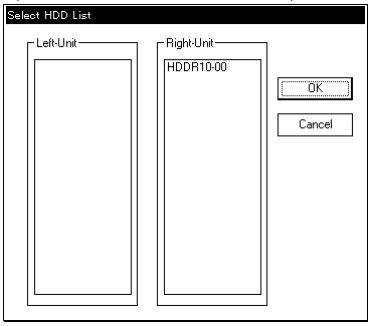
8. <Select [OK]>
Select (CL) the [OK] button.



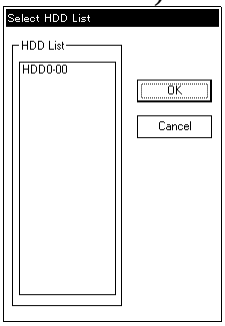
In Single Cabinet Model, "Disk" is displayed instead of "DKU-R1".

9. <Confirm HDD to be tested>
Confirm HDD to be tested in the 'DRIVE LIST'.
Then select (CL) [OK].

(Multi Cabinet Model)



(Single Cabinet Model)



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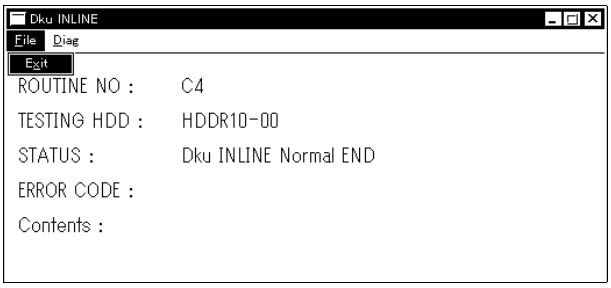
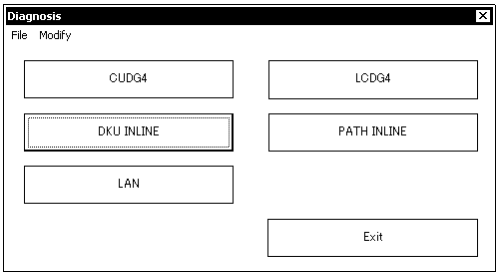
10. <Status Window>
The Status Window is displayed.

Normal end : Go to 11
Abnormal end : Go to 13
In case you abort the diagnosis, select (CL) the [Stop] button.

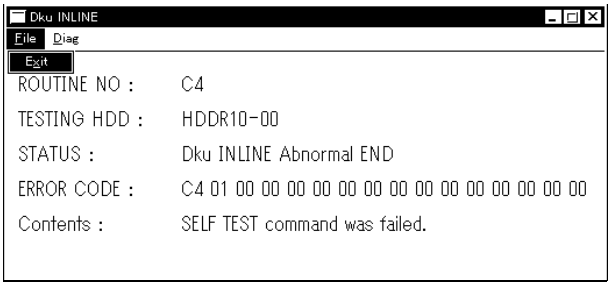
11. <DKU INLINE end>
After the status “Dku INLINE Normal END” is displayed, select (DR) [Exit] from [File].



12. <Diagnosis end>
Select (CL) [Exit].



13. <Error End>
“STATUS : Dku INLINE Abnormal END” is displayed.
Refer to Diag Log for the detailed information.
Select (DR) [Exit] from [File].
Go to 12.



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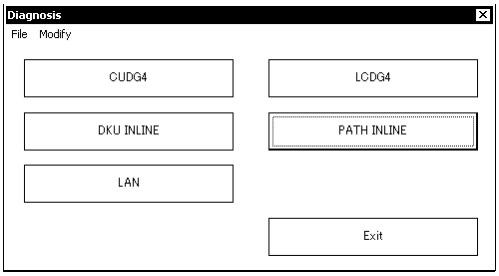
4.4 DKU PATH INLINE Test Procedures

4.4.1 A0 routine Test Procedures

1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Modify Mode].
   Select (CL) [Diagnosis].

3. <Select 'PATH INLINE'>
   The 'Diagnosis' window is displayed.
   And select (CL) [PATH INLINE].



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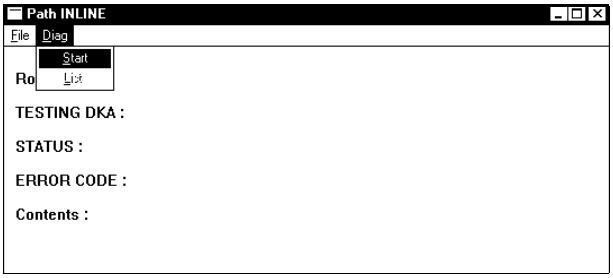
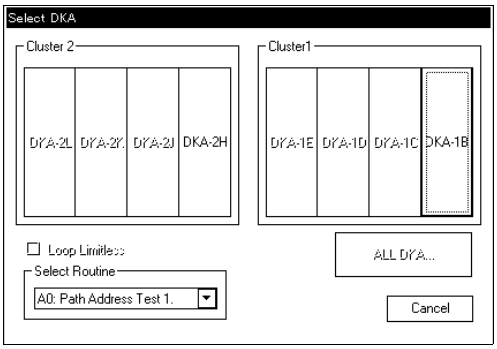
4. <Selecting [Start]>
Select (DR) [Start] from [Diag].

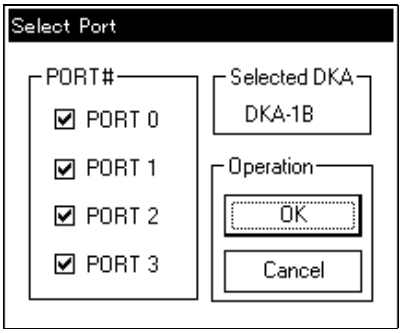


5. <Selecting Routine and the DKA>
Select the routine (A0) which is to be tested from 'Select Routine', Select (CL) the DKA for which the test routine is to be executed.



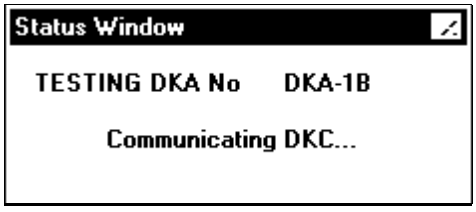
In Single Cabinet Model, the name of DKA is different.

6. <Selecting the PORT to be diagnosed>
Select (CL) the PORT for which the test routine is to be executed.
And select (CL) the [OK] button.



7. <Status Window>
The Status Window is displayed.

Normal end : Go to 8
Abnormal end : Go to 9



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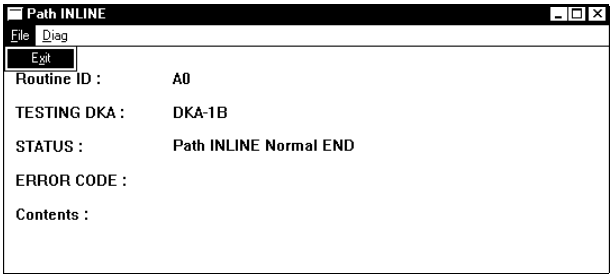
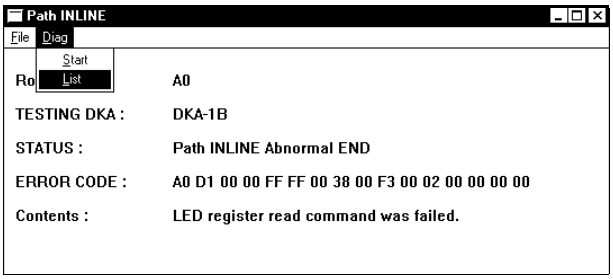
8. <Completing diagnosis>
After “Path INLINE Normal END” is displayed in the STATUS field, select (DR) [Exit] from [File].
Go to 13.



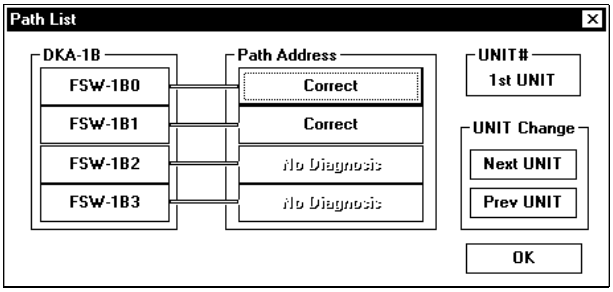
9. <Displaying the error detail>
Select (DR) [List] from [Diag].



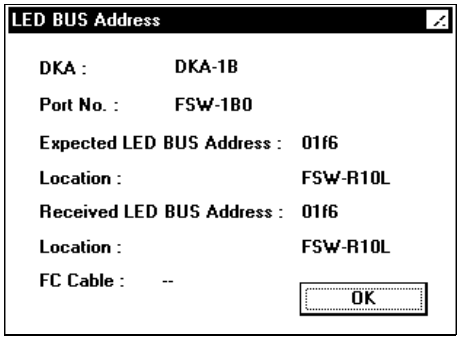
10 <Verification the incorrect part>
Select (CL) the incorrect part from [Path Address].

When [PathAddress] is selected, go to 11.
When [OK] is selected, go to 12.

In Multi Cabinet Model, if you want to display other DKC, select (CL) [Next UNIT] or [Prev DKU].



11. <Displaying ‘Result’>
‘Result’ is selected.
Select (CL) the [OK] button.
Go to 10.



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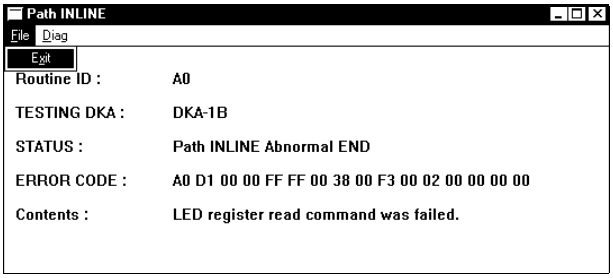
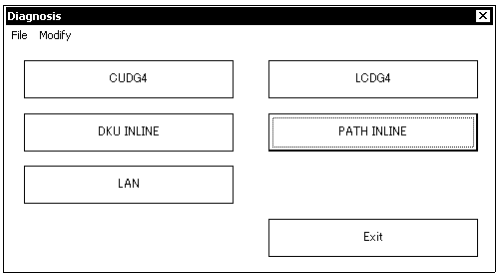
12. <DKU Path inline end>
After “Path INLINE Abnormal END” is displayed in the Status field, select (DR) [Exit] from [File].



13. <End of [Diagnosis]>
Select (CL) [Exit].



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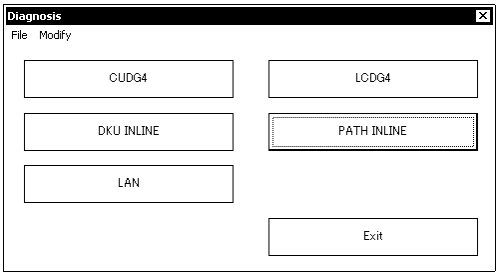
4.4.2 A2 (A8) routine Test Procedures

1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Test Mode].
   Select (CL) [Diagnosis].

   <Note>
   Please call Technical Support Center for asking how to change the mode to Test Mode.

3. <Select 'PATH INLINE'>
   The 'Diagnosis' window is displayed.
   And select (CL) [PATH INLINE].



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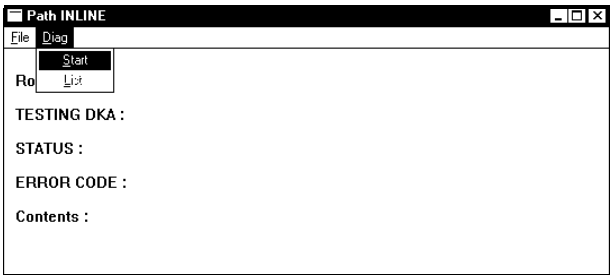
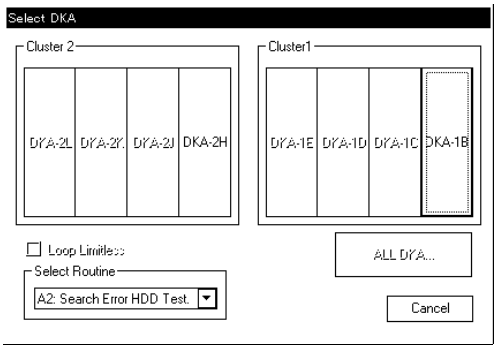
4. <Selecting [Start]>
Select (DR) [Start] from [Diag].

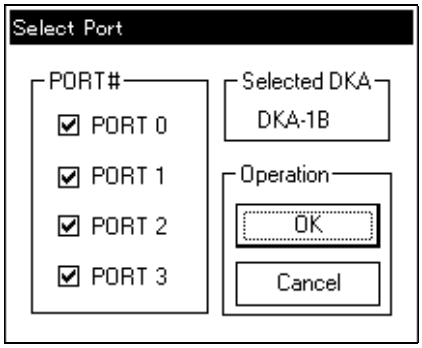


5. <Selecting Routine and the DKA>
Select the routine (A2) which is to be tested from 'Select Routine', Select (CL) the DKA for which the test routine is to be executed.



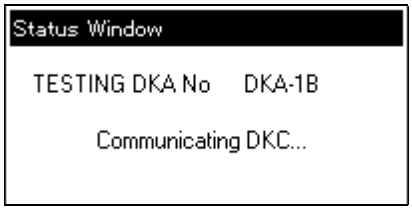
In Single Cabinet Model, the name of DKA is different.

6. <Selecting the PORT to be diagnosed>
Selecting the PORT and the routine to be executed.
Select (CL) the PORT for which the test routine is to be executed.
And select (CL) the [OK] button.



7. <Status Window>
The Status Window is displayed.

Normal end ------- Go to 8
Abnormal end ---- Go to 9



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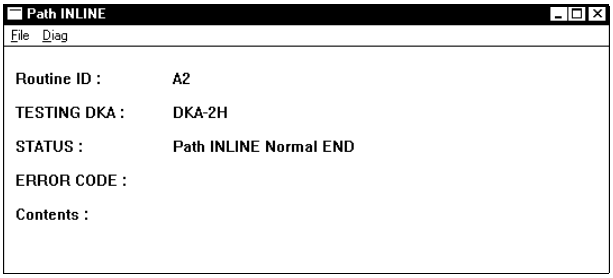
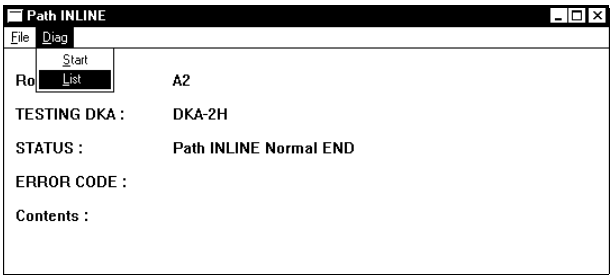
8. <DKU Path INLINE normal end>
After “Path INLINE Normal END” is displayed in the Status field, select (DR) [Exit] from [File].
Go to 13.



9. <Displaying the error detail>
Select (DR) [List] from [Diag].

In case of A8 routine, go to 14.

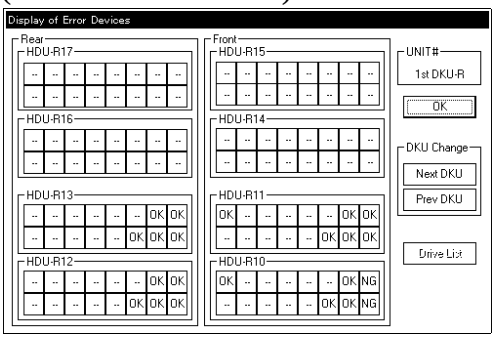


10. <Displaying the Error Devices>
In Multi Cabinet Model:
“NG” is displayed in the PDEV installing position viewed in the 1st DKU .

If you want to display other DKC, select (CL) [Next DKU] or [Prev DKU].

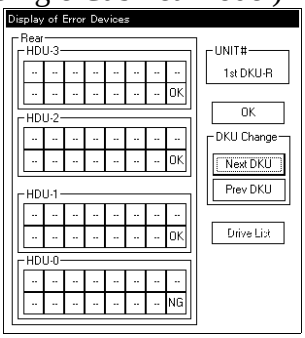
If you want to refer to more detailed information about the “NG” Pdev, select the “NG” button. Go to 11.

(Multi Cabinet Model)



In Single Cabinet Model:
If you want to refer to more detailed information about the “NG” Pdev, select the “NG” button. Go to 11.

(Single Cabinet Model)



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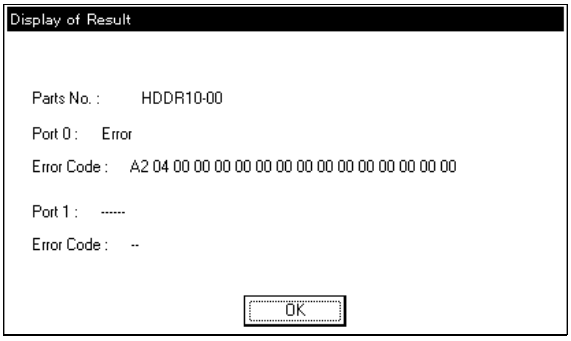
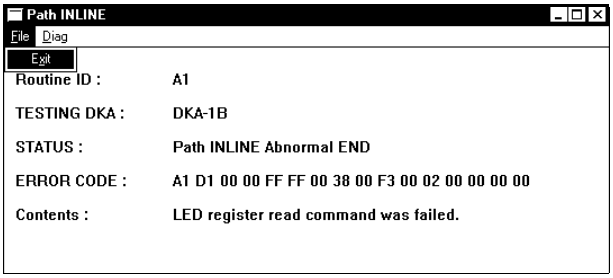
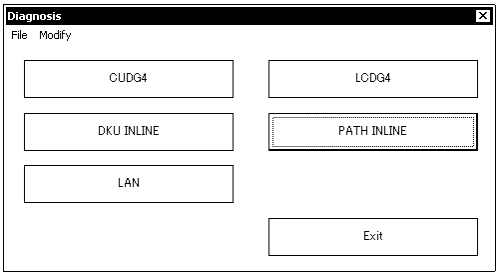
11. <Displaying the Error detail>
Select (CL) the [OK] button after 'Result' is displayed.



12. <DKU Path inline end>
Select (DR) [Exit] from [File].



13. <End of [Diagnosis]>
Select (CL) [Exit].



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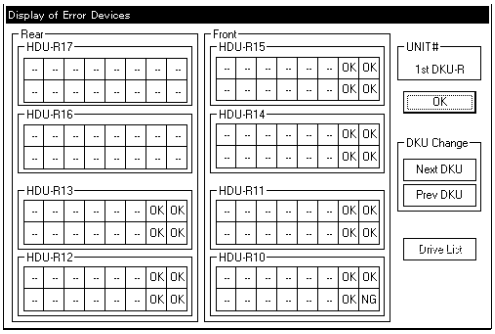
14. <Displaying the Error Devices (A8)>

In Multi Cabinet Model:
"NG" is displayed in the PDEV installing position viewed in the 1st DKU .

If you want to display other DKC, select (CL) [Next DKU] or [Prev DKU].

If you want to refer to more detailed information about the "NG" Pdev, select the "NG" button. Go to 15.

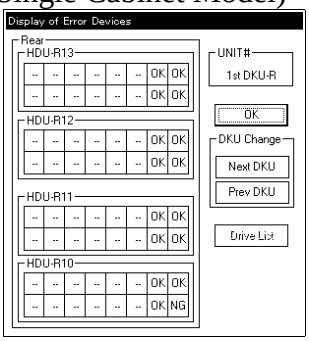
(Multi Cabinet Model)



In Single Cabinet Model:
If you want to refer to more detailed information about the "NG" Pdev, select the "NG" button. Go to 15.

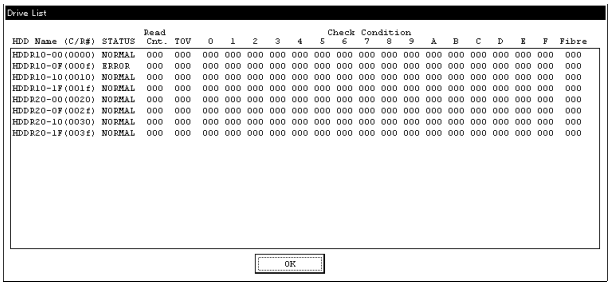
If you want to refer to Drive List, select the [Drive List] button.

(Single Cabinet Model)



15. <Displaying the Drive List>

Select (CL) the [OK] button after 'Drive List' is displayed.
Go to 14.



[HDD Name (C/R#)]
HDD Name, CDEV Number, RDEV Number

[STATUS]
NORMAL : No Error.
ERROR : Drive Read Error.
TP_ERR : Through Path Error.

[Read Cnt.]
Issue count of Drive Read Command.

[TOV]
Occurrence count of Time over.

[Check Condition 0-F]
Occurrence count of each Check Condition.
(Definition of Check Condition see Sense Key in SSB04-170.)

[Fibre]
Occurrence count of Fibre Error.

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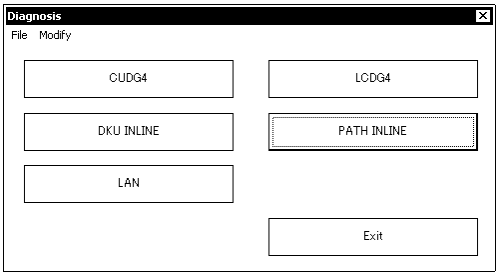
4.4.3 A3 routine Test Procedures

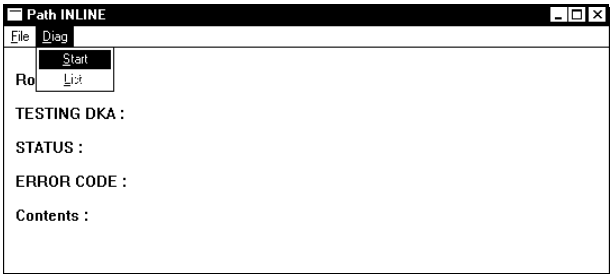
1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Modify Mode].
   Select (CL) [Diagnosis].

3. <Select 'PATH INLINE'>
   The 'Diagnosis' window is displayed.
   And select (CL) [PATH INLINE].



4. <Selecting [Start]>
   Select (DR) [Start] from [Diag].



