DIAGNOSIS SECTION

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1. Types of Diagnosis

This subsystem's diagnostics consist of the six 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/ FCDG3	Initial diagnoses	CHA, DKA, CACHE MEMORY, MP, ESW	When DKC is powered on or CHA or DKA or MP is replaced or installed (automatic)
2	CUDG4	Functional diagnoses executed when the unit is offline	CHA, DKA, CACHE MEMORY, MP, ESW	During installation (as specified by service personnel)
3	INLINE CUDG	Functional diagnoses executed when the unit is online	CACHE MEMORY	When Cache is replaced or installed (automatic)
4	DKU INLINE	DKA-HDU functional (connection) check	DKA, SSW, HDD	When an HDD is replaced (automatic) or during installation (as specified by service personnel)
5	DKU PATH INLINE	↑	DKA, SSW, HDDFAN	↑
6	LAN	LAN check between DKC and SVP	SVP, SSVP, DKA, CHA	When LAN communication error or communication time-out error is occurred.

2. DIAG Details

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

CUDG3/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/FCDG3 routines are listed in Table 2.1-1.

Table 2.1-1 CUDG3/FCDG3 Test Routines

Item No.	Routine Name	Function
1	CUDG3B	Local memory/ Processor diagnosis
2	CUDG3C1	Processor diagnosis
3	ESW Test1	ESW common part diagnosis by a delegated processor
4	ESW Test2	ESW occupation part diagnosis by a delegated processor in MPPK
5	CUDG3C6	Shared resource diagnosis by a delegated processor (CACHE)
6	CHA/DKA Test	CHA/DKA diagnosis by a delegated processor
7	FCDG3	CS, for Serial/Parallel port, read/write test, internal diagnostic test, communication diagnostic test

2.2 CUDG4 (Control Unit Diagnosis 4)

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

2.2.1 CUDG4

CAUTION

If CUDG4 is executed, it may become impossible to guarantee the data on Cache Memory.

① Execute PS OFF and ON before CUDG Test. The data on CACHE is stored to HDD.

② Be sure the check the validity of CUDG Test to Technical Support Division 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.	Test Item (*2)	Function	Module extending
1	One_LSI_Init_Own_Group (*1)	The hard initialization of the own- module is executed by specified MP.	None
2	One_LSI_Init_Otr_Group (*1)	The hard initialization of the other-module is executed by specified MP. (Use by two module composition)	Done
3	One_MP_PK_Test	Specified MP PK is diagnosed.	None
4	One_ESW_PK_Test	ESW PK in own-module is diagnosed by specified MP.	None
5	All_CM_PK_Test	CM PK and CACHE MEMORY in own-module are diagnosed by specified MP.	None
6	All_CHADKA_PK_Test	Specified CHA/DKA PK is diagnosed by specified MP.	Done
7	All_Diag1_Test	The data transfer diagnosis between each PK is executed by specified MP.	Done
8	All_Cache_mem_Test1	CACHE MEMORY in own-module are diagnosed by specified MP. (Diagnosis by micro function)	None
9	All_Cache_Mem_Test2	CACHE MEMORY in own-module are diagnosed by specified MP. (Diagnosis by hard function)	None

(*1) It is necessary to execute “One_LSI_Init_Own_Group” and “One_LSI_Init_Otr_Group” in advance of other diagnostic routines.
In the execution of “One_LSI_Init_Own_Group” and “One_LSI_Init_Otr_Group”, select all MP.
Execute other diagnostic routines after confirming the normal termination of “One_LSI_Init_Own_Group” and “One_LSI_Init_Otr_Group”.

(*2) Test Item that starts by “One” is sequentially executed when two or more MP is selected, and Test Item that starts by “All” is executed in parallel.

[CUDG4 Set Parameter Screen]