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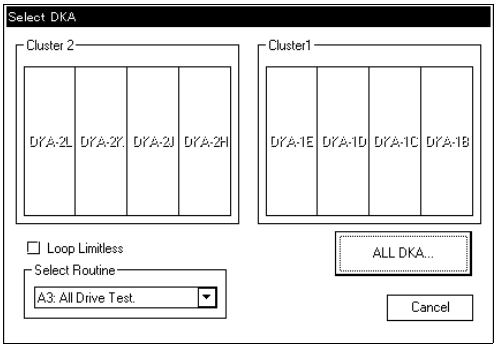
5. <Selecting the DKA >

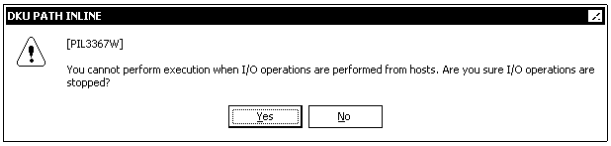
Select the routine (A3) which is to be tested from 'Select Routine', Select (CL) the ALL DKA.
In case you loop the diagnosis, check the "Loop Limitless" Check-Box.



In Single Cabinet Model, the name of DKA is different.

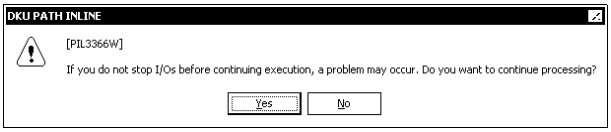
6. <I/O check>

An inquiry "You cannot perform execution when I/O operations are performed from hosts. Are you sure I/O operations are stopped?" is displayed.
It checks that I/O has stopped, then select (CL) the [Yes] button.



7. <Execution check>

An inquiry "If you do not stop I/Os before continuing execution, a problem may occur. Do you want to continue processing?" is displayed.
In case you perform the diagnosis, select (CL) the [Yes] button.



8. <Status Window>

The Status Window is displayed.

Normal end ------- Go to 9
Abnormal end ---- Go to 10

In case you abort the diagnosis, select (CL) the [Stop] button.

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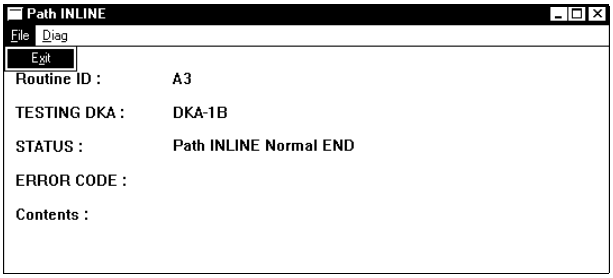
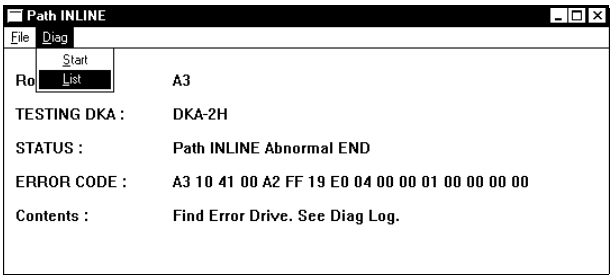
9. <DKU Path inline normal end>
After “Path INLINE NORMAL END” is displayed in the Status field, select (DR) [Exit] from [File].
Go to 14.



10. <Displaying the error detail>
Select (DR) [List] from [Diag].

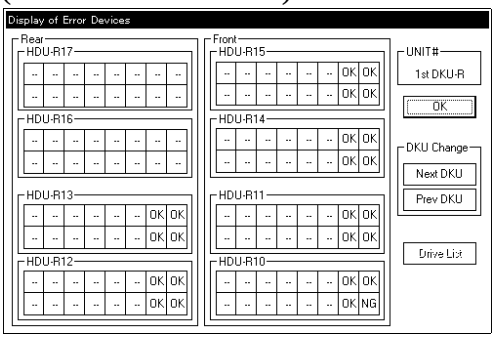


11. <Displaying the Error Devices>
In Multi Cabinet Model:
“NG” is displayed in the PDEV installing position viewed in the 1st DKU .

If you want to display other DKC, select (CL) [Next DKU] or [Prev DKU].

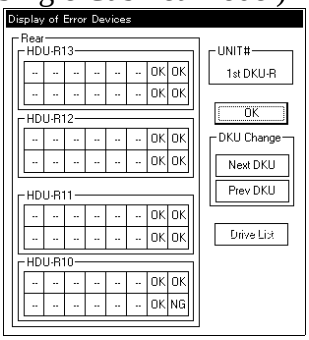
If you want to refer to more detailed information about the “NG” Pdev, select the “NG” button. Go to 13.

(Multi Cabinet Model)



In Single Cabinet Model:
If you want to refer to more detailed information about the “NG” Pdev, select the “NG” button. Go to 13.

(Single Cabinet Model)



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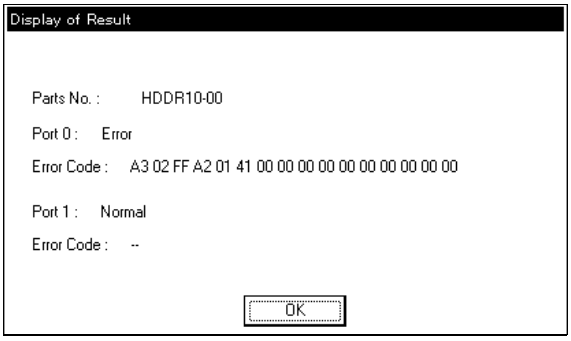
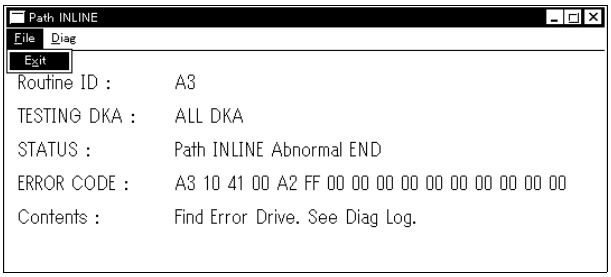
12. <Displaying the Error detail>
Select (CL) the [OK] button after 'Result' is displayed.

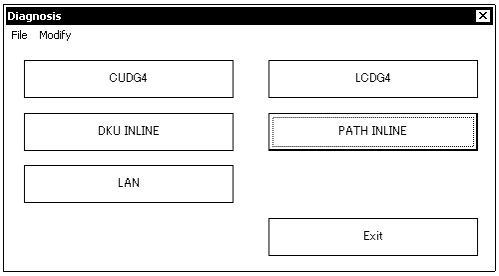


13. <DKU Path inline end>
Select (DR) [Exit] from [File].

Refer to Diag Log for detailed information.



14. <End of [Diagnosis]>
Select (CL) [Exit].



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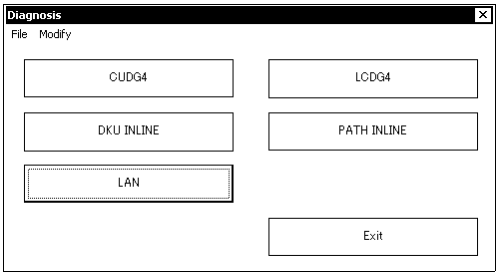
4.5 LAN Check Procedure

1. <Initial screen>

2. <Operation mode change>
   Change the mode to [Modify mode].
   Select (CL) [Diagnosis].

3. <Activating LAN...>
   Select (CL) [LAN...].
   (The screen is changed to the LAN Check menu screen.)



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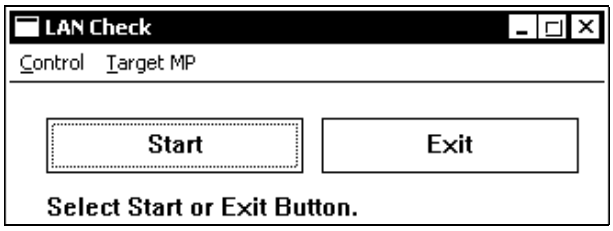
4. <Starting LAN Check>
Select (CL) [Start] in the 'LAN Check' window.



<Supplementary explanation>
Although an installed processor is set to be default to execute a hardware diagnosis, all processors can be selected.

Installed processor : Select (CL) [Target MP] and then select (DR) [Equipped MP].
All processors : Select (CL) [Target MP] and then select (DR) [All MP].

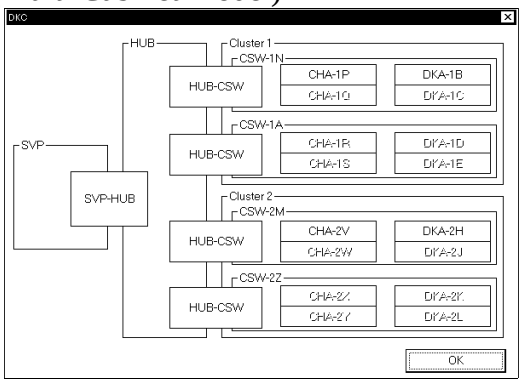
5. <Displaying Wait message>
The Wait message is displayed. The screen will change to the result display screen in a few minutes.

6. <Displaying result>

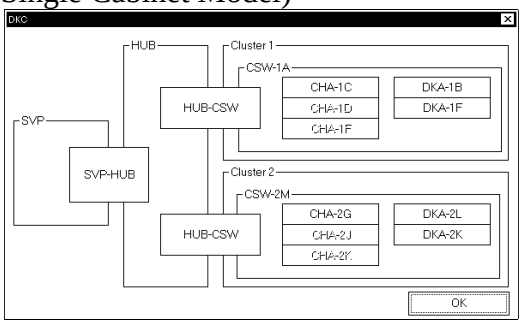
(1) Adapter status display
When the Adapter button is selected, the screen is changed to the MP status screen.
The screen is returned to the LAN Check menu screen by selecting (CL) [OK].

[Explanation on statuses]
The status is shown by the appearance of the button as follows:
Black : The test object is normal.
Blinking : The test object is abnormal.
Gray : The test object is not installed.

(Multi Cabinet Model)



(Single Cabinet Model)



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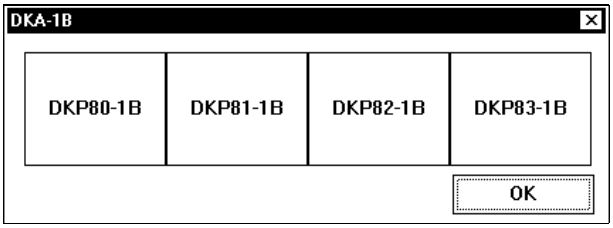
(2) MP status display

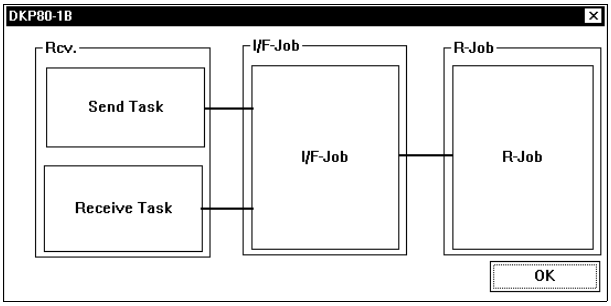


When the MP button is selected, the screen is changed to the detailed status screen.
The screen is returned to the adapter status screen by selecting (CL) [OK].

[Explanation on statuses]
The status is shown by the appearance of the MP button as follows:
Black : The concerning MP is normal.
Blinking : The test object is abnormal. However, for the MP which was normal at the time of an FF-Ping, "#" is indicated in front of the MP name.
Gray : The test object is not installed.

[Supplemental explanation]
When the test object is not installed in the state that the hardware is abnormal:
The concerning MP is indicated in gray.
When the test object is not installed in the state that the hardware is normal:
The indication of the concerning MP is grayed and blinks.
When the test object is installed by an FF-Ping:
A character "#" is indicated in front of the MP name, and the name indication blinks.
When the test object is connected by an FF-Ping but not installed:
A character "#" is indicated in front of the MP name, and the name indication is grayed and blinks.

(3) Detailed status display



Detailed information on the concerning MP is displayed.
The screen is returned to the MP status screen by selecting (CL) [OK].

[Explanation on statuses]
The test result is shown by the appearance of the Tusk button as follows:
Black : The MP is normal from the viewpoint of software.
Blinking : The blinking part has a problem.
Gray : Not diagnosed yet.

[Supplemental explanation]
There are five types of status as shown below:
When the hardware is abnormal : Rcv., I/F-JOB, and R-JOB are indicated in gray.
When the software is normal : Rcv., I/F-JOB, and R-JOB are indicated in black.
When the Rcv. is abnormal : Rcv. indication blinks, and I/F-JOB and R-JOB are indicated in gray.
When the I/F-JOB is abnormal : Rcv. is indicated in black, I/F-JOB indication blinks, and R-JOB is indicated in gray.
When the R-JOB is abnormal : Rcv. and I/F JOB are indicated in black and R-JOB indication blinks.

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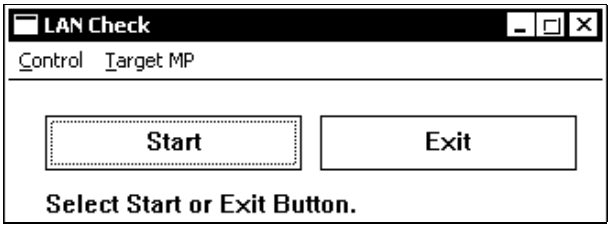
7. <Exiting from LAN Check>
   Select (CL) [Exit] in the 'LAN Check' window.



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5 DIAG Trouble shooting

5.1 CUDG Trouble shooting

Procedures of CUDG Trouble Shooting depend on CUDG Error Opportunity.
The procedures are listed in Table 5.1 CUDG Trouble shooting Types.

Table 5.1 CUDG Trouble shooting Types

CUDG Error Opportunity	CUDG Trouble shooting Types	Procedure
IMPL, CHA/DKA Replace , CHA/DKA Install	CUDG3 Trouble shooting	Following Subsection 5.1.1
CUDG4	CUDG4 Trouble shooting	Following Subsection 5.1.2
CACHE Replace , CACHE Install	INLINE CUDG Trouble shooting	Following Subsection 5.1.3

Note : If FPC is CACHE PCB or CACHE MEMORY MODULE, see Subsection 5.1.4 (DIAG05-60).

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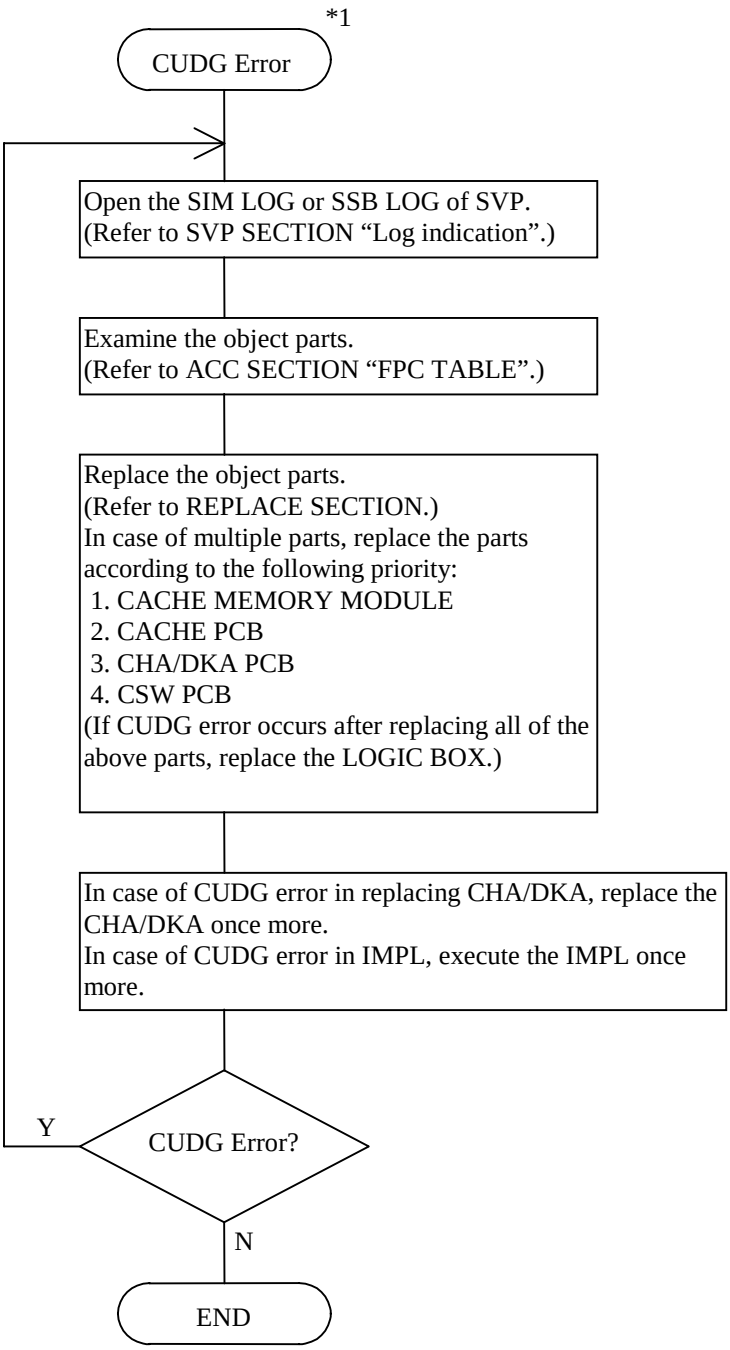
5.1.1 CUDG3 Trouble shooting



*1 CUDG Error Code is SIM REFERENCE CODE = (7601xx) or SSB ERROR CODE = (3306).
*2 See Subsection 5.1.4 (DIAG05-60).

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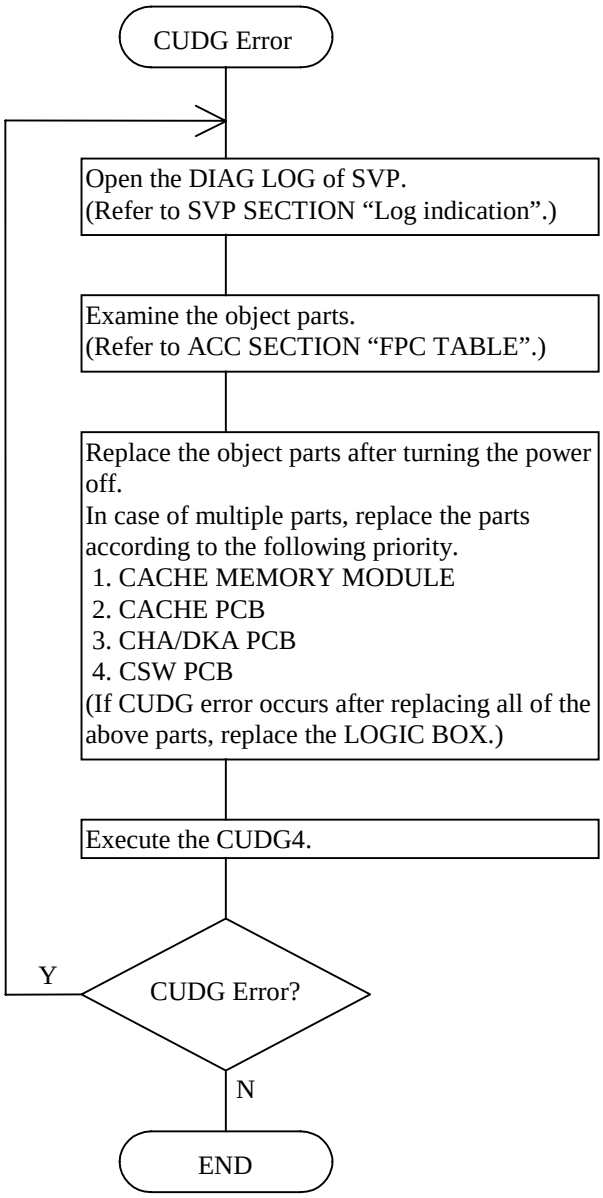
5.1.2 CUDG4 Trouble shooting



*1 See Subsection 5.1.4 (DIAG05-60).

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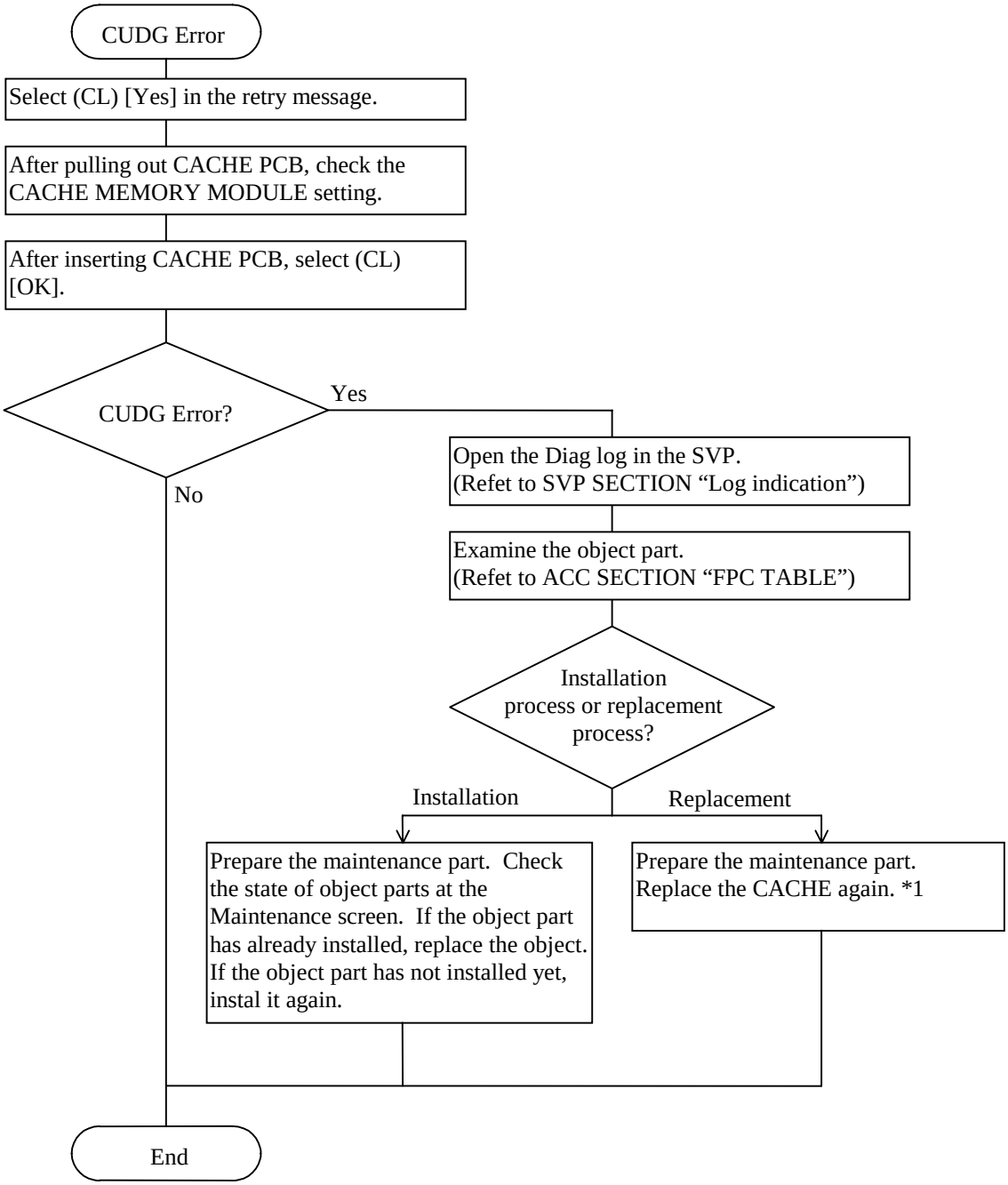
5.1.3 INLINE CUDG Trouble shooting

(1) Installation



*1 In case of multiple parts, replace the parts according to the following priority:

1. CACHE MEMORY MODULE
2. CACHE PCB
3. CHA/DKA PCB
4. CSW PCB

(If a CUDG error occurred after replacing all of the above parts, replace LOGIC BOX.)
If the error part is CACHE MEMORY MODULE/CACHE PCB, refer to Subsection 5.1.4 (DIAG05-60).

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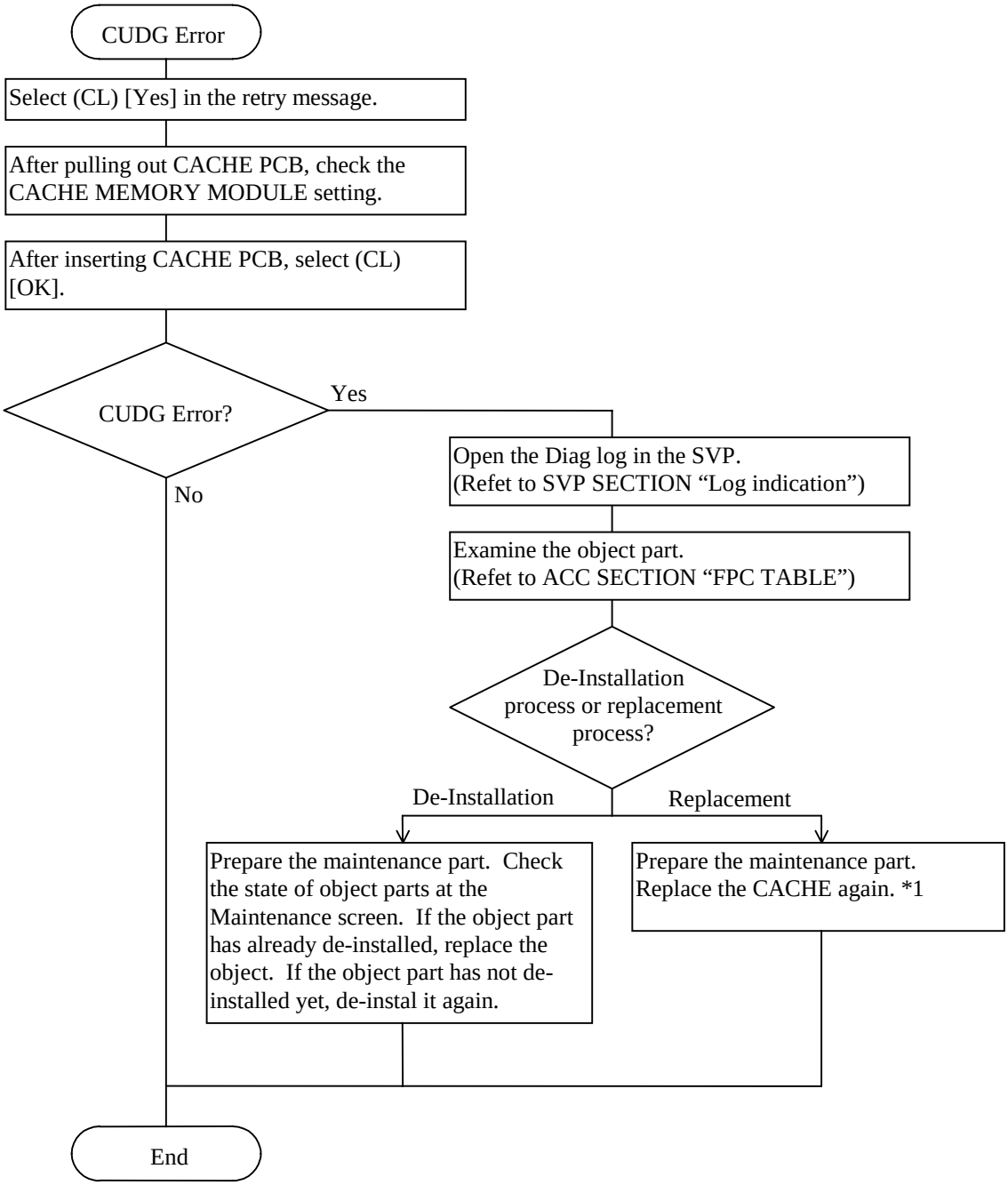
(2) De-Installation



*1 In case of multiple parts, replace the parts according to the following priority:

1. CACHE MEMORY MODULE
2. CACHE PCB
3. CHA/DKA PCB
4. CSW PCB

(If a CUDG error occurred after replacing all of the above parts, replace LOGIC BOX.)
If the error part is CACHE MEMORY MODULE/CACHE PCB, refer to Subsection 5.1.4 (DIAG05-60).

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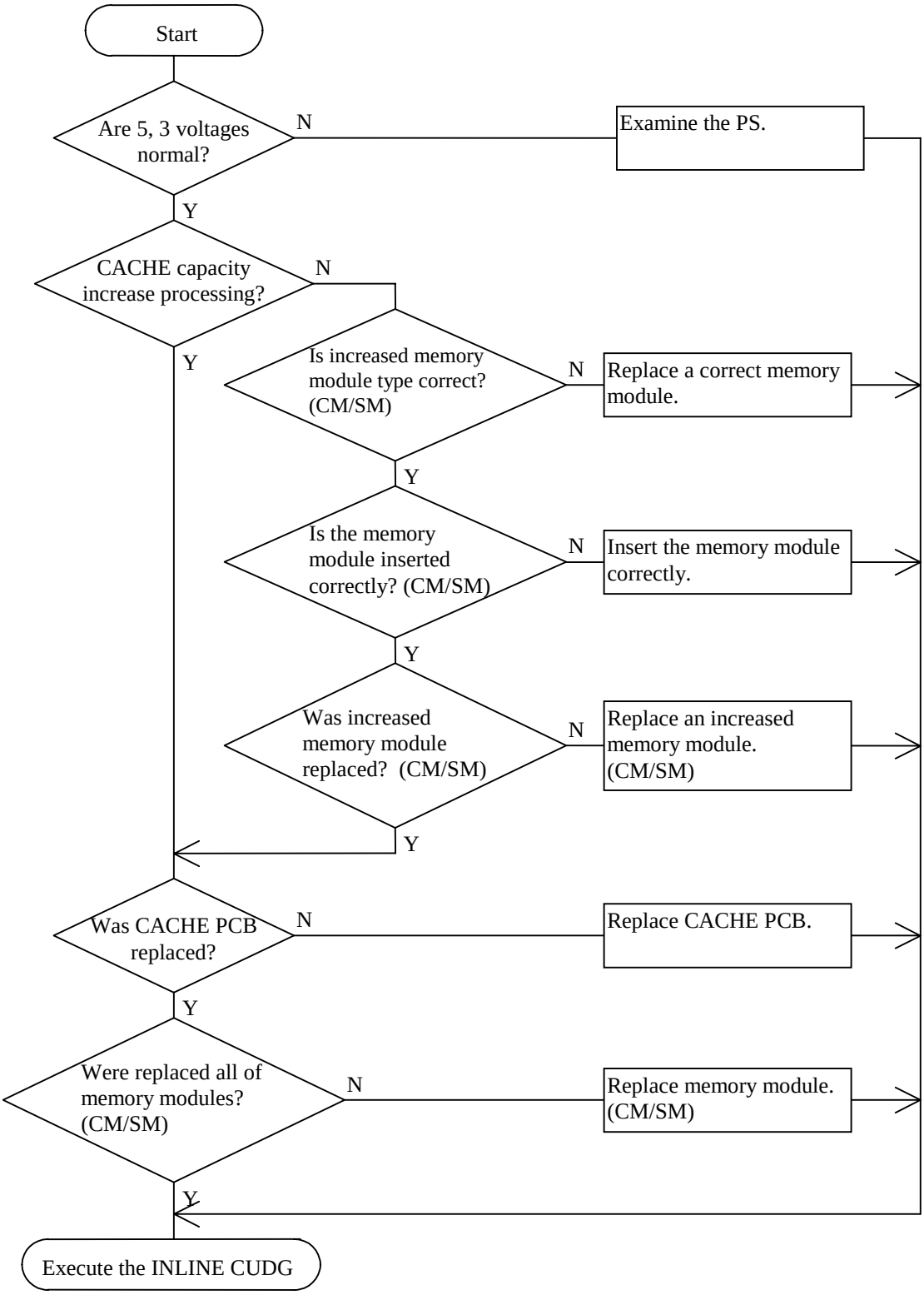
5.1.4 CACHE PCB, CACHE MEMORY MODULE Trouble shooting

If FPC is CACHE PCB, CACHE MEMORY MODULE, execute the following process.



*1 In case of multiple module groups, replace the module groups one by one.
If a CUDG error occurs after replacing the group, put them to original position.

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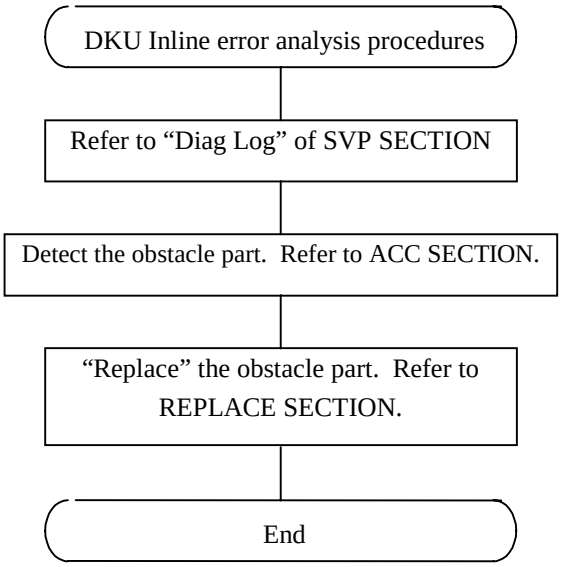
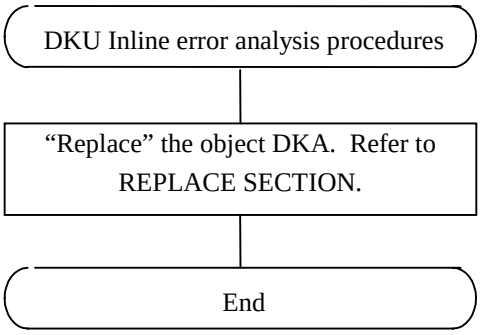
5.2 DKU INLINE Trouble shooting

Trouble shoot procedures (Except Error Code = “xx e3”)



Trouble shoot procedures (In case of Error Code = “xx e3”)



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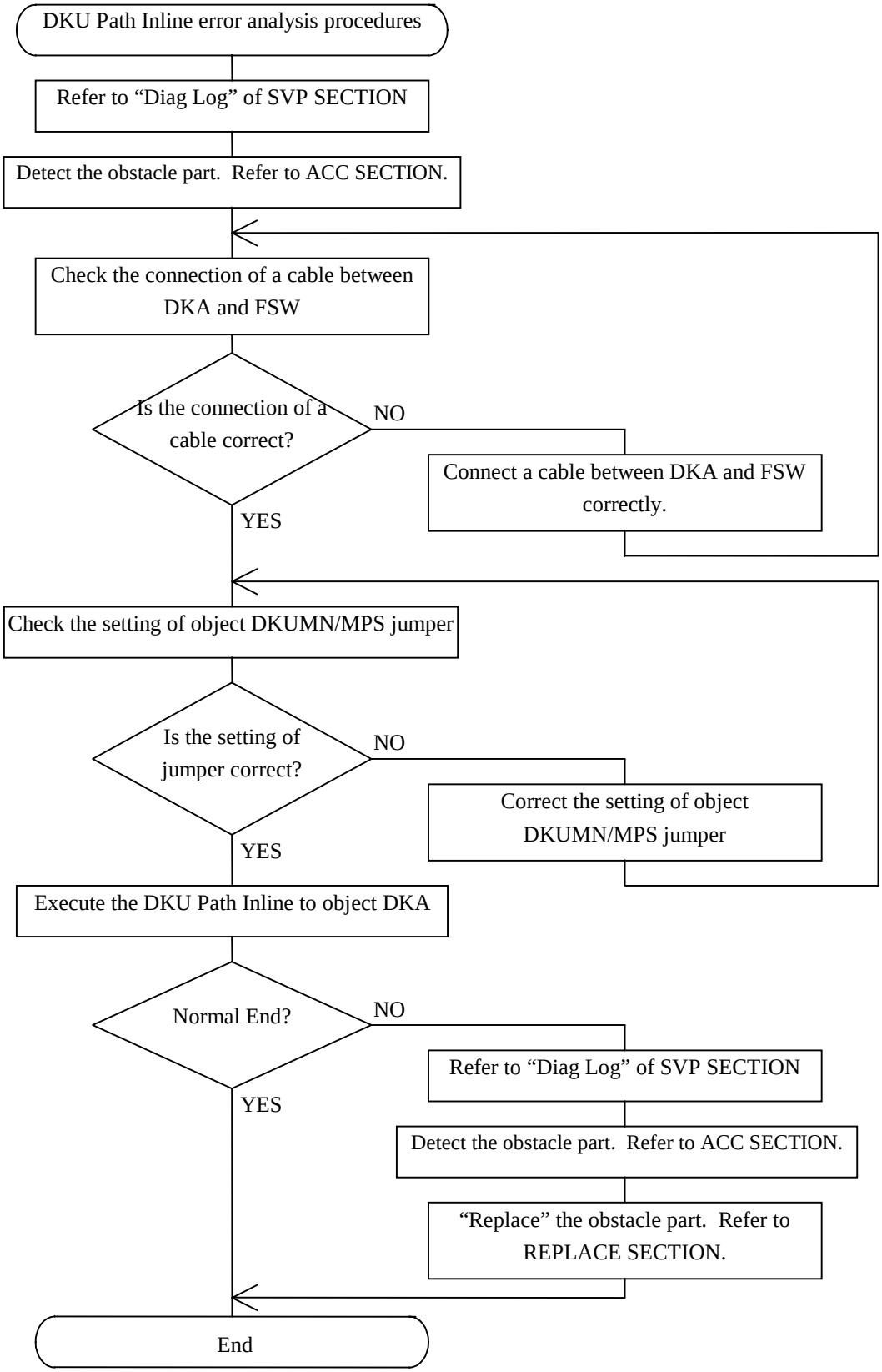
5.3 DKU PATH INLINE Trouble shooting

Trouble shoot procedures (Error Code = “ax ad”, “ax ae”, “ax 07”)



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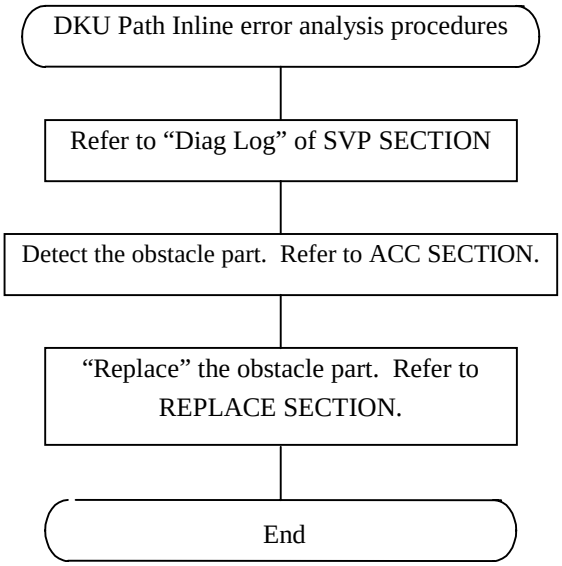
Trouble shoot procedures (Except Error Code = “ax ad”, “ax ae”, “ax 07”)



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6 DIAG Errors

6.1 DKU INLINE Error Code List

Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
XX	E0									The TEST UNIT READY command failed.
XX	E1									The FC Loop Check command failed.
XX	E2									The Reset Bypass command failed.
XX	E3									Communication of between DKC and SVP was TIME OUT.
XX	E4									Invalid SENSE KEY in TEST UNIT READY. Ev : 0x00
XX	E5									The LIP command failed.
XX	E6									The Set Bypass command failed.
XX	E8	Return Code				FC	FD			Structure Information command was failed.
XX	E9									Dku INLINE Start/End command failed.
XX	EA	Parameter from ONLINE								The specified HDD does not exist.
XX	EB									SVP error (Program Error)
XX	EC									Windows error
XX	ED									SVP error (DKC-SVP Communication)

FC: Function code FD: Function detail

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
C1	01									The TEST UNIT READY command failed.
C1	02									The REQUEST SENSE command failed.
C1	03									Invalid SENSE KEY. Ev : 0x00
C1	04									Invalid CODE-HI. Ev : 0x00
C1	05									Invalid CODE-LOW. Ev : 0x00
C1	06									The TEST UNIT READY command failed.
C1	07									The REQUEST SENSE command failed.
C1	08									Invalid SENSE KEY. Ev : 0x00
C1	09									Invalid CODE-HI. Ev : 0x00
C1	0A									Invalid CODE-LOW. Ev : 0x00
C1	0B									Invalid SENSE CODE-LOW in TEST UNIT READY. Ev : 0x00
C1	0C									Hard Error of SCSI BUFF has occurred.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
C2	01									The STOP UNIT command failed.
C2	02									The INQUIRY command failed
C2	03									The Vendor ID doesn't match.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
C3	01									The STOP UNIT command failed.
C3	02									Return Code in TEST UNIT READY Command reported 0x00000000.
C3	03									Return Code in TEST UNIT READY Command reported 0x0f001740.
C3	04									Invalid Error Factor in TEST UNIT READY failed. Ev : 0x17
C3	05									Invalid SENSE KEY in TEST UNIT READY failed. Ev : 0x02
C3	06									Invalid SENSE CODE-HI in TEST UNIT READY failed. Ev : 0x04
C3	07									Invalid SENSE CODE-LOW in TEST UNIT READY failed. Ev : 0x02
C3	08									The Delay function failed.
C3	09									The START UNIT command failed.
C3	0A									The REQUEST SENSE command failed.
C3	0B									Invalid SENSE KEY in TEST UNIT READY. Ev : 0x00
C3	0C									Invalid SENSE CODE-HI in TEST UNIT READY. Ev : 0x00
C3	0D									Invalid SENSE CODE-LOW in TEST UNIT READY. Ev : 0x00

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
C4	01									The SELF TEST command failed.
C4	02									The SELF TEST failed.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
D8	08									The TEST UNIT READY command failed.

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6.2 PATH INLINE Error Code List

Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
XX	50									Expected Data compare error in register read test.
XX	51									Expected Data compare error in register write and read test.
XX	52									Expected Data compare error in register bit test.
XX	53									Expected Data compare error in REV Check.
XX	FC	D#	P#	U#						FC cable connection error. There is the possibility of a FC cable connection mistake.

D# : DKA# P# : PORT# U# : UNIT#
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	UNIT# : 0-2
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	0 : R1-DKU 1 : R2-DKU
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	2 : R3-DKU
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	0 : L1-DKU 1 : L2-DKU
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	2 : L3-DKU
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
XX	B1									LBS_RW0 read failed in Bypass test.
XX	B2									The scsa_byenctl function failed in Bypass test.
XX	B3									BYPSEL read failed in Bypass test.
XX	B4									H_BYP read failed in Bypass test.
XX	B5									Register read failed in Bypass test.
XX	B6									Register write failed in Bypass test.
XX	B7									GEN_IO0 read failed in Bypass test.
XX	B8									GEN_IO0 write failed in Bypass test.
XX	BA									Bypass test compare error.
XX	BB									Structure Information error.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
XX	C0	D#	P#	LED						Register read failed in LED REGISTER READ TEST.
XX	C1	D#	P#	LED						Register read failed in LED REGISTER READ TEST.
XX	C2	D#	P#	LED						Register read failed in LED REGISTER WRITE and READ TEST.
XX	C3	D#	P#	LED						Register write failed in LED REGISTER WRITE and READ TEST.
XX	C4	D#	P#	LED						Register read failed in LED REGISTER WRITE and READ TEST.
XX	C5	D#	P#	LED						Register write failed in LED REGISTER WRITE and READ TEST.
XX	C6	D#	P#	LED						Register write failed in LED REGISTER WRITE and READ TEST.
XX	C7	D#	P#	LED						Register read failed in LED REGISTER WRITE and READ TEST.
XX	C9	D#	P#	LED						Register read failed in LED ERROR RESET.
XX	CA	D#	P#	LED						LBUS_ERR write failed in LED ERROR RESET.
XX	CB	D#	P#	LED						PK_STAT write failed in LED ERROR RESET.
XX	CD	D#	P#	LED						Register read failed in LED ERROR RESET.
XX	CE	D#	P#	LED						LBUS_ERR write failed in LED ERROR RESET.
XX	CF	D#	P#	LED						PK_STAT write failed in LED ERROR RESET.

D# : DKA# P# : PORT# LED : LEDSTAT
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	LEDSTAT
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	Bit09 : DKU Status Error Bit10 : ACK Error
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	Bit11 : Status Parity Error Bit12 : Read Data Parity Error
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	Bit13 : DKU Output Error Bit14 : Read Busy
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	Bit15 : Write Busy
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
XX	D0	D#	P#	LED						LBS_PADR read failed in ADDRESS CHECK.
XX	D1	D#	P#	LED						PKCTRL read failed in ADDRESS CHECK.
XX	D2	D#	P#	LED						PK_STAT read failed in ADDRESS CHECK.
XX	D3	D#	P#	LED						REV read failed in REV CHECK.
XX	D4	D#	P#	LED						RWO read succeeded in FORCE-ERROR TEST 1.
XX	D6	D#	P#	LED						RWO read succeeded in FORCE-ERROR TEST 1.
XX	D8	D#	P#	LED						LFORCE_ERR write failed in INT SIGNAL TEST.
XX	D9	D#	P#	LED						INT SIGNAL isn't output.
XX	DA	D#	P#	LED						LFORCE_ERR write failed in INT SIGNAL TEST.
XX	DB	D#	P#	LED						INT SIGNAL is output.
XX	DC	D#	P#							The FSW Shut Down LED is on. Extraction and insertion of a FSW has a possibility of not carrying out.
XX	DD	D#	P#	LED						DKULBSERR wasn't output in LED FORCE-ERROR TEST.
XX	DE	D#	P#	LED						PKCTRL read failed in pretreatment.
XX	DF	D#	P#	LED						PKCTRL write failed in pretreatment.