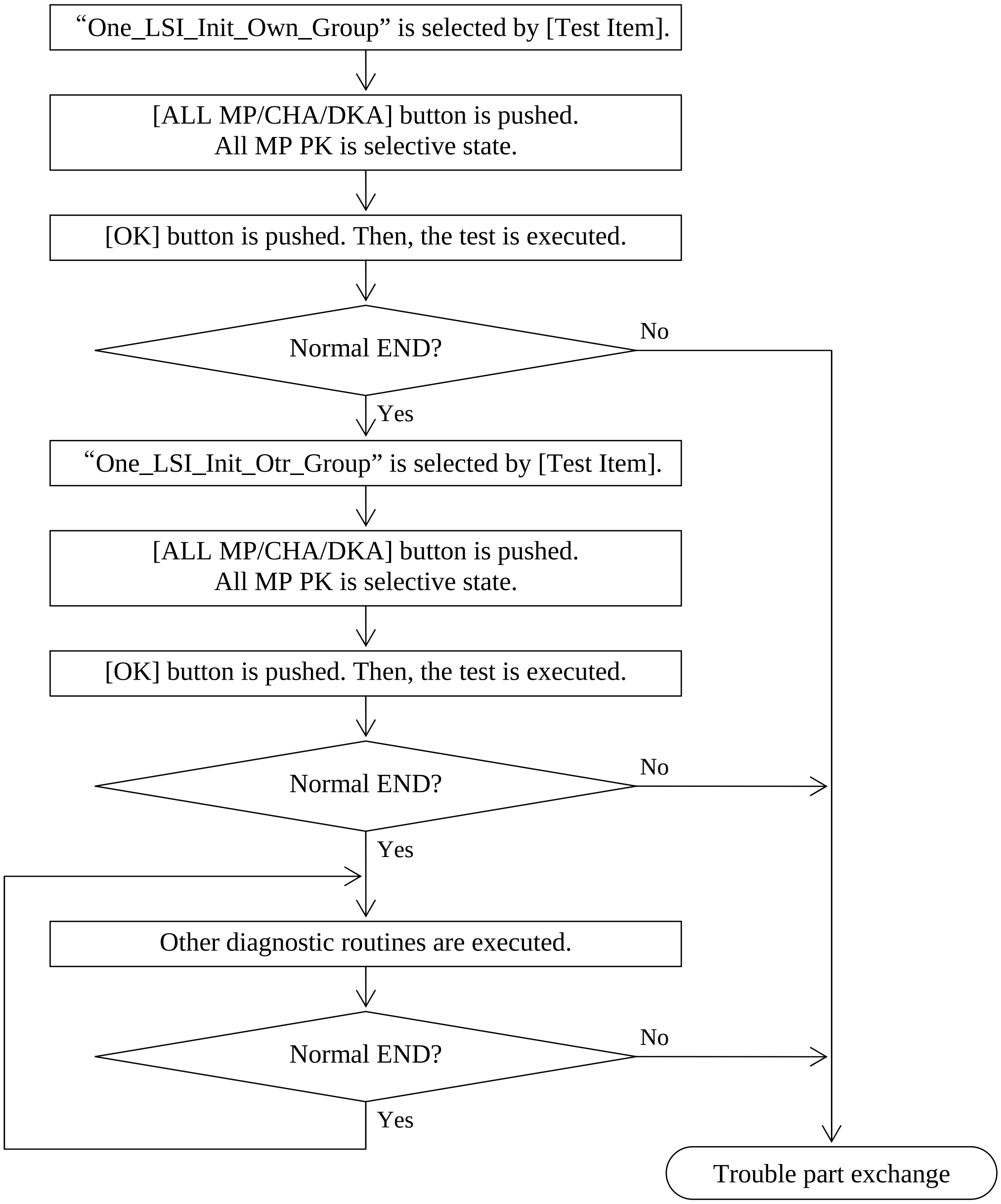

"One_LSI_Init_Own_Group" is selected by [Test Item].
[ALL MP/CHA/DKA] button is pushed.
All MP PK is selective state.
[OK] button is pushed. Then, the test is executed.
Normal END?
No
Yes
"One_LSI_Init_Otr_Group" is selected by [Test Item].
[ALL MP/CHA/DKA] button is pushed.
All MP PK is selective state.
[OK] button is pushed. Then, the test is executed.
Normal END?
No
Yes
Other diagnostic routines are executed.
Normal END?
No
Yes
Trouble part exchange

Table 2.2.1-2 CUDG4 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(Limit less) (*1)(*2)	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	Loop ___times (*2)	The CUDG test will be executed up to the specified frequency. (2～999)	
4	Error Loop(Limit less) (*1)(*2)	CUDG test will be executed continuously.	CUDG test continues. And an error detail is displayed on the SVP screen when CUDG test ends. But the CUDG will continues testing.
5	Error Loop ___times (*2)	The CUDG test will be executed up to the specified frequency. (2～999)	
6	Error Log(Limit less) (*1)(*2)	CUDG test will be executed continuously.	CUDG test continuous. And an error detail will be displayed on the SVP screen when CUDG test ends. After finishing the CUDG function, refer to Diag log.
7	Error Log ___times (*2)	The CUDG test will be executed up to the specified frequency. (2～999)	

*1: When “Limit less” is selected, Test Item that starts by “One” is executed only by head MP# in selected MP. Please specify the test frequency when you operate Test Item that starts by “One” with two or more MP.

*2: Please push [STOP] button when you stop the test continuously executed. [STOP] button might not be accepted unusually. At that time, please push [STOP] button again. It is likely to hang for a few minutes until stopping though the diagnosis time is different according to Test Item.

2.3 INLINE CUDG (INLINE Control Unit Diagnosis)

INLINE CUDG checks the validity of Cache memory when the entire disk subsystem is running normally. The INLINE CUDG test routines are listed in Table 2.3-1.

Table 2.3-1 INLINE CUDG Test Routines

Item No.	Routine Name	Function
1	Cache memory system	CACHE PCB 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 2.4-1 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.
C4	HDU SELF TEST	Issues the SEND DIAG (Self Test) command to the HDD and verifies that the terminates normally.

Notes:

- All logical devices must be in the “BLOCKED” state. If not, the test routine will error-terminate. Refer to from SVP02-890 of SVP SECTION for all logical devices blocked.
- The previous test routines must have been terminated normally before the pertinent test routine is started.
- The Disk Controller should have been powered on normally.

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 2.5-1.
Moreover, the thing for which only the diagnostic routine shown in diagnostic order at the time of introduction is performed at the time of equipment introduction. It is not performing manually, since diagnosis is automatically performed in extension processing when extending DKU to an established subsystem. (It will become a serious error if it performs manually.)

Table 2.5-1 DKU PATH INLINE Test Routine

Introduction diagnostic order	Routine ID	Execution propriety under ONLINE	Test Name	Function	Maximum execution time (*4)			
					1HDD	16HDD	32HDD	256HDD
1	A0	○ (*5)	Path Address TEST1	Checks whether the selected DKA and HDU are correctly connected.	About 1 min.	About 1 min.	About 1 min.	About 1 min.
—	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. (*2)	About 10 sec.	About 2 min.	About 3 min.	About 13 min.
2 (*1)	A3	×	HDD READ TEST	Executes the Read Test of the mounted HDD is executed. (*3)	About 10 sec. (*6)	About 3 min. (*6)	About 5 min. (*6)	About 13 min. (*6)
					About 15 sec. (*7)	About 4 min. (*7)	About 10 min. (*7)	About 35 min. (*7)

Notes:
*1: Do not perform when the subsystem is online, or when HDD installation or when DKU installation are performed. Only run this routine during a new Install, and before customer data is present.
*2: The routine A2 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.
*3: The routine A3 executes Read Test to all equipped HDD. Therefore, you must not execute this operation during ONLINE.
*4: The maximum execution times here is the time when communication is normal. Communication time-out, is 3 minutes plus the above time.
*5: Do not perform it manually, since diagnosis is automatically performed in the subsystem maintenance processing.
*6: The execution time in Standard model.
*7: The execution time in High performance model.

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 2.6-1 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".	

3. DIAG Parts

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

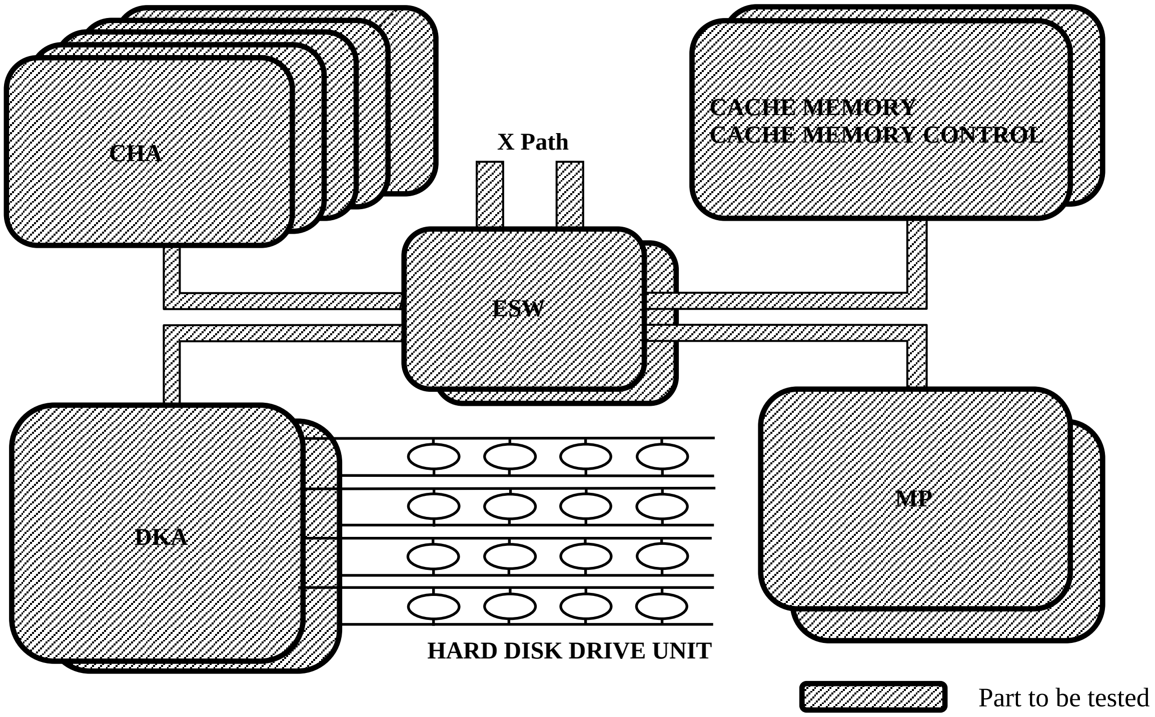


Fig. 3-1 Parts Subject to CUDG3/CUDG4 Tests

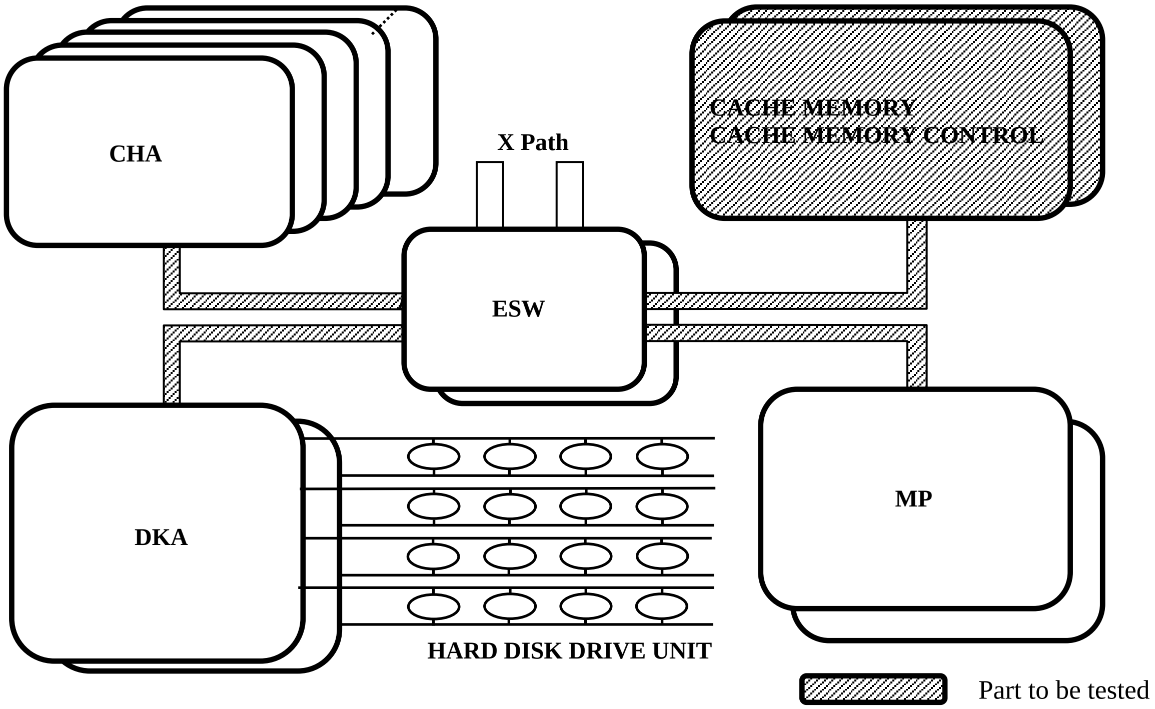


Fig. 3-2 Parts Subject to INLINE CUDG Tests

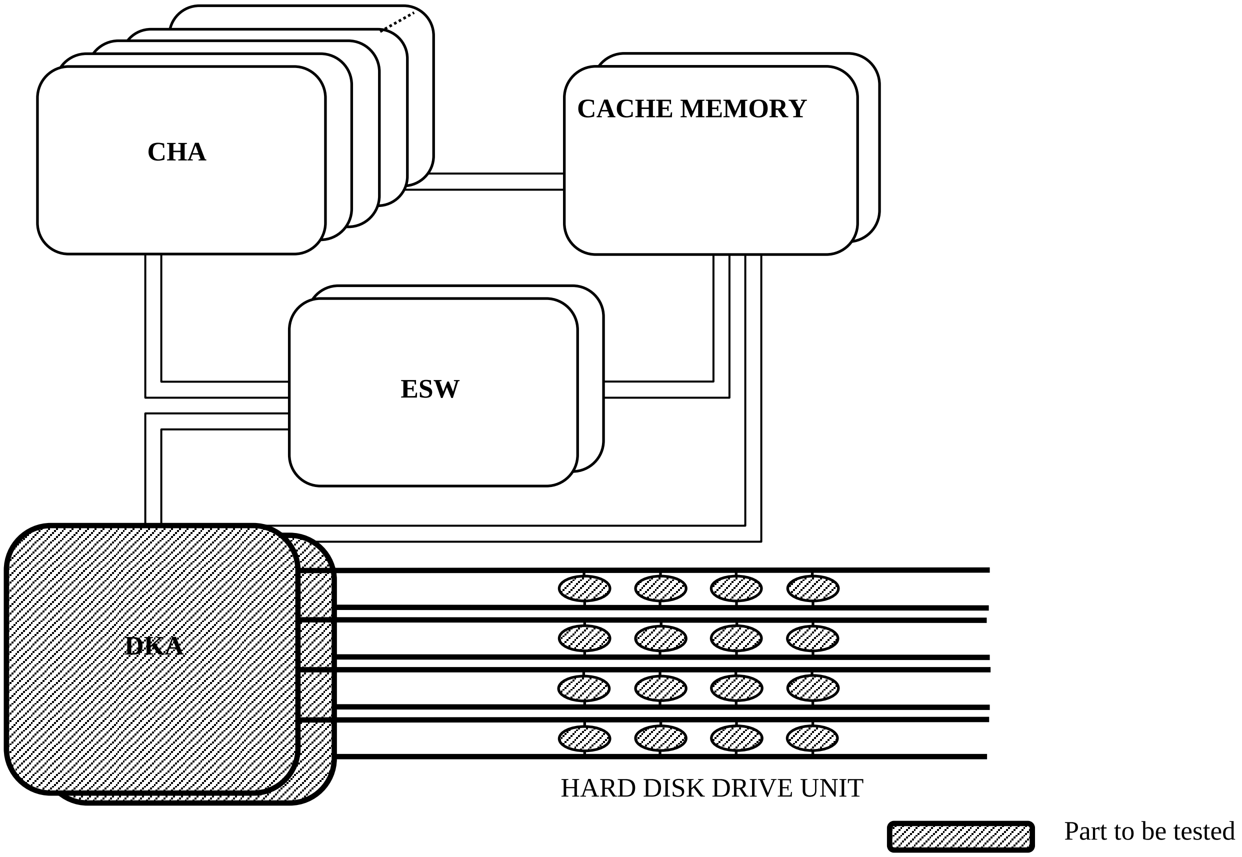


Fig. 3-3 Parts Subject to DKU INLINE Tests

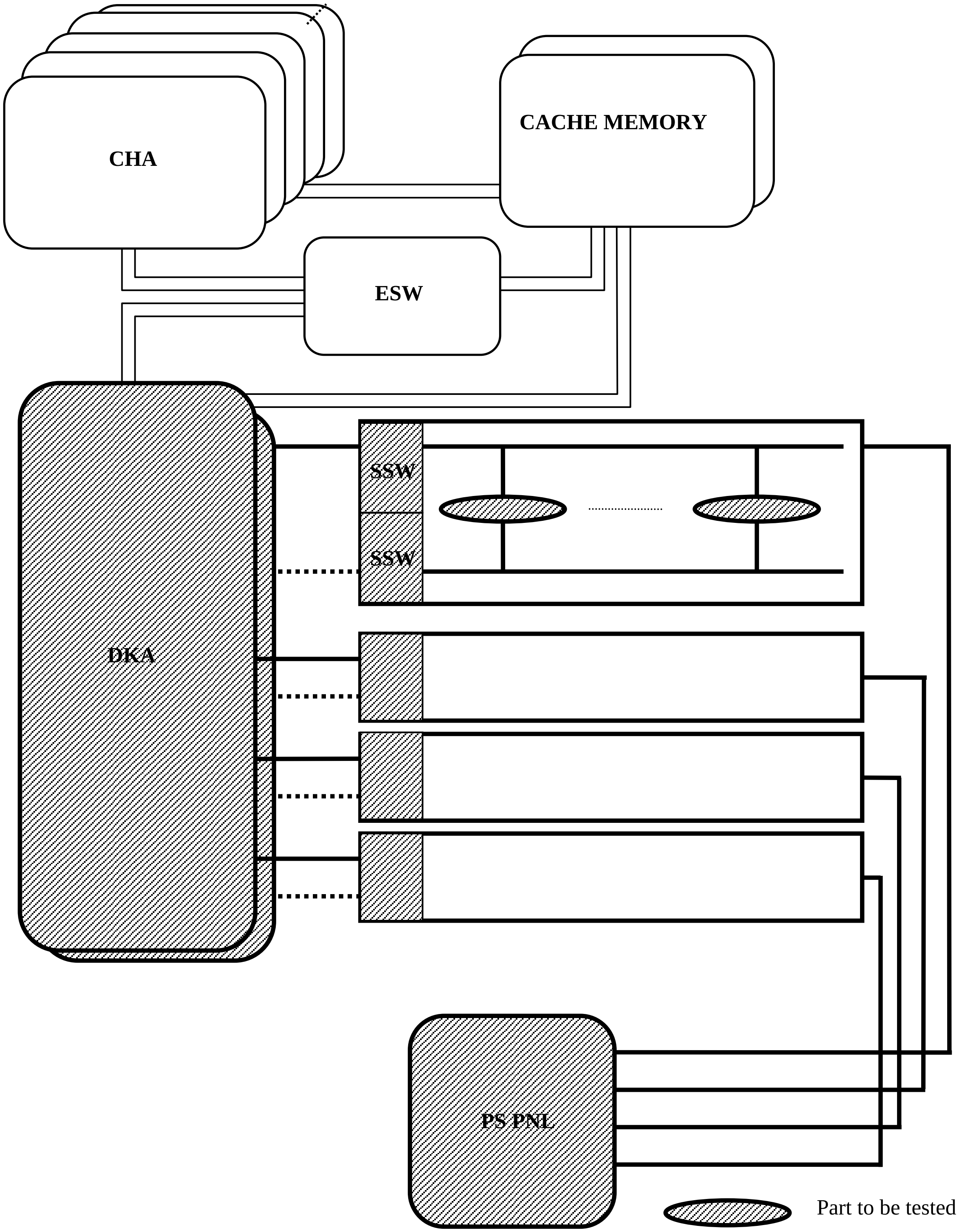


Fig. 3-4 Parts Subject to DKU PATH INLINE Tests

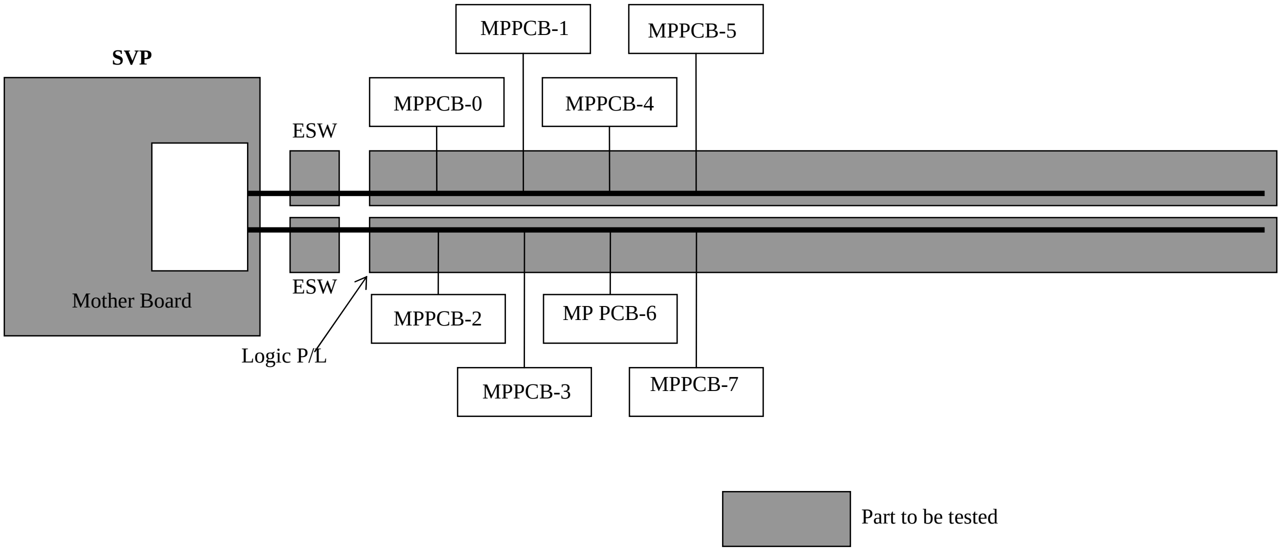


Fig. 3-5 Parts Subjects to LAN check

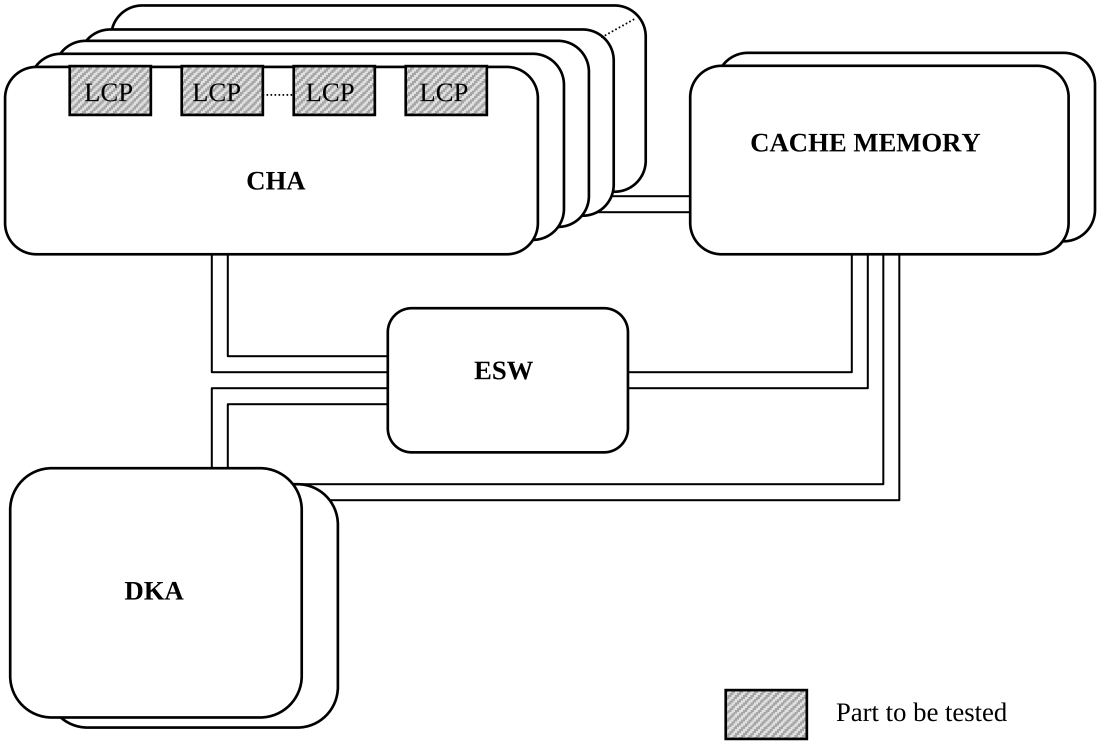


Fig. 3-6 Parts Subject to LCDG4 Tests

4. DIAG Test Procedures (SVP Operations)

4.1 CUDG4 Test Procedures

CAUTION

① If CUDG4 is executed, it may become impossible to guarantee the data on Cache Memory.