D# : DKA# P# : PORT# LED : LEDSTAT
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	LEDSTAT
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	Bit09 : DKU Status Error Bit10 : ACK Error
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	Bit11 : Status Parity Error Bit12 : Read Data Parity Error
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	Bit13 : DKU Output Error Bit14 : Read Busy
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	Bit15 : Write Busy
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
XX	E0									The TEST UNIT READY command failed.
XX	E1									The RESET CE MODE cannot be done.
XX	E2									The configuration information acquisition command failed.
XX	E3									Communication of between DKC and SVP was TIME OUT.
XX	E4									Communication of between DKC and SVP failed.
XX	E5									Invalid SENSE CODE-HI in TEST UNIT READY. Ev : 0x00
XX	E6									Invalid SENSE CODE-LOW in TEST UNIT READY. Ev : 0x00
XX	E8	Return Code				FC	FD			Structure Information command failed.
XX	E9									The SET CE MODE cannot be done.
XX	EA	Parameter from ONLINE								The specified HDD does not exist.
XX	EB									SVP error (Program Error)
XX	EC									Windows error
XX	ED									SVP error (DKC-SVP Communication)

FC: Function code FD: Function detail

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A0	01									FC cable information read command failed.
A0	02									Bypass check command failed.
A0	03									The INQUIRY command didn't fail.
A0	04									Reset Bypass command failed.
A0	05									The INQUIRY command failed.
A0	06									The Vender ID doesn't match.
A0	07									PORT mistake. There is the possibility of a FC cable connection mistake.
A0	08									The LIP command failed.
A0	1X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in a part of the PATH.
A0	2X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in all the PATH.
A0	AD	D#								Invalid LED BUS address data. (Note3)
A0	AE	D#	P#	U#	EV (Note2)		RV			Invalid LED BUS address data. (Note3)

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(1-3)S : PORT#(1-3) report (FF : Normal, Not FF : Abnormal)
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	LEDSTAT
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	Bit09 : DKU Status Error Bit10 : ACK Error
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	Bit11 : Status Parity Error Bit12 : Read Data Parity Error
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	Bit13 : DKU Output Error Bit14 : Read Busy
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	Bit15 : Write Busy
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

(Note2) Refer to DKA Path Address mapping (DIAG06-200 ~ 280) for Expected Value.

(Note3) There is the possibility of a LED cable connection mistake or a jumper setting mistake of DKUMN/MPS.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A1	01									FC cable information read command failed.
A1	02									Bypass check command failed.
A1	03									The INQUIRY command didn't fail.
A1	04									Reset Bypass command failed.
A1	05									The INQUIRY command failed.
A1	06									The Vender ID doesn't match.
A1	07									PORT mistake. There is the possibility of a FC cable connection mistake.
A1	08									The LIP command failed.
A1	1X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in a part of the PATH
A1	2X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in all the PATHs.
A1	AD	D#								Invalid LED BUS address data. (Note3)
A1	AE	D#	P#	U#	EV (Note2)		RV			Invalid LED BUS address data. (Note3)

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(1-3)S : PORT#(1-3) report (FF : Normal, Not FF : Abnormal)
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	LEDSTAT
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	Bit09 : DKU Status Error Bit10 : ACK Error
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	Bit11 : Status Parity Error Bit12 : Read Data Parity Error
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	Bit13 : DKU Output Error Bit14 : Read Busy
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	Bit15 : Write Busy
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

(Note2) Refer to DKA Path Address mapping (DIAG06-200 ~ 280) for Expected Value.

(Note3) There is the possibility of a LED cable connection mistake or a jumper setting mistake of DKUMN/MPS.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A2	01									Set Bypass command failed (Multi HDD).
A2	02									Reset Bypass command failed (Single HDD).
A2	03									LIP command failed (Single HDD).
A2	04									Inquiry command failed.
A2	05									Set Bypass command failed (Single HDD).
A2	06									Reset Bypass command failed (Multi HDD).
A2	07									LIP command failed (Multi HDD).
A2	08									Start-Diag command failed.
A2	09									End-Diag command failed.
A2	10									ERROR DRIVE exists. (Refer to the Diag Log for details.)

D# : DKA# P# : PORT# U# : UNIT#

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A3	01									The Drive Read command failed.
A3	02									The Drive Read failed.
A3	10									ERROR DRIVE exists.

D# : DKA# P# : PORT# U# : UNIT#

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A4	01									FC cable information read command failed.
A4	02									FC cable abstention indication command failed.
A4	03									The INQUIRY command didn't fail.
A4	04									FC cable entry indication command didn't fail.
A4	05									The INQUIRY command failed.
A4	06									The Vender ID doesn't match.
A4	07									PORT mistake. There is the possibility of a FC cable connection mistake.
A4	08									The LIP command failed.
A4	1X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in a part of the PATH
A4	2X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in all the PATHs.
A4	AD	D#								Invalid LED BUS address data. (Note3)
A4	AE	D#	P#	U#	EV (Note2)		RV			Invalid LED BUS address data. (Note3)

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(1-3)S : PORT#(1-3) report (FF : Normal, Not FF : Abnormal)
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	LEDSTAT
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	Bit09 : DKU Status Error Bit10 : ACK Error
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	Bit11 : Status Parity Error Bit12 : Read Data Parity Error
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	Bit13 : DKU Output Error Bit14 : Read Busy
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	Bit15 : Write Busy
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

(Note2) Refer to DKA Path Address mapping (DIAG06-200 ~ 280) for Expected Value.

(Note3) There is the possibility of a LED cable connection mistake or a jumper setting mistake of DKUMN/MPS.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A5	01									FC cable information read command failed.
A5	02									Bypass check command failed.
A5	03									The INQUIRY command didn't fail.
A5	04									Reset Bypass command failed.
A5	05									The INQUIRY command failed.
A5	06									The Vender ID doesn't match.
A5	07									PORT mistake. There is the possibility of a FC cable connection mistake.
A5	08									The LIP command failed.
A5	1X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in a part of the PATH
A5	2X	D#	P0S	P1S	P2S	P3S				Obstruction occurred in all the PATH.
A5	AD	D#								Invalid LED BUS address data. (Note3)
A5	AE	D#	P#	U#	EV (Note2)		RV			Invalid LED BUS address data. (Note3)

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(1-3)S : PORT#(1-3) report (FF : Normal, Not FF : Abnormal)
(Note1)

(Note1) DKA#, PORT#, UNIT# mapping

DKA# : 0-7	PORT# : 0-3	LEDSTAT
0 : DKF-1B (DKF-1B)	0 : HDU-R10, R20, R30 (HDU-0) 1 : HDU-R11, R21, R31 (HDU-1)	Bit09 : DKU Status Error Bit10 : ACK Error
4 : DKF-2H (DKF-2L)	2 : HDU-R12, R22, R32 (HDU-2) 3 : HDU-R13, R23, R33 (HDU-3)	Bit11 : Status Parity Error Bit12 : Read Data Parity Error
1 : DKF-1C (DKF-1F)	0 : HDU-R14, R24, R34 (HDU-0) 1 : HDU-R15, R25, R35 (HDU-1)	Bit13 : DKU Output Error Bit14 : Read Busy
5 : DKF-2J (DKF-2K)	2 : HDU-R16, R26, R36 (HDU-2) 3 : HDU-R17, R27, R37 (HDU-3)	Bit15 : Write Busy
2 : DKF-1D	0 : HDU-L10, L20, L30 1 : HDU-L11, L21, L31	
6 : DKF-2K	2 : HDU-L12, L22, L32 3 : HDU-L13, L23, L33	
3 : DKF-1E	0 : HDU-L14, L24, L34 1 : HDU-L15, L25, L35	
7 : DKF-2L	2 : HDU-L16, L26, L36 3 : HDU-L17, L27, L37	

( ): Single Cabinet Model

(Note2) Refer to DKA Path Address mapping (DIAG06-200 ~ 280) for Expected Value.

(Note3) There is the possibility of a LED cable connection mistake or a jumper setting mistake of DKUMN/MPS.

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Notes: Replace Error Code on Diagnosis Log of SVP Information since the 8th Byte and after of the Detail Information Byte correspond to Byte 01 and after of Error Byte.

Error Byte										Contents
01	02	03	04	05	06	07	08	09	10	
A8	01	Return Code								Set Bypass command failed (Multi HDD).
A8	02	Return Code								Reset Bypass command failed (Multi HDD).
A8	03	Return Code								LIP command failed (Multi HDD).
A8	04	Return Code								Reset Bypass command failed (Single HDD).
A8	05	Return Code								LIP command failed (Single HDD).
A8	06	Return Code								Set Bypass command failed (Single HDD).
A8	07	Return Code								Drive Read command failed.
A8	08	Return Code								Inquiry command failed.
A8	0A	Return Code								Reset Bypass command failed in Through Path Test.
A8	0B	Return Code								LIP command failed in Through Path Test.
A8	0C	Return Code								Drive Read command failed in Through Path Test.
A8	0D	Return Code								Set Bypass command failed in Through Path Test.
A8	10									Detected Error Drive.

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(A) Error Bit definition

bit 0															bit 15
Rsv	PA6	PA5	PA4	PA3	PA2	PA1	PA0	SA00	SA10	SA20	Term	SA01	SA11	SA21	Rsv

Rsv : Reserve (0)
PA4, 5, 6 : HDD P/L number
PA1, 2, 3 : DKU housing number
PA0 : CL number '0': CL2 PATH / '1': CL1 PATH
SA00 : SELA0 = FSW P/K LSI select (Basic LSI : 1)
SA10, 20 : SELID0, 1 = Basic LSI cable connect number
(0,0) = 4th, (0,1) = 3rd, (1,0) = 2nd, (1,1) = 1st
SA01 : SELA0 = FSW P/K LSI select (Extended LSI : 0)
SA11, 21 : SELID0, 1 = Extended LSI cable connect number
Term : Terminator

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(B) LED BUS Address (Expected Value)

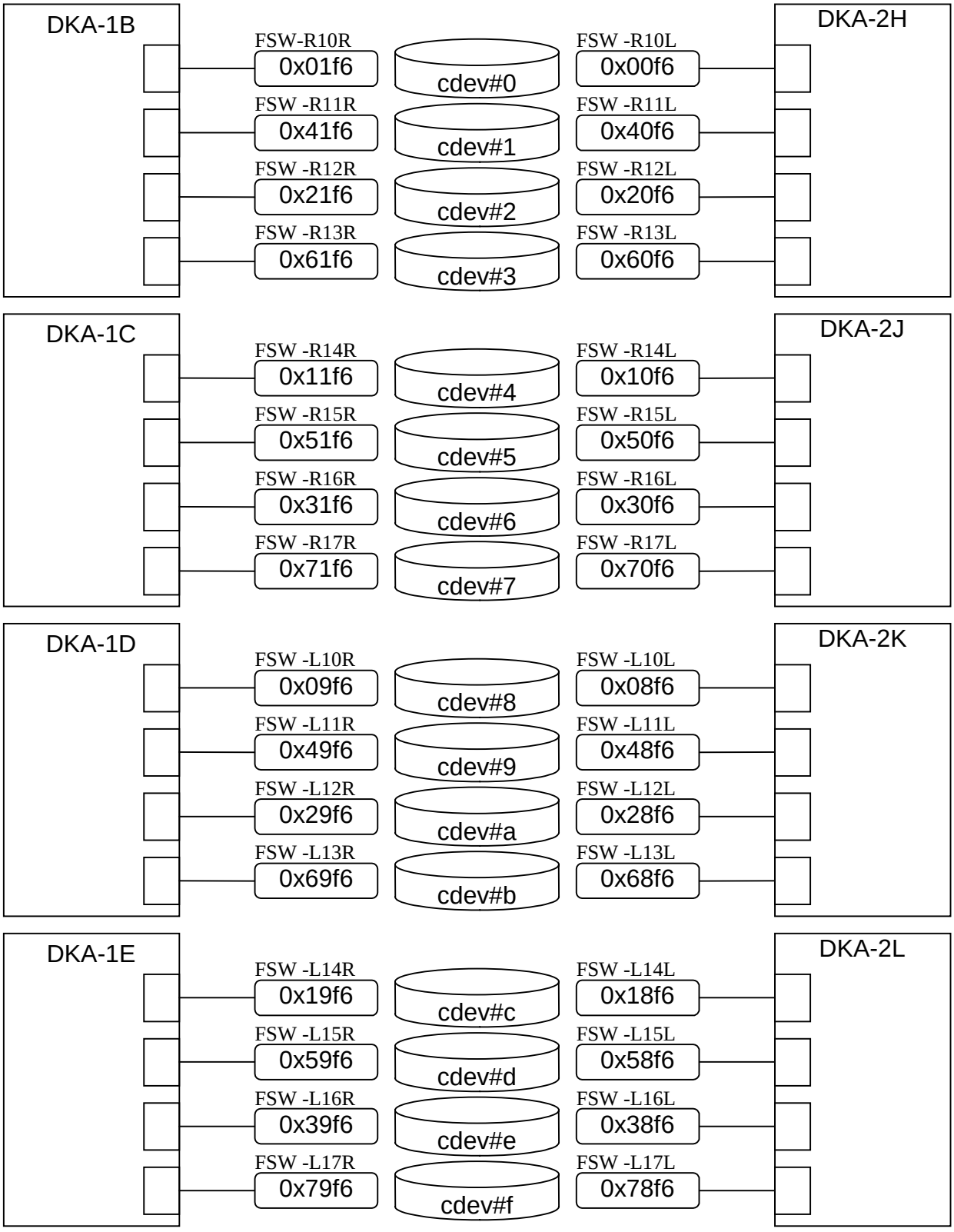

Fig. 6.2-1 DKA Path Address mapping
(Raid400-Connection : No Extended Unit : Basic Unit)

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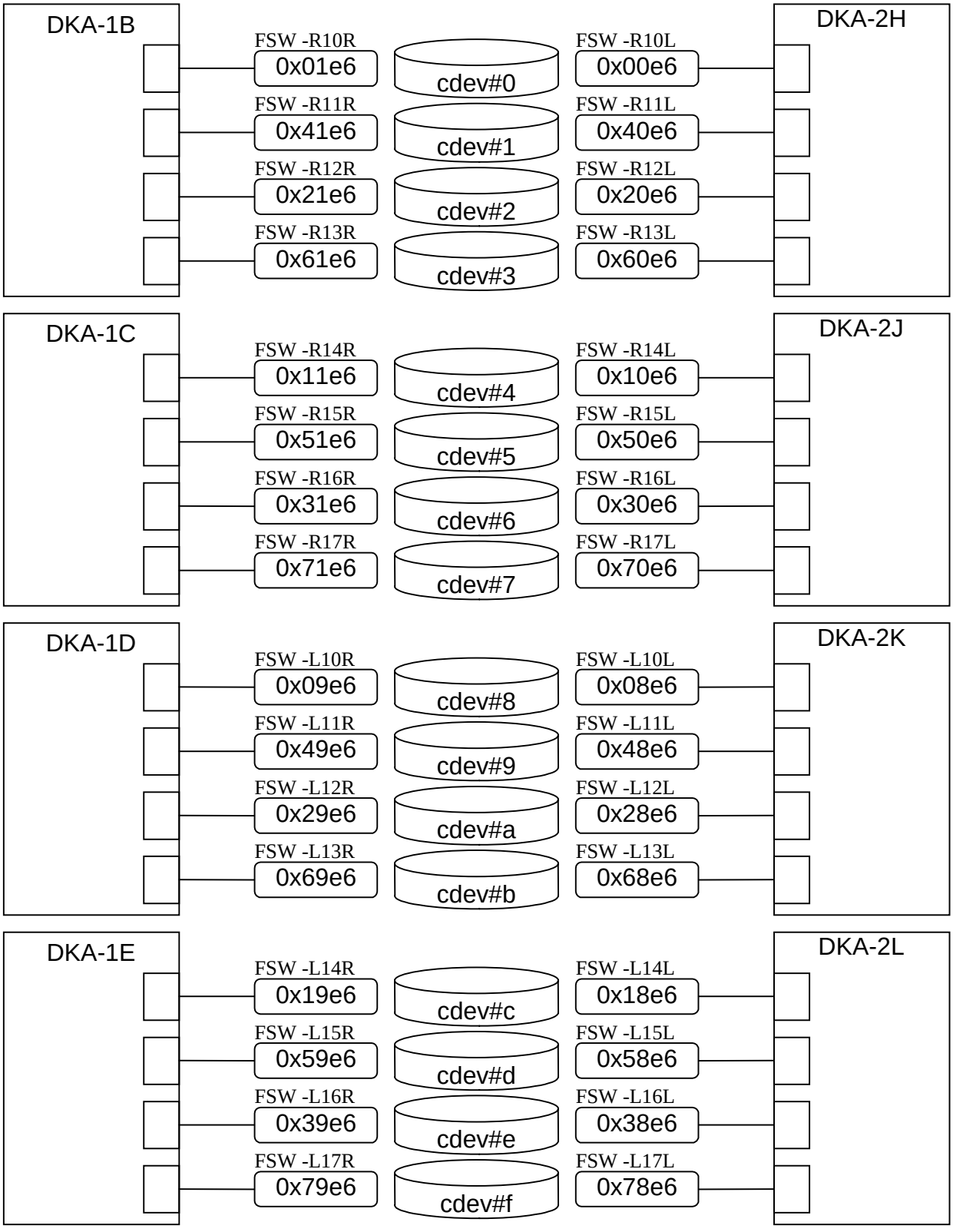

Fig. 6.2-2 DKA Path Address mapping
(Raid400-Connection : Equipped Extended Unit : Basic Unit)

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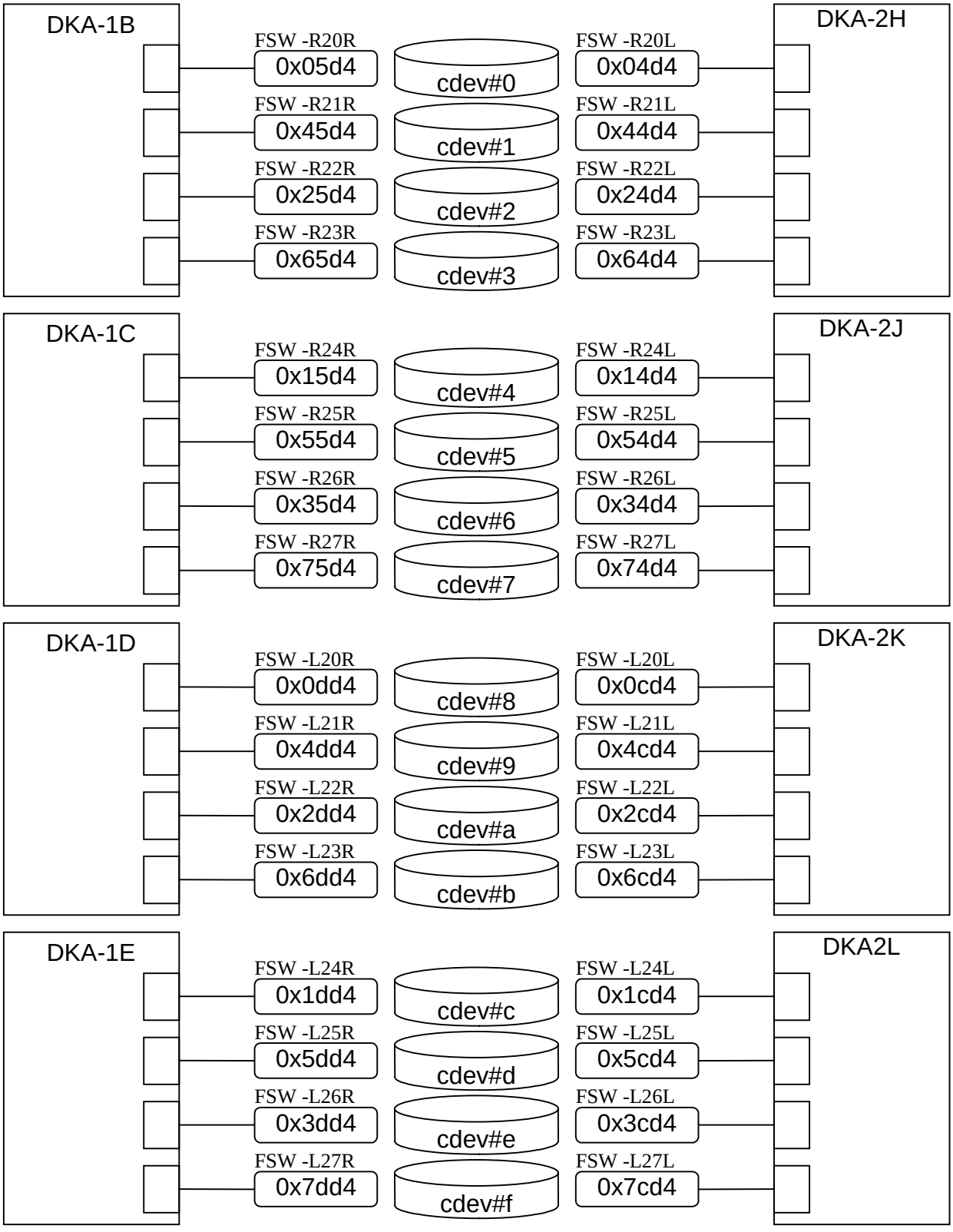

Fig. 6.2-3 DKA Path Address mapping
(Raid400-Connection : No Extended Unit 2 : Extended Unit 1)

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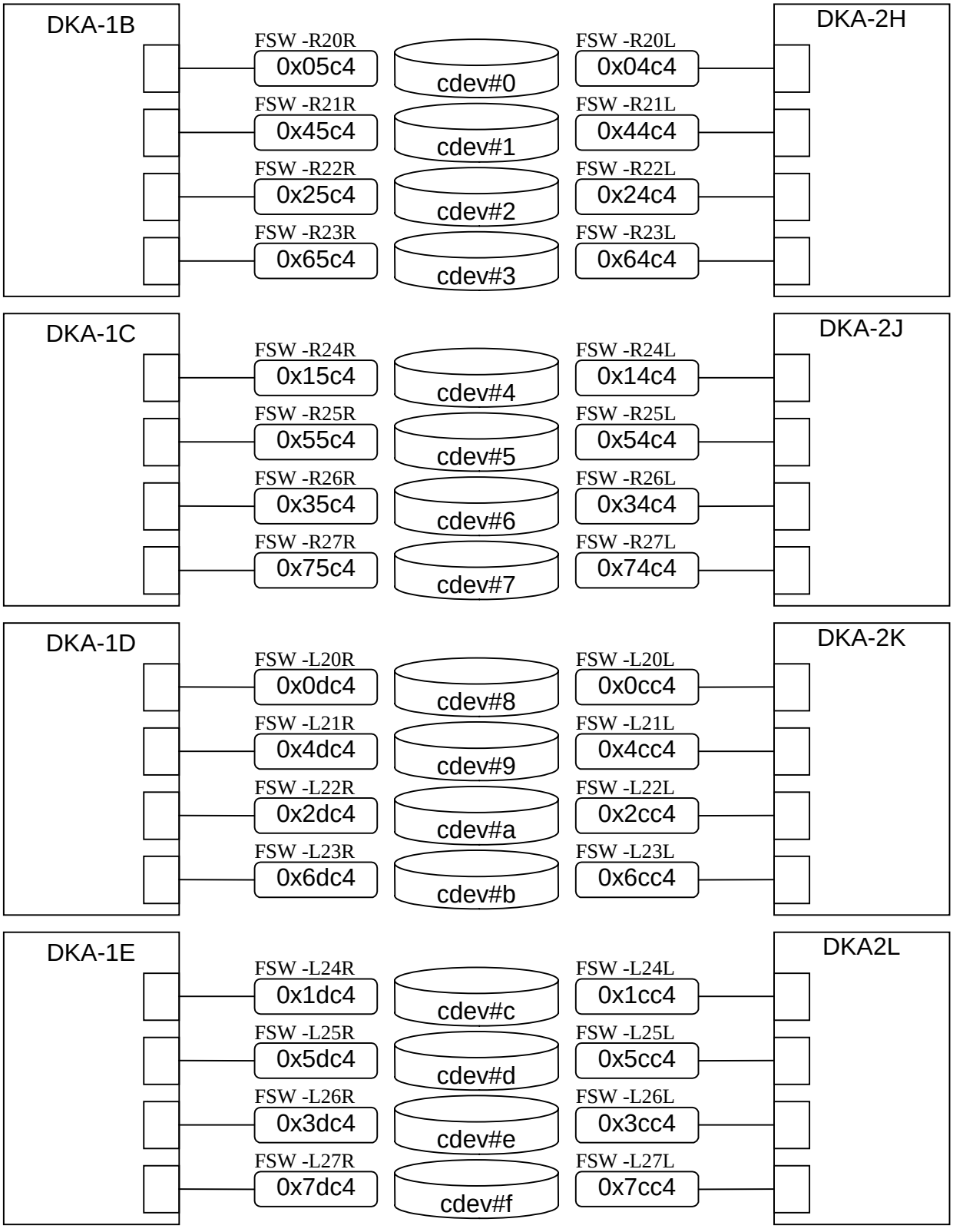

Fig. 6.2-4 DKA Path Address mapping
(Raid400-Connection : Equipped Extended Unit 2 : Extended Unit 1)

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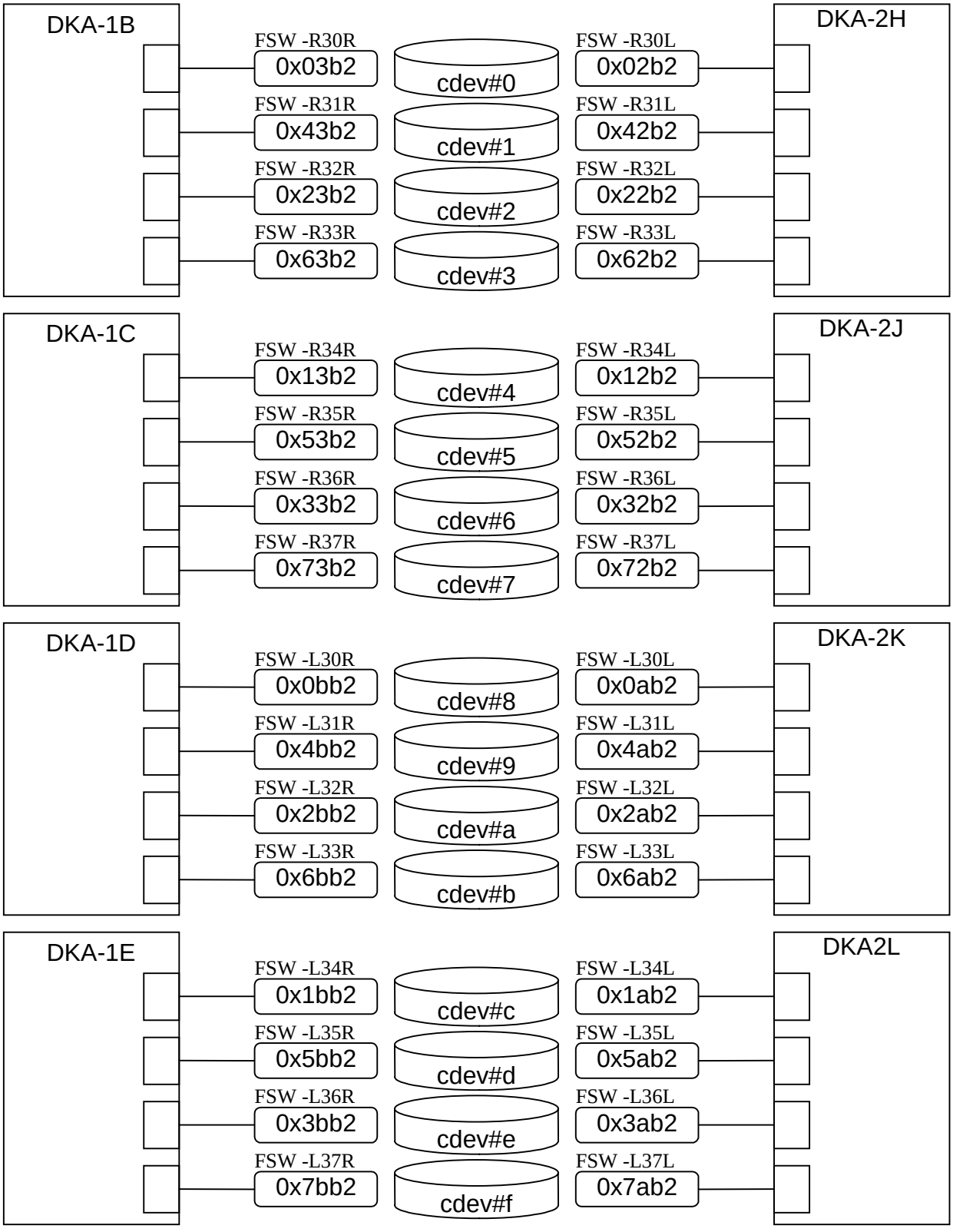

Fig. 6.2-5 DKA Path Address mapping
(Raid400-Connection : Extended Unit 2)

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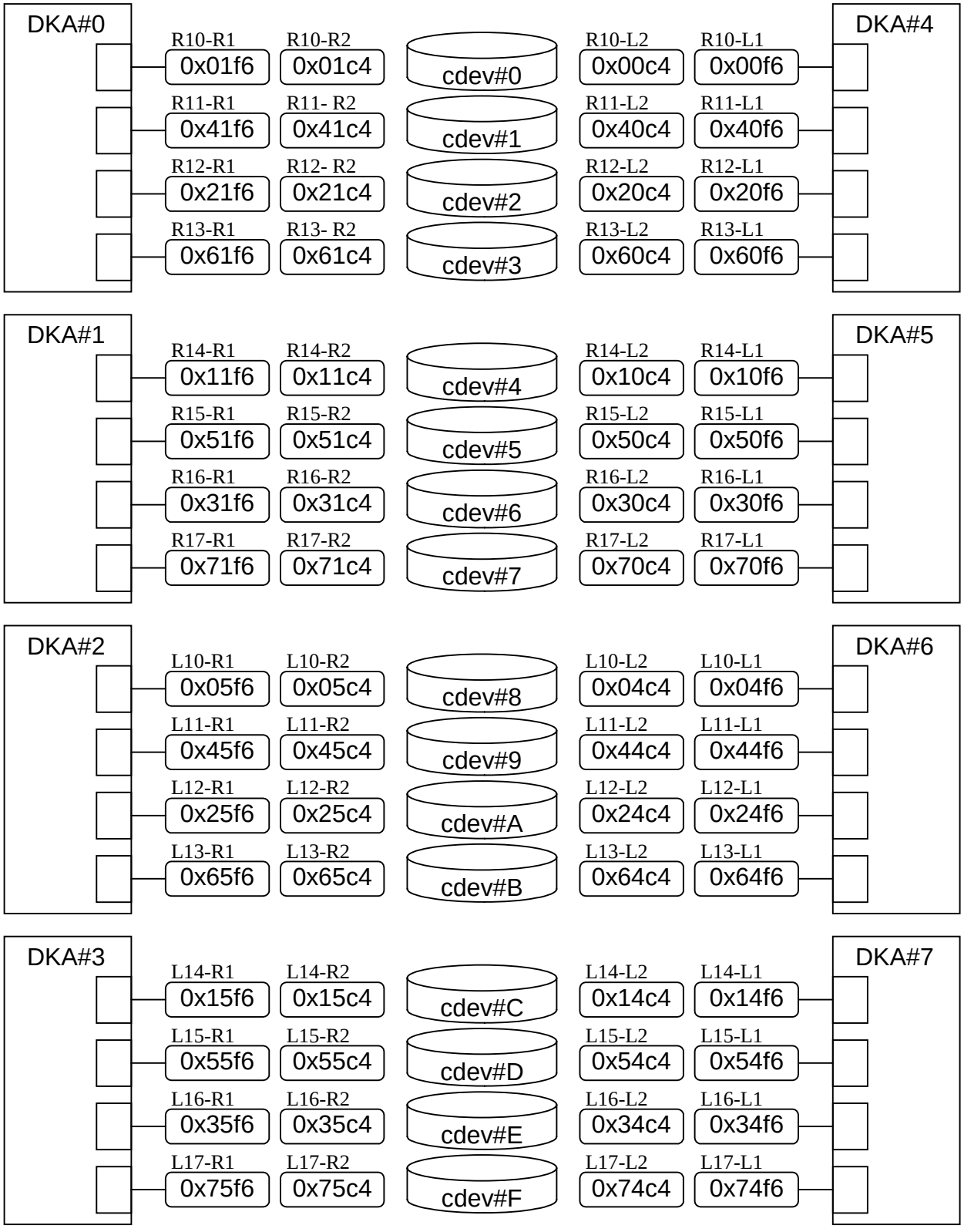

Fig. 6.2-6 DKA Path Address mapping
(Raid450-Connection : No Extended Unit : Basic Unit)

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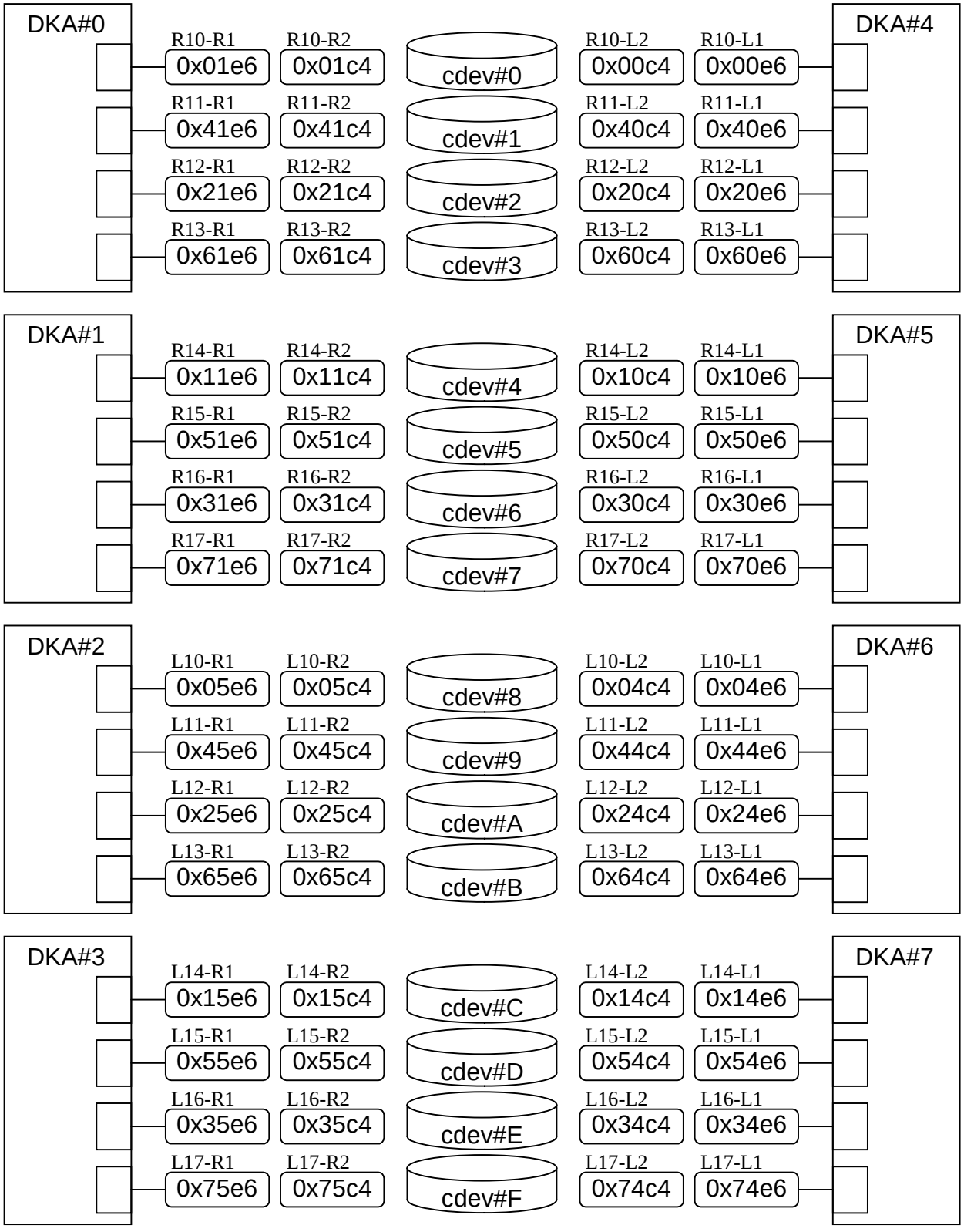

Fig. 6.2-7 DKA Path Address mapping
(Raid450-Connection : Equipped Extended Unit : Basic Unit)

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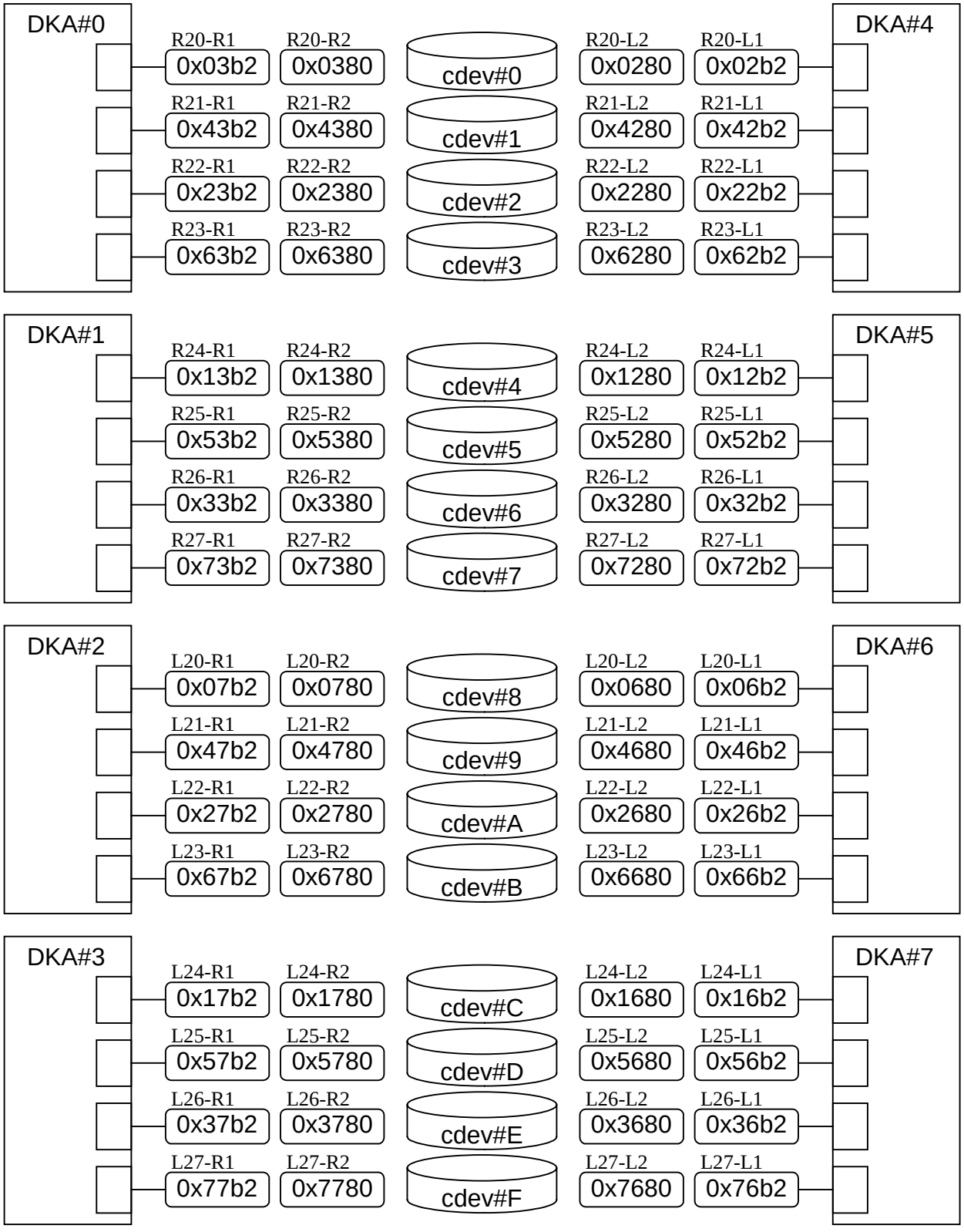

Fig. 6.2-8 DKA Path Address mapping
(Raid450-Connection : Extended Unit)

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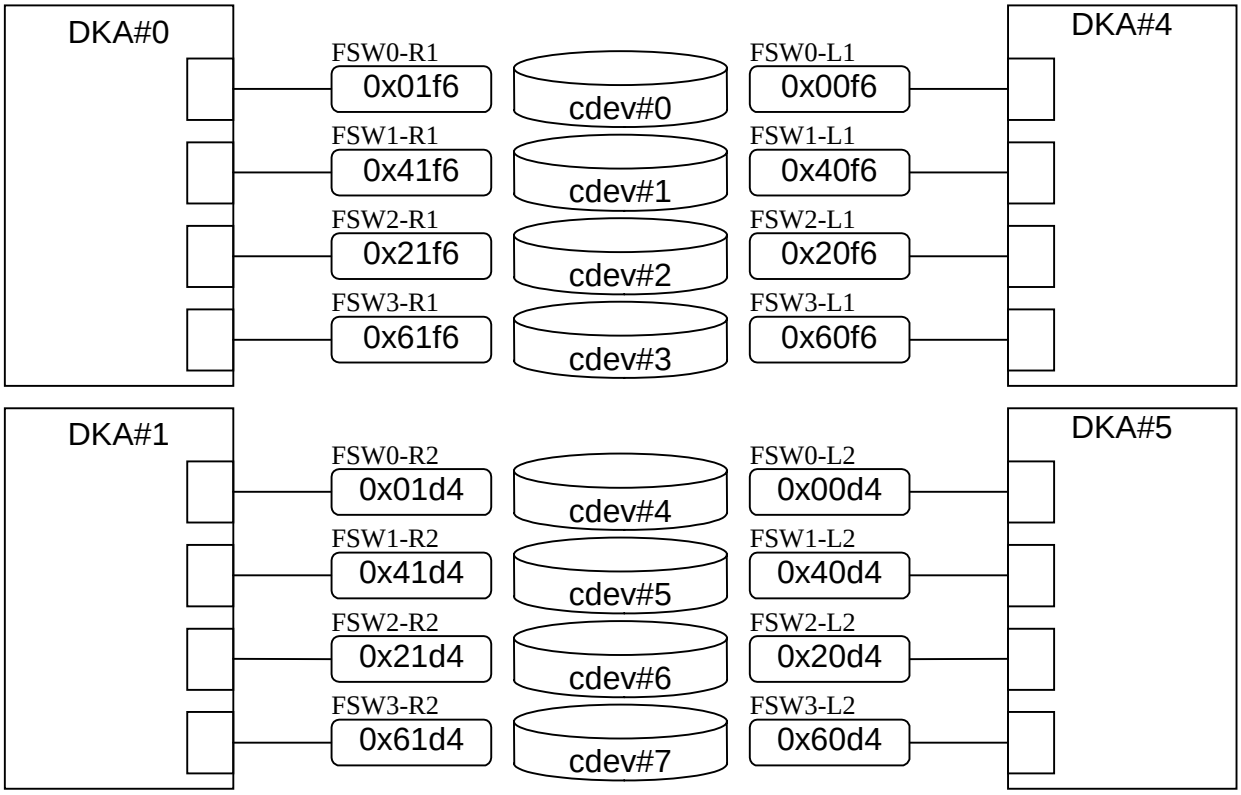

Fig. 6.2-9 DKA Path Address mapping (Single Cabinet Model 2 Pair)