- Execute PS OFF and ON before CUDG Test. The data on CACHE is stored to HDD.
- Be sure to check the validity of CUDG Test to Technical Support Division before CUDG Test.

② Powering off/on is required owing to the performance of this operation.

1. <Execute PS OFF>
   Turn off the DKC subsystem by performing the PS-OFF operation.

---

2. <PS ON with CE-Mode>
   Set the Maintenance Jumpers to CE Mode connectors, then execute PS ON.

---

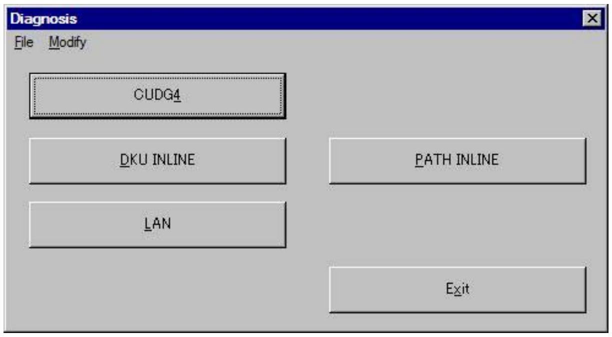
3. <SVP Initial screen>
   Refer to SVP01-120.

---

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

---

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

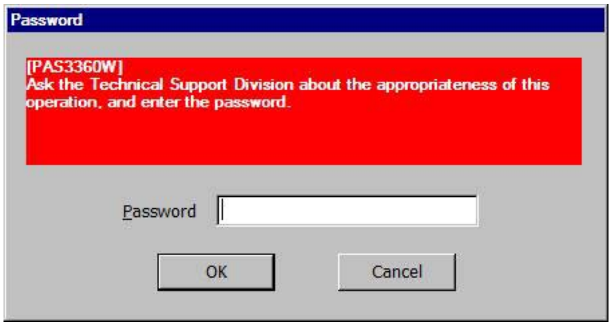


6. <Password>

⚠ CAUTION

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

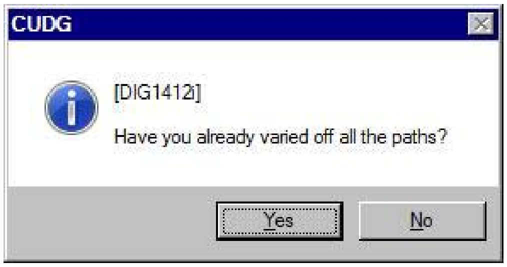