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6.3 CUDG error code list

LSI classification	Test Item	Error Code	Error Contents
CMA	0101		Register R/W Test. (Common Part)
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0040	CHK2 Error occurred.
		0001	Data Compare Error occurred.
	0102		Memory R/W Test (A)
		8000	Error occurred in Memory Read.
		4000	Error occurred in Memory Write.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0103		Memory R/W Test (B)
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		8000	Memory Read Error occurred.
		4000	Memory Write Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0104		General Memory Test (A)(Write Activation Part)
		1000	Error occurred in Register Write.
		0040	CHK2 Error occurred.
	0105		General Memory Test (A)(Polling Part)
		2000	Error occurred in Register Read.
		0004	Polling Time Out.
		0040	CHK2 Error occurred.
	0106		General Memory Test (A)(Status Confirmation Part after Write)
		2000	Error occurred in Status Confirmation Register Read.
		0001	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0107		General Memory Test (A)(Read Activation Part)
		1000	Error occurred in TESTADRH/L Write.
		0040	CHK2 Error occurred.
	0108		General Memory Test (A)(Status Confirmation Part after READ)
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Uncorrectable or Correctable Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0109		General Memory Test (A)(Write Activation Part)
		1000	Error occurred in Register Write.
		0040	CHK2 Error occurred.
	010a		General Memory Test (A)(Polling Part)
		2000	Error occurred in Register Read.
		0004	Polling Time Out.
		0040	CHK2 Error occurred.
	010b		General Memory Test (A)(Status Confirmation Part after Write)
		2000	Error occurred in Register Read.
		0001	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	010c		General Memory Test (A)(Read Activation Part)
		1000	Error occurred in TESTADRH/L Write
		0040	CHK2 Error occurred.
	010d		General Memory Test (A)(Status Confirmation Part after Read)
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Uncorrectable or Correctable Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	010e		ECC Circuit Test. (A)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
	010f		ECC Circuit Test. (B)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0110		ECC LOG Register Test
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
	0111		SLRC Test
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0112		Force Error Test (A)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0113		Force Error Test (B)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.
	0114		Self-refresh (Write Activation Part)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0115		Self-refresh (Polling Part)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0116		Self-refresh (Status Confirmation Part after Write)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0117		Self-refresh (Read Activation Part)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0118		Self-refresh (Status Confirmation Part after Read)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0119		Self-refresh (set/reset)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	011a		PD Check.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	011b		PROM Test.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	011c		GTL Impedance Control.
		2000	Error occurred in Register Read.
		0001	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	011d		Register W/R.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	011e		Timer Count Up Test.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	011f		Timer Count Reset Test.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0120		Force Error Test. (A)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0121		Force Error Test. (B)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0122		FIFO Memory Test.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
	0123		Normal Packet Access. (dw)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
	0124		Normal Packet Access. (bcp)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		0200	Cache to Copy Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0125		Normal Packet Access.(icp)
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		0400	Cache in Copy Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
	0126		Retry Function Confirmation Test.
		2000	Error occurred in Register Read.
		1000	Error occurred in Register Write.
		0001	Data Compare Error occurred.
		0002	Data Compare Error occurred.
		0040	CHK2 Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0168		Force Error Generating Check Test. (Group C-1)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		3000	Register Read/Write Error occurred.
		0001	Register Compare Error occurred.
	0169		Force Error Generating Check Test. (Group C-2)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		3000	Register Read/Write Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.
	016a		Force Error Generating Check Test. (Group A)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		3000	Register Read/Write Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.
	016b		Force Error Generating Check Test. (Group B)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.
	016c		Force Error Generating Check Test. (Group C)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		3000	Register Read/Write Error occurred.
		4000	Memory Write Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	016d		Force Error Generating Check Test. (Group D)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		3000	Register Read/Write Error occurred.
		4000	Memory Write Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.
	016e		Force Error Generating Check Test. (Group E)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.
	016f		Force Error Generating Check Test. (Group F)
		0040	CHK2 Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		3000	Register Read/Write Error occurred.
		4000	Memory Write Error occurred.
		C000	Memory Read/Write Error occurred.
		0001	Register Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0190		ACCKEY/CUDGKEY Setting Check Test.
		0100	Data Compare Error occurred.
		0110	Parameter Error occurred.
		0120	Transmission Mode Error occurred.
		0200	Status Compare Error occurred.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
		0040	CHK2 Error occurred.
	0191		SHUT UP Control Check Test.
		0100	Data Compare Error occurred.
		1000	SHUT UP Test Error occurred.
		0040	CHK2 Error occurred.
	0192		SPROM Force Error Test
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0193		Memory Address Logging Test
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		8000	Memory Read Error occurred.
		00fd	Timeout Errorr occurred.
		0100	Data Compare Error occurred.
		0200	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	0194		Memory capacity setting check test
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
		00fd	Timeout Errorr occurred.
		0100	Data Compare Error occurred.
		0200	Status Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CMA	0195		between modules write/read test.
		1000	Register Write Error occurred.
		2000	Register Read Error occurred.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0201		SM Normal Access Test.
		0100	Write/Read un-match Error occurred of Test area.
		0040	CHK3 Error occurred.
	0202		SM Resources Lock Access Test.
		0100	Write/Read un-match Error occurred at 2 word of Test area.
		0040	CHK3 Error occurred.
	0203		Atomic Access Test.
		0040	CHK3 Error occurred.
		0100	Write/Read un-match Error occurred of Test area.
	0204		Resources Lock Out Test.
		0040	CHK3 Error occurred.
		0100	Write/Read un-match Error occurred of Test area.
	0205		Target Broadcast Test.
		0100	Broadcast Register Data un-match Error occurred.
		0040	CHK3 Error occurred.
	0206		Self MP Status Read Test.
		0100	MP_STATUSREG Data un-match Error occurred.
		0040	CHK3 Error occurred.
	020c		Configuration Check.
		0040	CHK3 Error occurred.
		0100	Error occurred in PD Register Read. (CHK3)
		0200	Configuration un-match Error occurred.
	020d		SM Voltage Establish Control routine.
		0100	PS_DETINT Establish Error occurred.
		0200	PS_DET_INH Establish.
		0300	Parameter Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0211		Register Test 1
		0100	Data Compare Error occurred.
		0040	CHK3 Error occurred.
	0212		Register Test 2
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred. (0 Clear)
		0300	Data Compare Error occurred.
		0400	Data Compare Error occurred. (0 Clear)
		0040	CHK3 Error occurred.
	0221		BC Register Test 1
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred. (0 Clear)
		0300	Data Compare Error occurred.
		0400	Data Compare Error occurred. (0 Clear)
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0222		BC Register Test 2
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred. (BC Register)
		0300	Status Error occurred in BCINT OFF.
		0040	CHK3 Error occurred.
	0231		SC Register Test 1.
		0100	Data Compare Error occurred. (SCAN_WRITE_DATA Register Test)
		0200	Data Compare Error occurred. (0 Clear)
		0300	Data Compare Error occurred. (SCAN_WRITE_DATA Register Test)
		0400	Data Compare Error occurred. (0 Clear)
		1100	Data Compare Error occurred. (SCAN_READ_DATA Register Test)
		1200	Data Compare Error occurred. (0 Clear)
		1300	Data Compare Error occurred. (SCAN_READ_DATA Register Test)
		1400	Data Compare Error occurred. (0 Clear)
		2100	Data Compare Error occurred. (SCAN STATUS Register Test)
		2200	Data Compare Error occurred. (0 Clear)
		2300	Data Compare Error occurred. (SCAN STATUS Register Test)
		2400	Data Compare Error occurred. (0 Clear)
		0040	CHK3 Error occurred.
	0232		Scan Time Out Error occurred.
		0100	Scan Time Out Error occurred.
		0200	Data Compare Error occurred. (0 Clear)
		0300	Scan Time Out Error occurred.
		0040	CHK3 Error occurred.
	0241		MPST Register Test 1.
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred. (0 Clear)
		0040	CHK3 Error occurred.
	0251		ECC Test 1.
		0100	Status Data Compare Error occurred.
		0200	Data Compare Error occurred.
		0300	Uncollectable Error occurred.
		0400	Data un-match Error occurred.
		0040	CHK3 Error occurred.
	0252		ECC Test 2/3
		0100	Uncollectable Error occurred.(ECC Test 2)
		0200	Uncollectable Error occurred. (ECC Test 3)
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0261		Single Write/Read Test.
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred.
		1100	Data Compare Error occurred.
		1200	Data Compare Error occurred.
		1300	Data Compare Error occurred.
		1400	Data Compare Error occurred.
		2100	Data unmatch Error occurred. (CHK 3)
		2200	Data unmatch Error occurred.
		2300	Data unmatch Error occurred. (CHK 3)
		2400	Data unmatch Error occurred.
		0040	CHK3 Error occurred.
		3100	Single W/R Compare Error occurred.
		3200	Collectable Error occurred.
		4100	Double W/R Compare Error occurred. (Side A)
		4200	Collectable Error occurred.
		4300	Double W/R Compare Error occurred. (Side B)
	0262		Read Modify Write Function (Atomic operation Function) Test.
		0100	Read Data Error.
		0040	CHK3 Error occurred.
		1100	Read Modify Write Error occurred.
		1200	Collectable Error occurred.
	0263		Function Test 3.
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred.
		0500	Data Compare Error occurred.
		0600	Data Compare Error occurred.
		0900	Collectable Error occurred.
		0a00	Data Compare Error occurred.
		0d00	Collectable Error occurred.
		0e00	Data Compare Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0264		Function Test 4.
		0100	PD_DATA Compare un-match Error occurred.
		0200	Data Compare Error occurred.
		0300	Data Compare Error occurred.
		0040	CHK3 Error occurred.
	0265		Function Test 5.
		0100	Memory Read Error occurred.
		0200	Memory not Ready Error occurred.
		0300	Memory Data Compare Error occurred.
		0400	Memory Data Compare Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0266		Function Test 6.
		0100	Error Status Compare Error occurred.
		0200	All Lock Register Read Status Error occurred.
		0300	Read Data Compare Error occurred.
		0400	Memory Read Compare Error occurred.
		0500	Double All Lock Status Compare Error occurred.
		0600	All Lock Status Compare Error occurred.
		0700	Double All Lock Status Compare Error occurred.
		0800	All Lock Status Compare Error occurred.
		0900	All Lock Status Compare Error occurred.
		0a00	All Lock Status Compare Error occurred.
		0b00	All Lock Status Compare Error occurred.
		0040	CHK3 Error occurred.
	0269		Function Test 9.
		0100	Count Value Status Compare Error occurred.
		0200	OUNTER_ERROR_STATUS Register Status Compare Error occurred.
		0040	CHK3 Error occurred.
	026a		Function Test 10.
		0100	Timer Stop Status Compare Error occurred.
		0200	Timer Stop Status Compare Error occurred.
		0300	Timer Operation Status Compare Error occurred.
		0400	Timer Operation Status Compare Error occurred.
		0040	CHK3 Error occurred.
	026b		Function Test 11.
		0100	Error Status Compare Error occurred.
		1100	Error Status Compare Error occurred.
		1200	Error Status Compare Error occurred. (details)
		2100	Error Status Compare Error occurred.
		2200	Error Status Compare Error occurred.
		2300	Error Status Compare Error occurred. (details)
		0040	CHK3 Error occurred.
	026c		Function Test 11b.
		0400	CHK3 Error occurred.
		1100	Double Lock Error occurred.
		1200	Lock Error occurred.
		2100	Error occurred.
		2200	Double Lock Error occurred.
		2300	Lock Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0271		Counter Test 1.
		0100	Reset Status Compare Error occurred.
		0200	Count Up Status Compare Error occurred. (ACK_COUNTER)
		0040	CHK3 Error occurred.
	0272		Counter Test 2
		0100	Reset Status Compare Error occurred.
		0200	Count Up Status Compare Error occurred. (LOCK_COUNTER)
		0040	CHK3 Error occurred.
	0273		Counter Test 3
		0100	Reset Status Compare Error occurred.
		0200	Count Up Status Compare Error occurred. (SCAN_COUNTER)
		0040	CHK3 Error occurred.
	0274		Counter Test 4
		0100	Reset Status Compare Error occurred.
		0200	Count Up Status Compare Error occurred. (VALID_COUNTER)
		0040	CHK3 Error occurred.
	0275		Counter Test 5
		0100	Reset Status Compare Error occurred.
		0200	Count Up Status Compare Error occurred. (MEM_COUNTER)
		0040	CHK3 Error occurred.
	0281		Disconnect 1 Test
		0100	Transfer End Waiting Error occurred.
		0200	CHK3 Error occurred.
		0300	SM Data Check Error occurred.
		0700	Data Compare occurred.
		0040	CHK3 Error occurred.
	0282		Disconnect 2 Test
		0100	Transfer End Waiting Error occurred.
		0200	CHK3 Error occurred.
		0040	CHK3 Error occurred.
	0283		Disconnect 3 Test
		0100	Transfer End Waiting Error occurred.
		0200	CHK3 Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0284		Disconnect 4 Test.
		0100	Transfer End Waiting Error occurred.
		0200	CHK3 Error occurred.
		0300	LOG Address Data Check Error occurred.
		0400	LOG Read Data Error occurred.
		0500	LOG Read ECC Error occurred.
		0700	Board Check Error occurred.
		0040	CHK3 Error occurred.
	0291		Hard Error Test 1.
		0100	MPA Status Compare Error occurred.
		0200	MPA_MSTCHK3 Status Compare Error occurred.
		0300	PAHT0 Error Status Compare Error occurred.
		0400	PATH1 Error Status Compare Error occurred.
		0500	PATH0 Error Detail 0 Status Compare Error occurred.
		0600	PATH1 Error Detail 1 Status Compare Error occurred.
		0700	PATH Error Detail 0 Status Error occurred.
		0800	PATH Error Detail 0 Status Error occurred.
		0900	PATH Error Detail 1 Status Error occurred.
		1000	PATH Error Detail 1 Status Error occurred.
		1100	BOARD Error Status Error occurred.
		1200	BOARD Error Status Error occurred. (Details)
		1300	PATH0 Error Status Error occurred.
		1400	PATH1 Error Status Error occurred.
		1500	PATH0 Error Detail Status Error occurred.
		1600	PATH1 Error Detail Status Error occurred.
		0040	CHK3 Error occurred.
	0292		DIMM Control Line.
		0100	MPA Status Error occurred.
		0200	MCTL SINGLE ERROR Status Compare Error occurred.
		0300	MCTL SINGLE ERROR Status Compare Error occurred.
		0400	Board Error Status Compare Error occurred.
		0500	Board Error Status Compare Error occurred. (Details)
		0600	DIMM Status Compare Error occurred.
		0700	MPA_STATUS Error occurred.
		0800	MCTL SINGLE Status Compare Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	0292		DIMM Control Line.
		0900	MCTL SINGLE Status Compare Error occurred.
		0a00	PATH0 Status Compare Error occurred.
		0b00	PATH1 Status Compare Error occurred.
		0040	CHK3 Error occurred.
	0293		DIMM Control Line.
		0100	MPA Status Compare Error occurred.
		0200	PATH0 Common Board Status Compare Error occurred.
		0300	PATH1 Common Board Error Status Error occurred.
		0400	Board Error Status Compare Error occurred.
		0500	Board Error Status Compare Error occurred. (Details)
		0600	PARITY Error Status Compare Error occurred.(Detail 0)
		0700	PARITY Error Status Compare Error occurred.(Detail 1)
		0800	DIAG_MODE REG Status Error occurred.
		0900	DIAG_DATA REG Status Error occurred.
		0a00	PATH0 Non-Error Status Error occurred.
		0b00	PATH1 Non-Error Status Error occurred.
		0040	CHK3 Error occurred.
	294		Hard Error Test 4
		0100	MPA Status Compare Error occurred.
		0200	PATH0 Common Board Status Compare Error occurred.
		0300	PATH1 Common Board Error Status Error occurred.
		0400	Board Error Status Compare Error occurred.
		0500	Board Error Status Compare Error occurred.(Details)
		0600	PARITY Error Status Compare Error occurred.(Detail 0)
		0700	PARITY Error Status Compare Error occurred.(Detail 1)
		0800	DIAG MODE REG Status Error occurred.
		0900	DIAG DATA REG Status Error occurred.
		0a00	PATH0 Non-Error Status Error occurred.
		0b00	PATH1 Non-Error Status Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
SMA	02a1		Memory Test 1.
		0100	MSA Status Error occurred.
		0200	Transfer End Waiting Status Compare Error occurred.
		0300	Non-Error Status Compare Error occurred.
		0400	MSA Status Error occurred.
		0500	Transfer End Waiting Error occurred.
		0600	Non-Error Status Compare Error occurred.
		0040	CHK3 Error occurred.
	02a2		Memory Test 2.
		0100	Data Compare Error occurred.
		0040	CHK3 Error occurred.
	02a3		Memory Test 3.
		0100	Disconnect Status Compare Error occurred.
		0200	Transfer End Waiting Error occurred.
		0300	Error Status Compare Error occurred.
		0400	MSA Status Error occurred.
		0500	Self Refresh Mode Cancel Check Error occurred.
		0600	Disconnect Finish Check Error occurred.
		0700	Error Status Check Error occurred.
		0040	CHK3 Error occurred.
	02a4		Memory Test 4.
		0100	Read Data Compare Error occurred.
		0200	CHK3 Error occurred.
		0300	Collectable Error occurred.
		0040	CHK3 Error occurred.
	02b1		Lock Test 1.
		0100	SMA Status Register Compare Error occurred.
		0200	Data Compare Error occurred.
		0300	Data Compare Error occurred.
		0400	Read Status Compare Error occurred.
		0040	CHK3 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTA	0301		Register Test. (Direct Register Test part of PCI/DMA, HSN, HARB.)
		0100	Data Compare Error occurred. (0xb0010300 to 0xb00112d4)
		0200	Data Compare Error occurred. (0xb00103c to 0xb00112d8)
		0040	CHK2 Error occurred.
	0302		Register Test. (Indirect Register Test Part of PCI/DMA.)
		0100	Data Compare Error occurred. (0x00000020 to 0x00001063)
		0200	Data Compare Error occurred. (0x00000050 to 0x0000005f)
		0300	Data Compare Error occurred. (0x00000000 to 0x0000000a)
		0040	CHK2 Error occurred.
	0303		Register Test. (Indirect Register Test part of HSN.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0304		Register Test. (Indirect Register Test part of HARB.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0305		Counter Test (Indirect Register Test part of PCI/DMA.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0306		Counter Test (Indirect Register Test part of HSN.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0307		DBFLOOP Test.
		0100	Data Compare Error occurred.
		0200	Time Out Error occurred.
		0300	XFS Register Status Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTA	0308		DBF Memory Test.
		0100	Bit ON/OFF Data Compare Error occurred.
		0200	Address Data Compare Error occurred.
		0040	CHK2 Error occurred.
	0309		XBF Memory Test.
		0100	Bit ON/OFF Data Compare Error occurred in Data Block.
		0200	Bit ON/OFF Data Compare Error occurred in Data Block.
		0300	Bit ON/OFF Data Compare Error occurred in Data Block.
		0400	Bit ON/OFF Data Compare Error occurred in Data Block.
		0500	Bit ON/OFF Data Compare Error occurred in Data Block.
		0600	Bit ON/OFF Data Compare Error occurred in Data Block.
		0040	CHK2 Error occurred.
	030a		Forced Error Test.
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	030b		Impedance Adjustment Quality Judgment Test.
		0101	IMP_DAH DAL Value Base within the scope Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0401		Interruption function diagnosis Test.
		0100	INTREQSTS compare error occurred after INTREQDIAG 1SET.
		0200	INTREQLVL compare error occurred after INTREQDIAG 1SET.
		0300	Cause register IP2 0 compare error occurred.
		0400	INTREQSTS compare error occurred after INTREQDIAG 1SET.
		0500	INTREQLVL compare error occurred after INTREQDIAG 1SET.
		0600	Cause register IP2 0 compare error occurred.
		0700	INTREQLVL compare error occurred after INTREQEN 0SET.
		0800	INTREQSTS compare error occurred after INTREQEN 0SET.
		0900	Cause register IP2 0 compare error occurred.
		1000	Cause register IP6-3 +1 compare error occurred.
		1100	INTREQDIAG 0/EN0 1SET INTREQLVL compare error occurred.
		1200	INTREQDIAG 0/EN0 1SET INTREQSTS compare error occurred.
		1300	Cause register IP2 0 compare error occurred.
		1400	Cause register IP6-3 +1 compare error occurred.
		1500	INTREQEN1 0/DIAG 1SET INTREQLVL compare error occurred.
		1600	INTREQEN1 0/DIAG 1SET INTREQSTS compare error occurred.
		1700	Cause register IP2 0 compare error occurred.
		1800	Cause register IP6-3 compare error occurred.
		1900	INTREQEN1 0/EN1 1SET INTREQLVL compare error occurred.
		2000	INTREQEN1 0/EN1 1SET INTREQSTS compare error occurred.
		2100	Cause register IP2 0 compare error occurred.
		2200	Cause register IP6-3 compare error occurred.
		2300	Cause register IP6-3 +1 compare error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0402		Atomic function Test 1.
		0100	ATOM_STATE initial value compare error occurred.
		0200	ATOM_RDDT initial value compare error occurred.
		0300	ATOMSTATE compare error occurred in bit set value (F0F0F0F0).
		0400	ATOM_RDDT compare error occurred in bit set value (F0F0F0F0).
		0500	MPA_CHK3RD compare error occurred in bit set value (F0F0F0F0).
		0600	ATOM_STATE compare error occurred in bit set value (1F1F1F1F).
		0700	ATOM_RDDT compare error occurred in bit set value (1F1F1F1F).
		0800	MPA_CHK3RD compare error occurred in bit set value (1F1F1F1F).
		0900	ATOM_STATE compare error occurred in bit set value (1F1F1F1F).
		1000	ATOM_RDDT compare error occurred in bit set value (1F1F1F1F).
		1100	MPA_CHK3RD compare error occurred in bit set value (1F1F1F1F).
		1200	ATOM_STATE compare error occurred in bit set value (F0F0F0F0).
		1300	ATOM_RDDT compare error occurred in bit set value (F0F0F0F0).