If you want to continue this process, enter the password, and select (CL) [OK].



[PAS3360W]
Ask the Technical Support Division about the appropriateness of this operation, and enter the password.

---

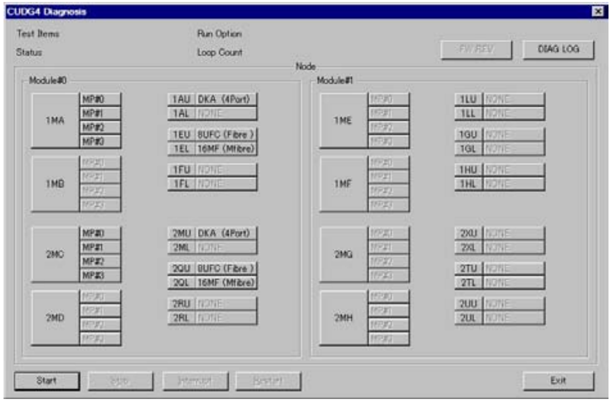
7. <Confirming that the channel path has been varied off>
An inquiry "Have you already varied off all the paths?" is displayed.
Vary off the channel path, then select (CL) the [Yes] button.



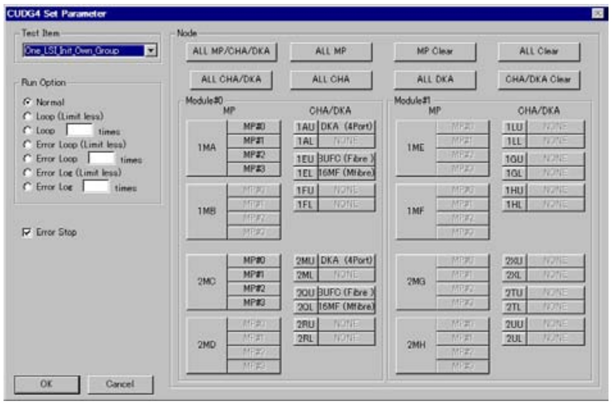
[DIG1412i]
Have you already varied off all the paths?

---

8. <Start of CUDG4 test>
Select (CL) [Start].



9. <Setting test parameters>
Select a Test Item, Run Option, test object CHA/DKA and a test object processor from Test Item.
Select (CL) the [OK] button after all the above selections are made.