		1400	MPA_CHK3RD compare error occurred in bit set value (F0F0F0F0).
		0040	CHK1B error occurred.
	0403		Atomic function Test 2.
		0100	ATOM_STATE compare error occurred in MSK:ALL DATA(11223344).
		0200	ATOM_RDDT compare error occurred in MSK:ALL DATA(11223344).
		0300	MPA_CHK3RD compare error occurred in MSK:ALL DATA(11223344).
		0400	ATOM_STATE compare error occurred in MSK:ALL DATA(EFDFCFBF).
		0500	ATOM_RDDT compare error occurred in MSK:ALL DATA(EFDFCFBF).
		0600	MPA_CHK3RD compare error occurred in MSK:ALL DATA(EFDFCFBF).
		0700	ATOM_STATE compare error occurred in MSK:(55667788) DATA(11223344).
		0800	ATOM_RDDT compare error occurred in MSK:(55667788) DATA(11223344).
		0900	MPA_CHK3RD compare error occurred in MSK:(55667788) DATA(11223344).
		1000	ATOM_STATE compare error occurred in MSK:(80808080) DATA(11223344).
		1100	ATOM_RDDT compare error occurred in MSK:(80808080) DATA(11223344).
		1200	MPA_CHK3RD compare error occurred in MSK:(80808080) DATA(11223344).
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0404		Atomic function Test 3.
		0100	ATOM_STATE compare error occurred in MSK:ALL DATA(F0F0F0F0).
		0200	ATOM_RDDT compare error occurred in MSK:ALL DATA(F0F0F0F0).
		0300	MPA_CHK3RD compare error occurred in MSK:ALL DATA(F0F0F0F0).
		0400	ATOM_STATE compare error occurred in MSK:ALL DATA(00010101).
		0500	ATOM_RDDT compare error occurred in MSK:ALL DATA(00010101).
		0600	MPA_CHK3RD compare error occurred in MSK:ALL DATA(00010101).
		0700	ATOM_STATE compare error occurred in MSK:(0) DATA(0EFEFEFE).
		0800	ATOM_RDDT compare error occurred in MSK:(0) DATA(0EFEFEFE).
		0900	MPA_CHK3RD compare error occurred in MSK:(0) DATA(0EFEFEFE).
		1000	ATOM_STATE compare error occurred in MSK:(0) DATA(00000001).
		1100	ATOM_RDDT compare error occurred in MSK:(0) DATA(00000001).
		1200	MPA_CHK3RD compare error occurred in MSK:(0) DATA(00000001).
		0040	CHK1B error occurred.
	0405		Atomic function Test 4.
		0100	ATOM_STATE compare error occurred in MSK:(0) DATA(1234568).
		0200	ATOM_RDDT compare error occurred in MSK:(0) DATA(1234568).
		0300	MPA_CHK3RD compare error occurred in MSK:(0) DATA(1234568).
		0400	ATOM_STATE compare error occurred in MSK:(0) DATA(9ABCDEF0).
		0500	ATOM_RDDT compare error occurred in MSK:(0) DATA(9ABCDEF0).
		0600	MPA_CHK3RD compare error occurred in MSK:(0) DATA(9ABCDEF0).
		0040	CHK1B error occurred.
	0406		LM-XR DMA transfer Test.
		0100	Command area toXPA starting bit OFF check error occurred.
		0200	Command area to XPA transfer data compare error occurred.
		0300	XPA to data area starting bit OFF check error occurred.
		0400	XPA to data area transfer compare error occurred.
		0500	Data area toXPA starting bit OFF check error occurred.
		0600	Data area toXPA transfer compare error occurred.
		0700	XPAto command area starting bit OFF check error occurred.
		0800	XPAto command area transfer data compare error occurred.
		0900	Error register check error occurred.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0407		LM-XR DMA transfer range attachment Test.
		0100	Command area toXPA range error 1 DMA end of transfer being waiting for error occurred.
		0200	Command area toXPA range error 1 DMA end of transfer Check error occurred.
		0300	Command area toXPA range error 2 DMA end of transfer being waiting for error occurred.
		0400	Command area toXPA range error 2 transfer status Check error occurred.
		0500	MP access error Check LM address 1 compare error occurred.
		0600	MP access error Check RMC_DTERR2 register compare error occurred.
		0700	MP access error Check RMC_DTERR2 register compare error occurred.
		0800	MP access error Check LM address 2 compare error occurred.
		0900	MP access error Check LM address 3 compare error occurred.
		1000	MP access error Check LM address 4 compare error occurred.
		1100	MP access error Check RMC_DTERR2 register compare error occurred.
		1200	MP access error Check LM address 4 compare error occurred.
		1300	MP access error Check RMC_DTERR2 register compare error occurred.
		0040	CHK1B error occurred.
	0408		STB counter function Test.
		0100	STB-A counter initial value Check CNT1_A compare error occurred.
		0200	STB-A counter starting - halt Check 1 STBTIMER_A compare error occurred.
		0300	STB-A counter starting - halt Check 2 STBTIMER_A compare error occurred.
		0400	STB-A counter starting - halt Check 3 STBTIMER_A compare error occurred.
		0500	STB-A counter starting - halt Check 4 STBTIMER_A compare error occurred.
		0600	STB-A counter starting - halt Check 5 STBTIMER_A compare error occurred.
		0700	STB-A counter starting - halt Check 6 STBTIMER_A compare error occurred.
		0800	STB-A counter starting - halt Check 7 STBTIMER_A compare error occurred.
		0900	STB-A counter starting - halt Check 8 STBTIMER_A compare error occurred.
		1000	STB-B counter initial value Check CNT1_B compare error occurred.
		1100	STB-B counter starting - halt Check 1 STBTIMER_B compare error occurred.
		1200	STB-B counter starting - halt Check 2 STBTIMER_B compare error occurred.
		1300	STB-B counter starting - halt Check 3 STBTIMER_B compare error occurred.
		1400	STB-B counter starting - halt Check 4 STBTIMER_B compare error occurred.
		1500	STB-B counter starting - halt Check 5 STBTIMER_B compare error occurred.
		1600	STB-B counter starting - halt Check 6 STBTIMER_B compare error occurred.
		1700	STB-B counter starting - halt Check 7 STBTIMER_B compare error occurred.
		1800	STB-B counter starting - halt Check 8 STBTIMER_B compare error occurred.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0409		STB counter compare function Test.
		0100	STB-A,B compare Check (byte 3) STBTIMER_A compare error occurred.
		0200	STB-A,B compare Check (byte 2) STBTIMER_A compare error occurred.
		0300	STB-A,B compare Check (byte 1) STBTIMER_A compare error occurred.
		0400	STB-A,B compare Check (byte 0) STBTIMER_A compare error occurred.
		0500	CNT1_A compare error occurred in testing end.
		0600	CNT1_B compare error occurred in testing end.
		0700	STBTIMER_A high-order compare error occurred in testing end.
		0800	STBTIMER_A low order compare error occurred in testing end.
		0900	STBTIMER_B high-order compare error occurred in testing end.
		1000	STBTIMER_B low order compare error occurred in testing end.
		0040	CHK1B error occurred.
	0410		Force error Test 1.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred with force error testing 5200(RMCINT0).
		0400	INTREQLVL compare error occurred with force error testing 5210(RMCINT1).
		0500	INTREQLVL compare error occurred with force error testing 5214(RMCINT1).
		0600	INTREQLVL compare error occurred with force error testing 5218(RMCINT1).
		0040	CHK1B error occurred.
	0411		Force error Test 2.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred with force error testing 521C(RMCINT2).
		0400	INTREQLVL compare error occurred with force error testing 5220(RMCINT2).
		0500	INTREQLVL compare error occurred with force error testing 5224(RMCINT2).
		0600	INTREQLVL compare error occurred with force error testing 5228(RMCINT2).
		0700	INTREQLVL compare error occurred with force error testing 522C(RMCINT2).
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0412		Force error Test 4.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred with force error testing 5234-00,10(RMCINT4).
		0400	INTREQLVL compare error occurred with force error testing 5234-02(RMCINT4).
		0500	INTREQLVL compare error occurred with force error testing 5234-04-05(RMCINT4).
		0600	INTREQLVL compare error occurred with force error testing 5234-04-05(RMCINT4).
		0700	INTREQLVL compare error occurred with force error testing 5238-10-14,16-17,20(RMCINT4).
		0800	INTREQLVL compare error occurred with force error testing 5238-15(RMCINT4).
		0900	INTREQLVL compare error occurred with force error testing 5238-21(RMCINT4).
		0040	CHK1B error occurred.
	0413		Force error Test 4.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred with force error testing 5234-20-22(RMCINT5).
		0400	INTREQLVL compare error occurred with force error testing 5240-20(RMCINT5).
		0500	INTREQLVL compare error occurred with force error testing 5234-23(RMCINT5).
		0040	CHK1B error occurred.
	0414		Error mask function Test 1.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred.
		0400	Detailed error register compare error occurred.
		0500	Detailed error register compare error occurred after reset.
		0040	CHK1B error occurred.
	0415		Error mask function Test 2.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred.
		0400	Detailed error register compare error occurred.
		0500	Detailed error register compare error occurred after reset.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0416		Error mask function Test 3.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred.
		0400	Detailed error register compare error occurred.
		0500	Detailed error register compare error occurred after reset.
		0040	CHK1B error occurred.
	0417		Error mask function Test 4.
		0100	INTREQLVL compare error occurred in interruption attachment.
		0200	INTREQLVL compare error occurred in error mask cancellation.
		0300	INTREQLVL compare error occurred.
		0400	Detailed error register compare error occurred.
		0500	Detailed error register compare error occurred after reset.
		0040	CHK1B error occurred.
	0418		MPCH diagnosis Test 1.
		0100	AREG initial value compare error occurred.
		0200	Compulsion error 1. sequence error expectation compare error occurred.
		0300	Compulsion error 2. No errors expectation compare error occurred.
		0400	Compulsion error 3. No errors AREG expectation compare error occurred.
		0500	Compulsion error 4. No errors AREG expectation compare error occurred.
		0600	Compulsion error 5. No errors expectation compare error occurred.
	0419		MPCH diagnosis Test 2.
		0100	Expectation compare error occurred by all0 data R/W Check.
		0200	Expectation compare error occurred by compulsion compare error Check.
	0420		MPCH diagnosis Test 3.
		0100	Expectation compare error occurred with normal case testing 1.
		0200	Expectation compare error occurred with normal case testing 2.
		0300	Expectation compare error occurred by MRST cancel testing.
		0400	Compulsion error 3 CHK1A/ timeout expectation compare error occurred.
		0500	Compulsion error 4 WCK1/ timeout expectation error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0421		MPCH diagnosis Test 4.
		0100	Compulsion error 1 CHK1A/ timeout expectation compare error occurred.
		0200	No errors expectation compare error occurred in compulsion error 1 reset.
		0300	Compulsion error 2 time register parity error expectation compare error occurred.
		0400	Error expectation compare error occurred after compulsion error 2 reset.
		0500	No errors expectation compare error occurred after compulsion error 2 reset.
	0422		MPCH diagnosis Test 5.
		0100	Compulsion error 0 sequence expectation compare error occurred.
		0200	Compulsion error 1 CHK1A/sequencer error expectation t compare error occurred.
		0300	Compulsion error 2 WCHK1 expectation compare error occurred.
		0400	Compulsion error 3 timeout error expectation compare error occurred.
		0500	Compulsion error 4 CHK1A/ timeout error expectation compare error occurred.
		0600	Compulsion error 5 WCHK1/ timeout error expectation compare error occurred.
		0700	Compulsion error 6 expectation compare error occurred.
		0800	Compulsion error 7 CHK1A/ compare error occurred.
		0900	Compulsion error 8 WCHK1/ compare error occurred.
		1000	Compulsion error 9 time register parity error occurred.
		1100	Compulsion error 10 time register parity error occurred.
	0423		SRAM diagnosis 15.
		0100	Comparison error occurred by AREG byte 3 R/W Check.
		0200	Comparison error occurred by AREG byte 2 R/W Check.
		0300	Comparison error occurred by AREG byte 1 R/W Check.
		0400	Comparison error occurred by AREG byte 0 R/W Check.
		0500	Comparison error occurred by BREG byte 3 R/W Check.
		0600	Comparison error occurred by BREG byte 2 R/W Check.
		0700	Comparison error occurred by BREG byte 1 R/W Check.
		0800	Comparison error occurred by BREG byte 0 R/W Check.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0424		Register R/W Test.
		0100	Expectation compare error occurred by all bit ON/OFF testing diagnostic mode attachment Check.
		0200	Expectation compare error occurred by all bit ON/OFF testing register R/W Check.
		0300	Expectation compare error occurred by specification data pattern register R/W testing diagnostic mode attachment Check.
		0400	Expectation compare error occurred by specification data pattern register R/W testing register R/W Check.
		0500	Expectation compare error occurred by Read only/Write Only register testing diagnostic mode attachment Check.
		0600	RRSTS0 compare error occurred after Read only/Write Only register testing factor register WR.
		0700	RSTS0 compare error occurred after Read only/Write Only register testing reset.
		0800	SCANERSTS compare error occurred after Read only/Write Only register testing reset.
		0900	ERSTS0 compare error occurred after Read only/Write Only register testing reset.
		1000	CHK1BSTS compare error occurred after Read only/Write Only register testing reset.
		1100	ERSTS0 compare error occurred after Read only/Write Only register testing reset.
		1200	DRLCTLERR compare error occurred after Read only/Write Only register testing reset.
		1300	CHK1SSTS compare error occurred after Read only/Write Only register testing reset.
	0428		LM R/W Test.
		0100	Expectation compare error occurred by LM R/W Check.
		0200	Expectation compare error occurred by no errors Check.
	0429		Threshold value counter diagnosis Test.
		0100	Expectation compare error occurred by compulsion count up Check.
	0430		ECC circuit Test 1.
		0100	Expectation compare error occurred by W/R data validation.
		0200	Expectation compare error occurred by syndrome pattern Check.
		0300	Expectation compare error occurred by W/R data validation.
		0400	Expectation compare error occurred by syndrome pattern Check.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0431		ECC circuit Test 2.
		0100	Expectation compare error occurred by CECNT Check.
		0200	Expectation compare error occurred by ERSTS0 Check.
		0300	Expectation compare error occurred by CHK1ASTS Check.
		0400	Expectation compare error occurred by CHK1ASTS Check.
		0500	Expectation compare error occurred by ERADR Check.
		0600	Expectation compare error occurred by ERBYT Check.
		0700	Expectation compare error occurred by ERORD Check.
		0800	Expectation compare error occurred by ERORC Check.
		0900	Expectation compare error occurred by ERCRD Check.
		1000	Expectation compare error occurred by ERCRC Check.
		1100	Expectation compare error occurred by ERSYD Check.
		1200	Expectation compare error occurred by ERWR Check.
		1300	Expectation compare error occurred by check bit, syndrome, Check.
		1400	Expectation compare error occurred by data validation before correction.
		1500	Expectation compare error occurred by substitute error destruction Check.
		1600	Expectation compare error occurred by CECNT Check.
	0432		ECC circuit Test 3.
		0100	Expectation compare error occurred by Check in correction inability error detection.
		0200	Expectation compare error occurred by CHK1ASTS Check after reset.
	0433		ECC circuit Test 4.
		0100	Expectation compare error occurred by Check in correction inability error detection.
		0200	Expectation compare error occurred by CHK1ASTS Check after reset.
	0434		SRAM diagnosis XR3H Test.
		0100	Expectation compare error occurred by MICCHKSTS initial error being anonymous Check.
		0200	Expectation compare error occurred by XARSPER initial error being anonymous Check.
		0300	Expectation compare error occurred by address parity error byte3 Check.
		0400	Expectation compare error occurred by address parity error byte2 Check.
		0500	Expectation compare error occurred by address parity error byte1 Check.
		0600	Expectation compare error occurred by address parity error byte0 Check.
		0700	Expectation compare error occurred by address parity error byte3A Check.
		0800	Expectation compare error occurred by address parity error byte1A Check.
		0900	Expectation compare error occurred by ERRSTS Check after reset.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0435		SRAM diagnosis XR5H Test.
		0100	Expectation compare error occurred by MICCHKSTS no errors Check.
		0200	WAIT TIMEOUT error testing MICCHK1STS compare error occurred.
		0300	ADEC2 error testing MICCHK1STS compare error occurred.
		0400	ADEC3B1 error testing MICCHK1STS compare error occurred.
		0500	ADEC3B0 error testing MICCHK1STS compare error occurred.
		0600	ADEC2A error testing MICCHK1STS compare error occurred.
		0700	ADEC3B1 error testing MICCHK1STS compare error occurred.
		0800	ADEC3B0 error testing CICCHK1STS compare error occurred.
		0040	CHK1B error occurred.
	0436		SRAM diagnosis 16H Test.
		0100	C1WSTS initial value compare error occurred.
		0200	Expectation compare error occurred by compulsion WCHK1 generate Check.
		0300	Expectation compare error occurred by WCHK1 generate Check of a CHK1A 2 time.
		0400	Expectation compare error occurred by MPCHWCHK1 generate Check.
		0500	Expectation compare error occurred by RCHKCHK1A generate Check.
		0600	Expectation compare error occurred by MPCHK1A generate Check.
		0040	CHK1B error occurred.
	0437		SRAM diagnosis 19 Test.
		0100	MICPERSTS initial value compare error occurred.
		0200	Expectation compare error occurred by write only register read Check.
		0300	Expectation compare error occurred by MPCHK time register parity error Check.
		0040	CHK1B error occurred.
	0438		SRAM diagnosis 18 Test.
		0100	MICPERRSTS initial value compare error occurred.
		0200	Force error being not yet announced straight testing MICCHK1STS compare error occurred after mask attachment.
		0300	The testing MICCHK1STS compare error generate that force error occurred after mask cancell ation.
		0040	CHK1B error occurred.
	0439		SRAM diagnosis Test 1.
		0100	CHK1BSTS initial value compare error occurred.
		0200	CHK1BSTS compare error occurred after force error attachment.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0440		SRAM diagnosis Test 4.
		0100	CEMODE initial value compare error occurred.
		0200	MICPERSTS compare error occurs after force error attachment.
		0300	MICPERSTS compare error occurred after published by error reset.
		0040	CHK1B error occurred.
	0441		SRAM diagnosis Test 5.
		0100	MICPERSTS initial value compare error occurred.
		0200	Expectation compare error occurred by read Check of write dedicated register.
		0300	MICPERSTS compare error occurred after published by MCRRST.
		0400	MICPERSTS compare error occurred after published by MRST.
		0500	MICPERSTS compare error occurred after published by MCRRST.
		0040	CHK1B error occurred.
	0442		Reset control Test.
		0100	Source of reset cancellation register data Ann match error occurred.
		0200	Source of reset holding register Ann match error occurred after compulsion reset.
		0300	Source of reset holding register Ann match error occurred after compulsion reset.
		0040	CHK1B error occurred.
	0443		Interrupt control part Test (before INTMASK).
		0100	Expectation compare error occurred by CEMODE register R/W Check.
		0200	Expectation compare error occurred by DIAGINT register R/W Check.
		0300	Expectation compare error occurred by INTEN register R/W Check.
		0400	Expectation compare error occurred by INTEN register 00R/W Check.
		0500	INTSTS compare error occurred after DIAG attachment.
		0600	LVLSTS compare error occurred after LVLREG attachment.
		0700	SYNCINT compare error occurred after LVLREG attachment.
		0800	Expectation compare error occurred by INTLVL register 00R/W Check.
		0040	CHK1B error occurred.
	0444		Timer #0 control Test.
		0100	R/W compare data error occurred.
		0200	Interruption being not yet announced life error occurred.
		0300	Full count expectation error occurred.
		0400	Interruption generate error occurred.
		0500	Full count expectation error occurred.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0445		Timer #1 control Test.
		0100	R/W compare data error occurred.
		0200	Interruption being not yet announced life error occurred.
		0300	Full count expectation error occurred.
		0400	Interruption generate error occurred.
		0500	Full count expectation error occurred.
		0040	CHK1B error occurred.
	0446		Timer #2 control Test.
		0100	R/W compare data error occurred.
		0200	Interruption being not yet announced life error occurred.
		0300	Full count expectation error occurred.
		0400	Interruption generate error occurred.
		0500	Full count expectation error occurred.
		0040	CHK1B error occurred.
	0447		Timer #3 control Test.
		0100	R/W compare data error occurred.
		0200	Interruption being not yet announced life error occurred.
		0300	Full count expectation error occurred.
		0400	Interruption generate error occurred.
		0500	Full count expectation error occurred.
		0040	CHK1B error occurred.
	0448		Timer #4 control Test.
		0100	R/W compare data error occurred.
		0200	Cycle register R/W compare data error.
		0300	Interruption generate error occurred.
		0400	Full count expectation error occurred.
		0500	Interruption generate error occurred.
		0600	Full count expectation error occurred.
		0040	CHK1B error occurred.
	0449		Timer #5 control Test.
		0100	R/W compare data error occurred.
		0200	Autoload check error occurred.
		0040	CHK1B error occurred.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0450		Timer #6 control Test.
		0100	R/W compare data error occurred.
		0200	Autoload check error occurred.
		0040	CHK1B error occurred.
	0451		Timeout counter Test.
		0100	R/W compare data error occurred.
		0200	Expectation compare error occurred by WAITTOCNT R/W Check.
		0300	Expectation compare error occurred by MICCHK1STS Check.
		0400	Expectation compare error occurred by WAITTOCNT R/W Check.
		0500	Expectation compare error occurred by HOLDTOCNT R/W Check.
		0600	Expectation compare error occurred by MICCHK1STS Check.
		0700	Expectation compare error occurred by HOLDTOCNT R/W Check.
		0040	CHK1B error occurred.
	0452		Trace function Test.
		0100	Expectation compare error occurred by ERRSTS Check after compulsion CHK1B generate.
		0200	Expectation compare error occurred by LAST1 Check after compulsion CHK1B generate.
		0300	Expectation compare error occurred by LAST2 Check after compulsion CHK1B generate.
		0400	Expectation compare error occurred by WAITTOCNT R/W Check.
		0040	CHK1B error occurred.
	0454		Hard monitor control part Test 1.
		0300	Expectation compare error occurred by counter initialization Check.
		0400	Expectation compare error occurred by compulsion count up Check.
		0500	Expectation compare error occurred by error status Check.
	0455		Hard monitor control part Test 2.
		0300	Expectation compare error occurred by counter initialization Check.
		0400	Expectation compare error occurred by error status Check after compulsion count up.
	0456		Hard monitor control part Test 3.
		0300	Expectation compare error occurred by counter initialization Check.
		0400	Expectation compare error occurred by error status Check after compulsion count up.