CUDG4 Set Parameter

Test Item: One_LSI_Init_Own_Group

Run Option: ● Normal

☑ Error Stop

[Test Item]
Refer to DIAG02-30.

[Run Option]
Refer to DIAG02-50.

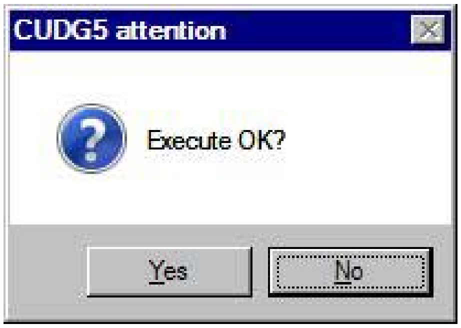
[Error Stop]
When the error is detected when two or more MP (processor) is selected and Test Item that starts by “One” is executed, the execution of the following MP is stopped.

[Test object processors]
ALL MP/CHA/DKA : The test is executed on all the processors and all the CHA/DKA in the configuration.
ALL MP : The test is executed on all the processors in the configuration.
ALL CHA/DKA : The test is executed on all the CHA/DKA in the configuration.
ALL CHA : The test is executed on all the CHA in the configuration.
ALL DKA : The test is executed on all the DKA in the configuration.
MP Clear : Release of processor selection.
ALL Clear : Release of all selection.
CHA/DKA Clear : Release of CHA/DKA selection.

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

---

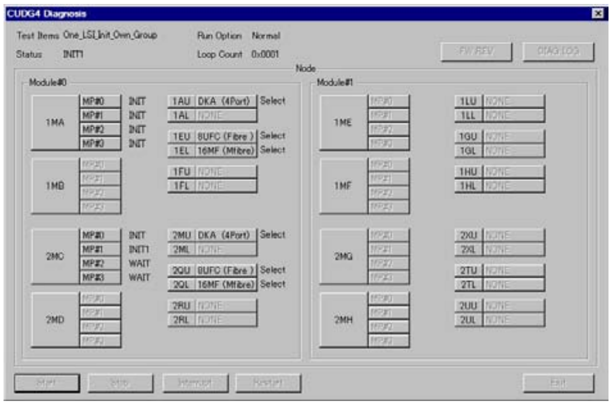
10. <Confirmation of execution>
The execution confirmation message is displayed.
Select (CL) [Yes].


CUDG5 attention

Execute OK?

11. <Displaying CUDG4 loading>
Statuses of INIT1, INIT2, INIT3 and WAIT are displayed on the 'CUDG4' screen.

If Load is done once, it is not executed until returning to the Diagnosis screen of step 5.



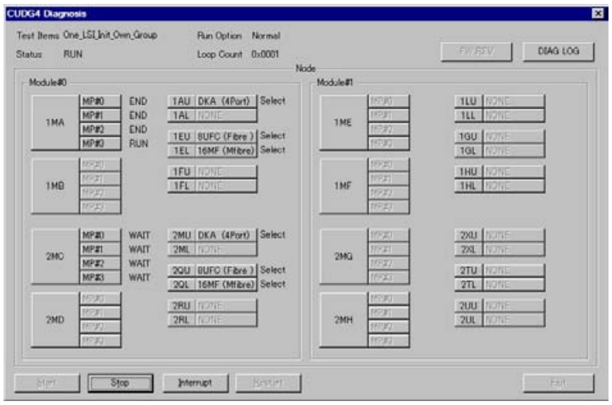
CUDG4 Diagnosis

Test Items One_LSI_Init_Own_Group
Run Option Normal
Status INIT1
Loop Count 0x0001

---

12. <Displaying Run>
State of the run is displayed on the 'CUDG4' screen.
Normal end state:
'WAIT'->'RUN'->'END'
Abnormal end state:
'WAIT'->'RUN'->'ERR'

Normal end----------- Go to step 11.
Abnormal end-------- Go to step 10.



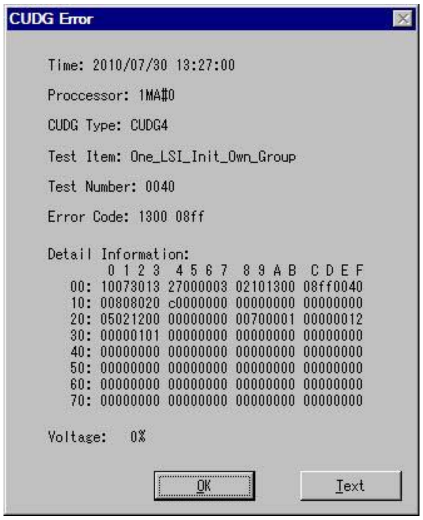
CUDG4 Diagnosis

Test Items One_LSI_Init_Own_Group
Run Option Normal
Status RUN
Loop Count 0x0001

13. <Displaying error>

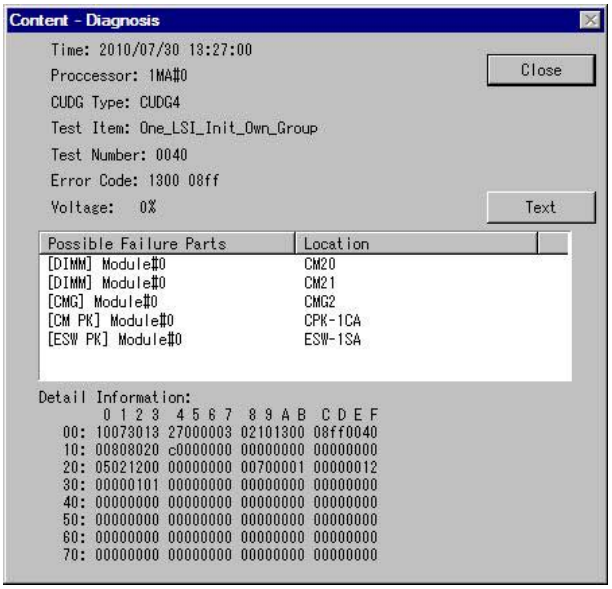
    If an error occurs in CUDG4 test, the CUDG Error window is displayed.

    To execute CUDG4 again, go to step 15 -> step 16 -> step 5.
    To terminate CUDG4, go to step 15 -> step 16 -> step 17.



```
Time: 2010/07/30 13:27:00

Proccessor: 1MA#0

CUDG Type: CUDG4

Test Item: One_LSI_Init_Own_Group

Test Number: 0040

Error Code: 1300 08ff

Detail Information:
          0 1 2 3  4 5 6 7  8 9 A B  C D E F
     00: 10073013 27000003 02101300 08ff0040
     10: 00808020 c0000000 00000000 00000000
     20: 05021200 00000000 00700001 00000012
     30: 00000101 00000000 00000000 00000000
     40: 00000000 00000000 00000000 00000000
     50: 00000000 00000000 00000000 00000000
     60: 00000000 00000000 00000000 00000000
     70: 00000000 00000000 00000000 00000000

Voltage:   0%
```

The error screen accumulated by selecting the [DIAG LOG] button on the CUDG4 Diagnosis screen is displayed.



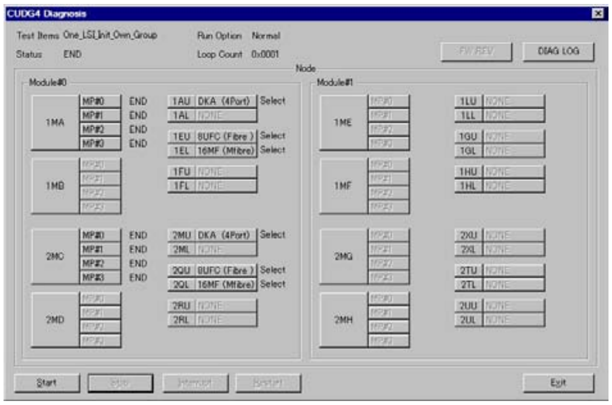
```
Time: 2010/07/30 13:27:00
Proccessor: 1MA#0
CUDG Type: CUDG4
Test Item: One_LSI_Init_Own_Group
Test Number: 0040
Error Code: 1300 08ff
Voltage:   0%
```

Possible Failure Parts	Location
[DIMM] Module#0	CM20
[DIMM] Module#0	CM21
[CMG] Module#0	CMG2
[CM PK] Module#0	CPK-1CA
[ESW PK] Module#0	ESW-1SA

```
Detail Information:
          0 1 2 3  4 5 6 7  8 9 A B  C D E F
     00: 10073013 27000003 02101300 08ff0040
     10: 00808020 c0000000 00000000 00000000
     20: 05021200 00000000 00700001 00000012
     30: 00000101 00000000 00000000 00000000
     40: 00000000 00000000 00000000 00000000
     50: 00000000 00000000 00000000 00000000
     60: 00000000 00000000 00000000 00000000
     70: 00000000 00000000 00000000 00000000
```

14. <Displaying End>
Status “END” is displayed for the processor that CUDG4 test ends.

To continue CUDG4, go to step 8.
To terminate CUDG4, go to step 15.

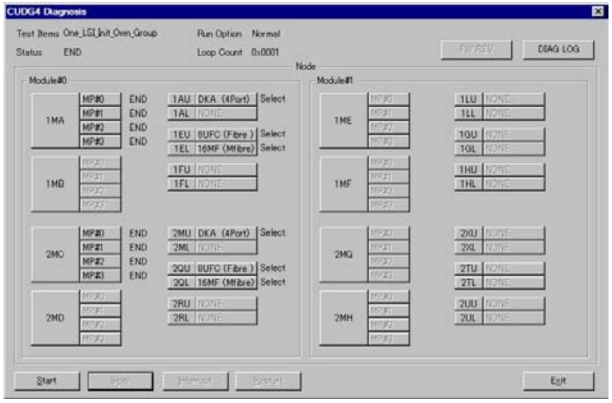


CUDG4 Diagnosis

Test Items One_LSI_Init_Own_Group
Status END
Run Option Normal
Loop Count 0x0001

---

15. <Displaying Exit>
Select (CL) [Exit].

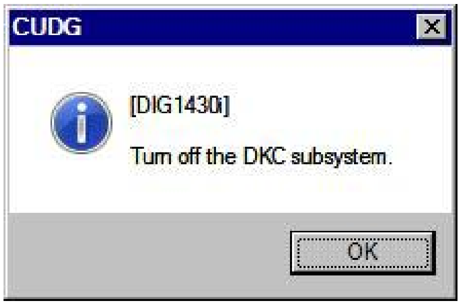


CUDG4 Diagnosis

Test Items One_LSI_Init_Own_Group
Status END
Run Option Normal
Loop Count 0x0001

---

16. <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.
To continue CUDG4, PS-ON operation and go to step 5.
To terminate CUDG4, go to step 17.



CUDG

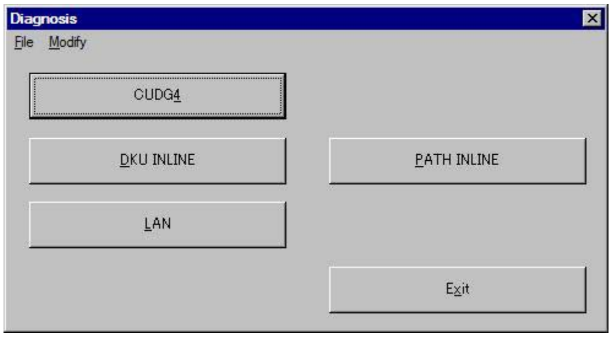
[DIG1430I]

Turn off the DKC subsystem.

---

17. <Detaching of Maintenance Jumper>
The Maintenance Jumper is detached from the CE-Mode connector.

18. <Reboot the PC and PS-ON>
‘Diagnosis’ window is displayed.
- Close the window
- Reboot the PC
  - Power Off SVP (See SVP01-160.)
  - Power On SVP (See SVP01-150.)
- PS-ON



End of CUDG4 operation.

4.2 DKU INLINE Test Procedures

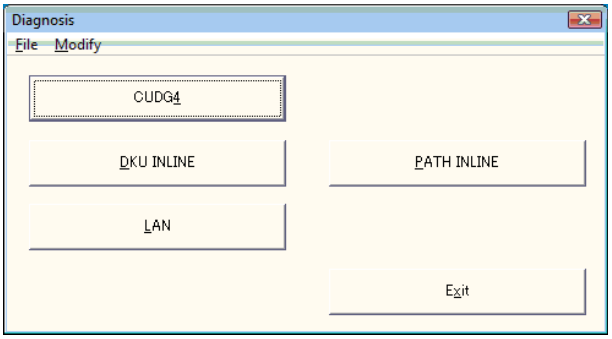
1. <Initial screen>

---

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

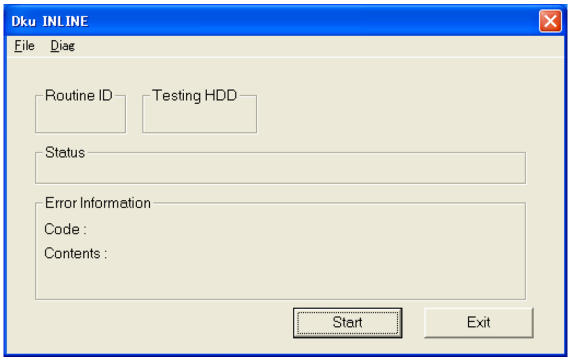
---

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



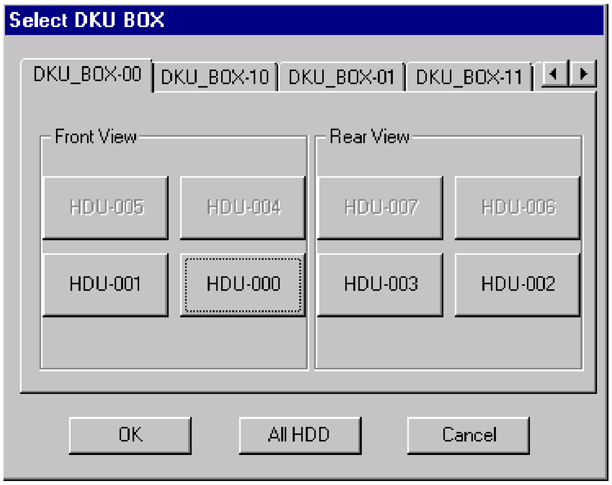
---

4. <Select [Start]>
Select (CL) [Start].