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LSI classification	Test Item	Error Code	Error Contents
RMC	0457		Interrupt control part test (after INTMASK).
		0100	Expectation compare error occurred by CEMODE register R/W Check.
		0200	Expectation compare error occurred by LVLREG register R/W Check.
		0300	Expectation compare error occurred by INTMASK register R/W Check.
		0400	Expectation compare error occurred by DIAGINT register R/W Check.
		0500	Expectation compare error occurred by XINTSTS Check after DIAGINT attachment.
		0600	Expectation compare error occurred by DIAGINT register 00R/W Check.
		0700	Expectation compare error occurred by XINITSTS Check after published by XINTRST.
		0800	Expectation compare error occurred by DIAGINT Check after INTMASK attachment.
		0900	Expectation compare error occurred by XINTSTS Check after INTMASK attachment.
		1000	Expectation compare error occurred by XINTSTS Check after INTMASK attachment.
		1100	Expectation compare error occurred by XINTSTS Check after XINTSET attachment.
		1200	Expectation compare error occurred by XINTSTS Check after published by XINTRST.

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LSI classification	Test Item	Error Code	Error Contents
XPA	0601		XPA LSI Test.
		0010	XMEM Data Line Test Error occurred.
		0020	XMEM Address Line Test Error occurred.
		0030	MMEM Data Line Test Error occurred.
		0040	CHK1B Error occurred.
		0050	CMEM Data Line Test Error occurred.
		0060	CMEM address line test
	0602		XPA Initialize Test.
		0010	XPA LSI Initialize Error occurred.
		0040	CHK1B Error occurred.
	0603		XPA Initialize check Test.
		0010	XPA LSI Initialize Check Error occurred.
		0011	XPA LSI Initialize Compare Error occurred.
		0040	CHK1B Error occurred.
	0604		Force Error Test.
		0100 | 1411	Data Compare Error occurred.
		0040	CHK1B Error occurred.
XPA	0605		DMA Test.
		0010	PCI WR DMA Test.
		0020	PCI RD DMA Test.
		0030	PCI CMD Chain Test.
		0040	CHK1B Error occurred.
	0606		PCI-LM transmission test
		0010	PCI WR LM Test.
		0020	PCI RD LM Test.
		0040	CHK1B Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XPA	0607		Tachyon Test.
		0011	Compare Error occurred.
		0012	Compare Error occurred.
		0014	Compare Error occurred.
		0021	Compare Error occurred.
		0022	Compare Error occurred.
		0024	Compare Error occurred.
		0111	Parameter Error occurred.
		0112	Parameter Error occurred.
		0114	Parameter Error occurred.
		0121	Parameter Error occurred.
		0122	Parameter Error occurred.
		0124	Parameter Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
MPA	0800		MP resources exclusion in PK.
		0100	Exclusion Time Out.
	0801		Register Test Part of occupational MPA.
			Initial default Read Test.
		0100	Error occurred in Initial default Read.
		0200	Data Compare Error occurred.
			Counter Test.
		0300	Count Master Data un-match Error occurred.
			Sequencer Test.
		0400	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0802		Register Test part of common MPA.
		0500	SCINT_IF Register Initial default Read Test Error occurred.
		0600	SCINT_IF Register Write/Read Test Error occurred.
		0700	SM_IF Register Initial Read Test Error occurred.
		0800	SM_IF Register Write/Read Test Error occurred.
		0040	CHK1B Error occurred.
	0803		GTL Impedance Adjustment Quality Judgment Test.
		0100	GTL Impedance Error occurred.
		0040	CHK1B Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
QDTA	0901		Register Test.
		0040	CHK1B Error occurred.
		0100	Data Compare Error occurred.
		0200	Register Reset Error occurred.
	0902		Data/Latch Test.
		0040	CHK1B Error occurred.
		0100	Data Compare Error occurred.
		0200	Register Reset Error occurred.
	0903		Sequencer Test.
		0040	CHK1B Error occurred.
		0100	Data Compare Error occurred.
		0200	Register Reset Error occurred.
	0904		Counter Register Test.
		0040	CHK1B Error occurred.
		0100	Data Compare Error occurred.
		0200	Register Reset Error occurred.
	0905		Inside RAM WRITE/READ Test.
		0040	CHK1B Error occurred.
		0100	Error occurred in Register Read/Write.
		0200	Data Compare Error occurred.
	0907		QDTA→CACHE Data Transfer Test.
		0040	CHK1B Error occurred.
		0100	Error occurred in Register Read/Write.
		0200	Data Compare Error occurred.
	0908		LA Change Test.
		0040	CHK2 Error occurred.
		0100	Error occurred in CACHE Read/Write.
		0200	Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
QDTA	0909		GTL Impedance Test.
		0040	CHK1B Error occurred.
		0100	High-order Bit of IMONO Compare Error.
		0200	Error occurred in Byte Normal Scope Judgment.
	090a		Forced Error Test.
		0040	CHK2 Error occurred.
		0100	Error occurred in CHK2 Forced Error Test.
		0200	Error occurred in CHK1B Forced Error Test.
	090b		Parity Part LA Test.
		0040	CHK2 Error occurred.
		0100	Data Read Error occurred.
	090c		CACHE Transfer Test2.
		0040	CHK1B Error occurred.
		0100	Write/Read Error occurred.
		0200	Write/Read Error occurred.
		0300	Data Compare Error occurred.
		0400	CMA Register Write Error occurred.
	090d		2side command multi Test.
		0040	CHK1B Error occurred.
		0200	Write/Read Error occurred.
		0300	Data Compare Error occurred.
	090e		Forced Error Test2.
		0040	CHK2 Error occurred.
		0100	Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CARB	0c01		P Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0040	CHK2 Error occurred.
	0c02		Common Path.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0040	CHK2 Error occurred.
	0c03		C0 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c04		C1 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c05		C2 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
CARB	0c06		C3 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c07		C4 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c08		C5 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c09		C6 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c0b		C7 Path Test.
		0100	Error occurred in Initial default Read Test.
		0200	Error occurred in Register Read/Write Test.
		0300	Error occurred in Counter/Sequencer Test.
		0500	Error occurred in register restoration.
		0040	CHK2 Error occurred.
	0c0f		Initialze
		0100	REV Register Read Error occurred.
	0c10		GTL Impedance Test.
		0040	CHK2 Error occurred.
		0100	Register Read Error occurred.
		0200	Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FCA	0f01		Register Initial default Test.
		0100	Initial default Read un-match Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f02		Data Register W/R Test.
		0100	Data Compare Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f03		Slave Register Test.
		0100	Data Compare Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f04		Counter Test.
		0100	Data Compare Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f05		Special Register Test.
		0100	Data Compare Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f06		Inside RAM Test.
		0100	Data Compare Error occurred. (Address match Data)
		0200	CHK1 occurred.
		0300	Data Compare Error occurred. (Fixed Data)
		0400	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f07		Error Latch Test.
		0100	Test case 1 Data Compare Error occurred.
		0200	Test case 2 Data Compare Error occurred.
		0300	Test case 3 Data Compare Error occurred.
		0400	Test case 4 Data Compare Error occurred.
		0040	CHK1B Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FCA	0f08		TL Loop Test.
		0100	Initialization Error occurred.
		0200	Data Compare Error occurred.
		0801	Data Compare Error occurred.
		0802	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f09		CHSN Test.
		0100	Data transfer Test Error.
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f0a		PAL Test
		0010	CM Write Error occurred.
		0040	CHK1B Error occurred.
	0f0b		CHSN Test 2
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f0c		Double Write/Read Test.
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.(SLV0)
		0021	CM Read Error occurred.(SLV1)
		0030	Data Compare Error occurred.(SLV0)
		0031	Data Compare Error occurred.(SLV1)
		0040	CHK1B Error occurred.
	0f0d		LDEV FMT Test.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f0e		BITMAP Test.
		0010	CM FMT Write Error occurred.
		0011	CM BITMAP Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FCA	0f0f		MRCF Test
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f10		Data Register W/R Test 2.
		0100	Data Compare Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f11		Data Register W/R Test 3.
		0100	Data un-match Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f12		Inside RAM Test 2.
		0100	Data Compare Error in H side.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f13		Inside RAM Test 3.
		0100	Word Access Data Compare Error occurred.
		0200	Short Access Data Compare Error occurred.
		0300	Byte Access Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f14		Slave Register Test 2.
		0100	Data Compare Error occurred.
		0200	CHK1 occurred.
		0040	CHK1B Error occurred.
	0f15		LED Register Test.
		0100	Read Compare Error occurred.
		0200	CHK1 Status Error occurred.
		0300	CHK1 Status Error occurred. (End)
		0040	CHK1B Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FCA	0f16		REQIN Test.
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f17		PARITY Transfer Test.
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f18		DRIVE Micro Transfer Test.
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.
	0f19		Preread Transfer Test.
		0010	CM Write Error occurred.
		0020	CM Read Error occurred.
		0030	Data Compare Error occurred.
		0040	CHK1B Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLM	1001		Initial default Test.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
	1002		Register W/R Test.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
	1003		Memory Data Bus Bit Test 1.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
	1004		Memory Data Bus Bit Test 2.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
	1005		Memory Address Test 1.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred.
		0300	CHK1 Error occurred.
	1006		Memory Address Test 2.
		0040	CHK1 Error occurred.
		0100	CHK1 Error occurred.
		0200	Data Compare Error occurred.
		0300	CHK1 Error occurred.
		0400	Data Compare Error occurred.
		0500	CHK1 Error occurred.
	1007		Data Transfer in P/K Test 1.
		0040	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLM	1008		Data Transfer in P/K Test 2.
		0040	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
	1009		Forced Error CHK2 Test.
		0040	CHK1 Error occurred.
		0100	CHK2 Error occurred.
	100a		Forced Error CHK1 Test.
		0040	CHK1 Error occurred.
		0100	CHK1 Error occurred.
		0200	Data Compare Error occurred.
		0300	CHK1 Error occurred.
		0400	Data Compare Error occurred.
	100b		Impedance Test.
		0040	CHK1 Error occurred.
		0100	CHK1 Error occurred.
		0200	Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
Common			Main
	0000	0000	Machine Constitution data acquisition function error occurred.
	0005	0000	BSA LSI Resource acquisition error occurred.
	0006	0000	No Valid CHSN.
	0007	0000	No Machine Constitution data CMG.
	0008	0000	No Machine Constitution data CMG.
	0009	0000	CARB Register Initialize error occurred.
	000a	0000	CMA Register Initialize error occurred.
	000b	0000	SVP Parameter Error.
	0127	0000	Cache Register Initialize error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTM	1201		Register Test. (Direct Register Test part of PCI/DMA, HSN, HARB.)
		0100	Data Compare Error occurred. (no mask)
		0200	Data Compare Error occurred. (mask)
		0040	CHK2 Error occurred.
	1202		Register Test. (Indirect Register Test Part of PCI/DMA.)
		0100	Data Compare Error occurred. (0x00000020 to 0x00001063)
		0200	Data Compare Error occurred. (0x00000050 to 0x0000005f)
		0300	Data Compare Error occurred. (0x00000000 to 0x0000000a)
		0040	CHK2 Error occurred.
	1203		Register Test. (Indirect Register Test part of HSN.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	1204		Register Test. (Indirect Register Test part of HARB.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	1205		Counter Test (Indirect Register Test part of PCI/DMA.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	1206		Counter Test (Indirect Register Test part of HSN.)
		0100	Data Compare Error occurred.
		0040	CHK2 Error occurred.
	1207		DBFLOOP Test.
		0100	Data Compare Error occurred.
		0200	Time Out Error occurred.
		0300	XFS Register Status Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTM	1208		DBF Memory Test.
		0100	Bit ON/OFF Data Compare Error occurred.
		0200	Address Data Compare Error occurred.
		0040	CHK2 Error occurred.
	1209		XBF Memory Test.
		0100	Bit ON/OFF Data Compare Error occurred in Data Block.
		0200	Bit ON/OFF Data LRC Expect Data Compare Error occurred in Data Block.
		0300	Address Data Compare Error occurred in Data Block.
		0400	Address Data LRC Expect Data Compare Error occurred in Data Block.
		0500	Bit ON/OFF Data Compare Error occurred in LRC Block.
		0600	Address Data Compare Error occurred in LRC Block.
		0040	CHK2 Error occurred.
	120a		Forced Error Test.
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	120b		Impedance Adjustment Quality Judgment Test.
		0100	IMP_DAH DAL Value Base within the scope Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTM	120c		Register Test. (Direct Register Test part of PMA.)
		0100	Data Compare Error occurred. (no mask)
		0200	Data Compare Error occurred. (mask)
		0300	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.
	120d		Register Test. (Indirect Register Test Part of PMA.)
		0100	Data Compare Error occurred. (no mask.)
		0200	Data Compare Error occurred. (mask.)
		0300	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.
	120e		Counter Test (Indirect Register Test part of PMA.)
		0100	Data Compare Error occurred.
		0200	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.
	120f		PBF Memory Test.
		0100	Bit ON Data Compare Error occurred.
		0200	Bit OFF Data Compare Error occurred.
		0300	Address Data Compare Error occurred.
		0400	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.
	1210		PMA XBF Memory Test.
		0100	Bit ON Data Compare Error occurred.
		0200	0 Data after Bit ON Data Compare Error occurred.
		0300	Bit OFF Data Compare Error occurred.
		0400	0 Data after Bit OFF Data Compare Error occurred.
		0500	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.
	1211		CRC Calculation Circuit Test.
		0100	Data Compare Error occurred.
		0200	CHK2 Error occurred.
		0300	CRC Data Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTM	1212		Forced Error Test. (part of PMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	1213		PMA Path Test.
		4000	Memory Write Error occurred.
		8000	Memory Read Error occurred.
		0002	Memory Compare Error occurred.
		0008	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.
	1214		Detailed Forced Error Test. (PMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	1215		Individual Forced Error Test. (DMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	1216		Individual Forced Error Test. (PMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	1217		Forced Error Test. (Tachyon transfer on DMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	1218		Detailed Forced Error Test. (Tachyon transfer on DMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTM	1219		Individual Forced Error Test. (Tachyon transfer on DMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	121a		FIFO Error Injection Test. (DBF to HSN.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	121b		FIFO Error Injection Test. (PBF to HSN.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	121c		FIFO Error Injection Test. (DBF to PCI 4Byte.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	121d		FIFO Error Injection Test. (PBF to PCI.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	121e		FIFO Error Injection Test. (XBF to HSN.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	121f		FIFO Error Injection Test. (DBF to PCI 8Byte.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
FDTM	1220		Detailed Forced Error Test. (Part of DMA.)
		0100	Status Compare Error occurred.
		0040	CHK2 Error occurred.
	1222		Tachyon Loop Test. (Tachyon to HSN.)
		0100	LPA Setting Error occurred.
		0200	Link Up Error occurred.
		0300	Data Transfer Error occurred. (Single R/W Address Data.)
		0400	Data Transfer Error occurred. (Single R/W Specific Data.)
		0500	Data Transfer Error occurred. (Single RD after Double WR Address Data.)
		0600	Data Transfer Error occurred. (Single CRC R/W All f Data.)
		0700	Data Transfer Error occurred. (Single CRC R/W All 0 Data.)
		0040	CHK2 Error occurred.
	1223		Tachyon Loop Test . (Tachyon to DBF.)
		0100	LPA Setting Error occurred.
		0200	Link Up Error occurred.
		0300	Data Transfer Error occurred.
		0040	CHK2 Error occurred.
	1224		LPA-FDTM(PMA)XFR Test
		0100	Data Transfer Error occurred.
		0200	Data Compare Error occurred.
		0300	Entery on PMA Error occurred.
		0040	CHK2 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
ORCA	1225		DXBF Test.
		0040	CHK2 Error occurred.
		0100	XPA->DXBF Transfer Error occurred.(ALL 0 Pattern)
		0200	XPA->DXBF Transfer Error occurred.(ALL F Pattern)
		0300	XPA->DXBF Transfer Error occurred.(BIT'1' Pattern)
		0400	XPA->DXBF Transfer Error occurred.(BIT'0' Pattern)
		0500	XPA->DXBF Transfer Error occurred.(Address Pattern)
	1226		CRC MEM Test.
		0040	CHK2 Error occurred.
		0100	CHK2 or Data Compare Error occurred. (Address Pattern)
		0200	CHK2 or Data Compare Error occurred. (BIT'0' Pattern)
		0300	CHK2 or Data Compare Error occurred. (BIT'1' Pattern)
	1227		DXBF Path Test.
		0040	CHK2 Error occurred.
		4000	CM Write Error occurred.
		8000	CM Read Error occurred.
		0002	Data Compare Error occurred.
	1228		Tachyon Loop Test.(DXBF Target)
		0040	CHK2 Error occurred.
		0011	Tachyon Loop Test Error occurred.
		0012	Tachyon Loop Test Error occurred.
		0014	Tachyon Loop Test Error occurred.
		0021	Tachyon Loop Test Error occurred.
		0022	Tachyon Loop Test Error occurred.
		0024	Tachyon Loop Test Error occurred.
		0111	Tachyon Loop Test Error occurred.
		0112	Tachyon Loop Test Error occurred.
		0114	Tachyon Loop Test Error occurred.
		0121	Tachyon Loop Test Error occurred.
		0122	Tachyon Loop Test Error occurred.
		0124	Tachyon Loop Test Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
ORCA	1229		Tachyon Loop Test.(DBF Loop)
		0040	CHK2 Error occurred.
		0011	Tachyon Loop Test Error occurred.
		0012	Tachyon Loop Test Error occurred.
		0014	Tachyon Loop Test Error occurred.
		0021	Tachyon Loop Test Error occurred.
		0022	Tachyon Loop Test Error occurred.
		0024	Tachyon Loop Test Error occurred.
		0111	Tachyon Loop Test Error occurred.
		0112	Tachyon Loop Test Error occurred.
		0114	Tachyon Loop Test Error occurred.
		0121	Tachyon Loop Test Error occurred.
		0122	Tachyon Loop Test Error occurred.
		0124	Tachyon Loop Test Error occurred.
	122a		Forced Error Test. (DMA Control Part CRC_DBG /DXBF Memory Control part)
		0040	CHK2 Error occurred.
		0100	Status Compare Error occurred.
	122b		Forced Error Test. (PCI Interface Part DXBF)
		0040	CHK2 Error occurred.
		0100	Status Compare Error occurred.
	122c		PAL Test.
		0040	CHK2 Error occurred.
		0100	Transfer Error occurred.
	122d		Counter Test 4. (SUM CHECK Part)
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
ORCA	122e		SUM CHECK arithmetic circuit Test. (DXBF)
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.
	122f		SUM CHECK arithmetic circuit Test. (DBF)
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
ORCA	1230		SUM CHECK Header Buffer Test.
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.
	1231		SUM CHECK Magic Number function Test.
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
ORCA	1232		SUM CHECK Force Error Test.
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0100	Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.
	1233		BE Force Error Test.
		0040	CHK2 Error occurred.
		0011	CHK2 or Data Compare Error occurred.
		0012	CHK2 or Data Compare Error occurred.
		0014	CHK2 or Data Compare Error occurred.
		0021	CHK2 or Data Compare Error occurred.
		0022	CHK2 or Data Compare Error occurred.
		0024	CHK2 or Data Compare Error occurred.
		0100	Compare Error occurred.
		0111	CHK2 or Data Compare Error occurred.
		0112	CHK2 or Data Compare Error occurred.
		0114	CHK2 or Data Compare Error occurred.
		0121	CHK2 or Data Compare Error occurred.
		0122	CHK2 or Data Compare Error occurred.
		0124	CHK2 or Data Compare Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLA	1301		Initial default Test.
		0000	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
		ff00	CHK1 Error occurred.
	1302		Register W/R Test.
		0000	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1303		Memory Data Bus Bit Test 1.
		0000	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
		0300	Data Compare Error occurred.
		0400	CHK1 Error occurred.
		ff00	CHK1 Error occurred.
	1304		Memory Data Bus Bit Test 2.
		0000	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	CHK1 Error occurred.
		0300	Data Compare Error occurred.
		0400	CHK1 Error occurred.
		ff00	CHK1 Error occurred.
	1305		Memory Address Test 1.
		0000	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred.
		0300	Data Compare Error occurred.
		0400	CHK1 Error occurred.
		ff00	CHK1 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLA	1306		Memory Address Test 2.
		0000	CHK1 Error occurred.
		0100	CHK1 Error occurred.
		0200	Data Compare Error occurred.
		0300	CHK1 Error occurred.
		0400	Data Compare Error occurred.
		0500	CHK1 Error occurred.
		0600	Data Compare Error occurred.
		0700	CHK1 Error occurred.
		ff00	CHK1 Error occurred.
	1307		Outside Memory Data Bus Bit Test
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1308		Outside Memory Address Test 1.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	130a		Forced Error CHK2 Test.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		ff00	CHK1 Error occurred.
	130b		Forced Error CHK1 Test.
		0000	CHK1 Error occurred.
		0100	CHK1 Error Not occurred.
		0200	Data Compare Error occurred.
		0300	CHK1 Error Not occurred.
		0400	Data Compare Error occurred.
		ff00	CHK1 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLA	130c		GTL Impedance Test.
		0000	CHK1 Error occurred.
		0100	Except a regulation value Error occurred.
		0200	Poring TimeOut Error occurred.
		ff00	CHK1 Error occurred.
	130d		Forced Error Test.
		0000	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Data Compare Error occurred.
		0300	Data Compare Error occurred.
		0400	Data Compare Error occurred.
		0500	Data Compare Error occurred.
		0600	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1311		Data Transfer Test(DXBF→ CBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1312		Data Transfer Test(DXBF→ WRBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1313		Data Transfer Test(RDBF→ CBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
		ff00	CHK1 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLA	1314		Data Transfer Test(RDBF→ DXBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0400	CHK2 Error occurred.
		0500	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1315		Search Test 1(DXBF→SCH←RDBF)
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	CHK2 Error occurred.
		0400	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1316		Search Test 2 (DXBF→SCH←CBF)
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1317		Data Truncation Test(RDBF→ DXBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	CHK2 Error occurred.
		0400	Truncation Error Not occurred.
		0500	CHK2 Error occurred.
		0600	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	1318		Data Truncation Test(DXBF→ CBF)in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	Truncation Error Not occurred.
		0400	Data Compare Error occurred.
		ff00	CHK1 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLA	1319		IO Short Test(CBF→ DXBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	Truncation Error Not occurred.
		0300	CHK2 Error occurred.
		0400	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	131a		IO Short Test(DXBF→ CBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	IO Short Error Not occurred.
		0400	Data Compare Error occurred.
		ff00	CHK1 Error occurred.
	131b		Data Chain Test(DXBF→ CBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	CHK2 Error occurred.
		0400	CHK2 Error occurred.
		0500	CHK2 Error occurred.
		0600	Truncation Error Not occurred.
		0700	CHK2 Error occurred.
		0800	Truncation Error Not occurred.
		0900	Data Compare Error occurred.
		0a00	Data Compare Error occurred.
		ff00	CHK1 Error occurred.

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LSI classification	Test Item	Error Code	Error Contents
XCLA	131c		Data Chain Test(CBF→ DXBF) in P/K.
		0000	CHK1 Error occurred.
		0100	CHK2 Error occurred.
		0200	CHK2 Error occurred.
		0300	CHK2 Error occurred.
		0400	CHK2 Error occurred.
		0500	CHK2 Error occurred.
		0600	Truncation Error Not occurred.
		0700	CHK2 Error occurred.
		0800	Truncation Error Not occurred.
		0900	CHK2 Error occurred.
		0a00	Data Compare Error occurred.
		0b00	Data Compare Error occurred.
		ff00	CHK1 Error occurred.

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