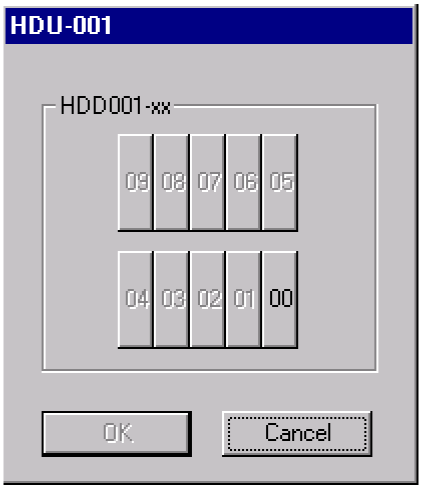
5. <Select UNIT to be tested>
   Select (CL) the UNIT for which the test routine is to be executed from ‘Select Unit’.

   When selecting each ‘UNIT’, go to 6.
   If ‘ALL HDD’ is selected, go to 9.

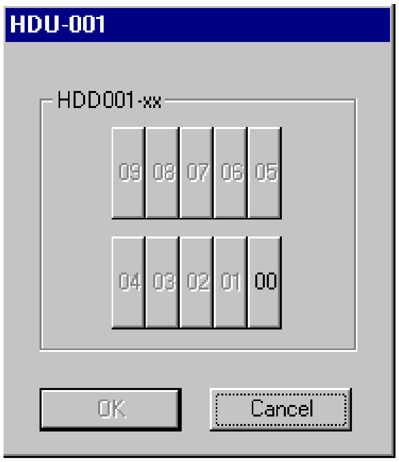


6. <Select HDU Group to be tested>
   Select (CL) the HDU Group for which the test routine is to be executed from ‘UNIT’.

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

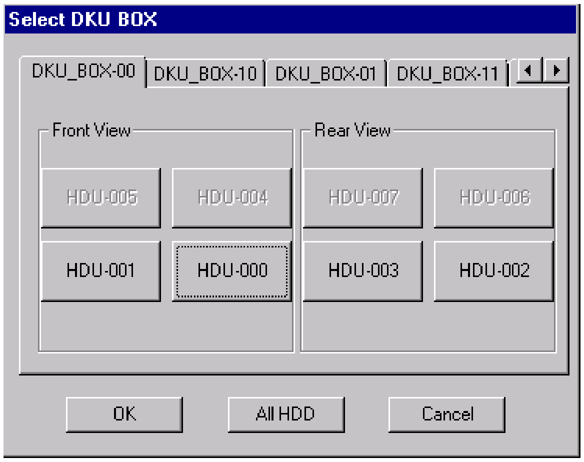


7. <Select HDD to be tested>
   Select (CL) HDD for which the test routine is to be executed from selected HDU Group.
   Then select (CL) the [OK] button.



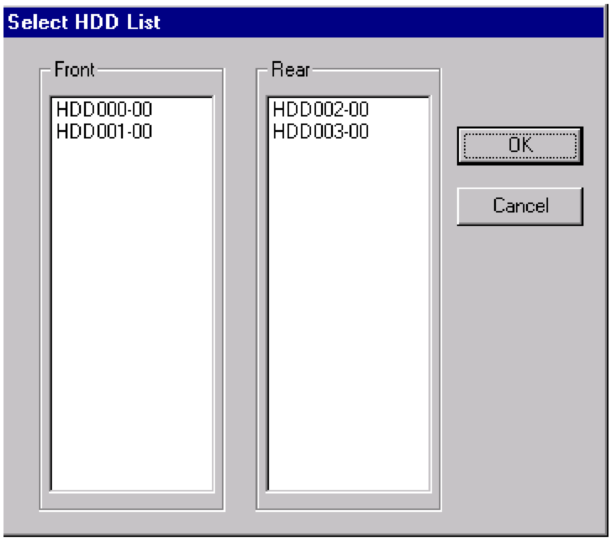
---

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



---

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

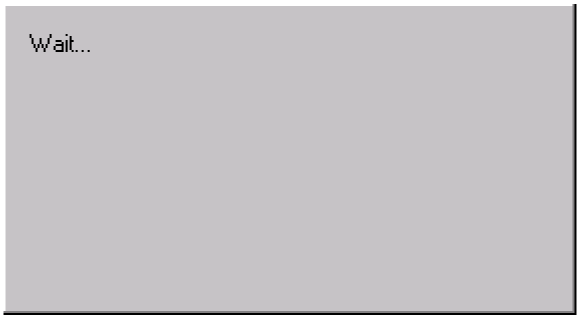


Front	Rear
HDD000-00	HDD002-00
HDD001-00	HDD003-00

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.

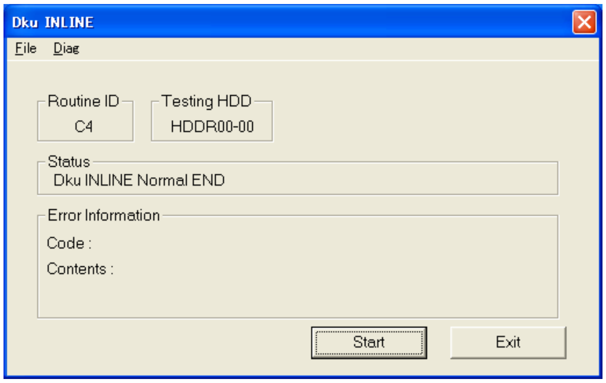


Wait...

---

11. <DKU INLINE end>

    After “Dku INLINE Normal END” is displayed in the Status field, select (CL) [Exit].

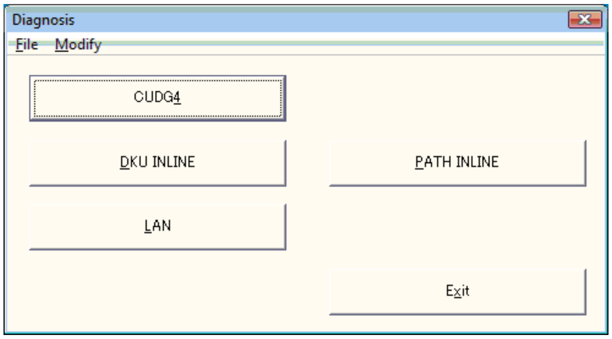


Routine ID: C4
Testing HDD: HDDR00-00
Status: Dku INLINE Normal END
Error Information
Code :
Contents :

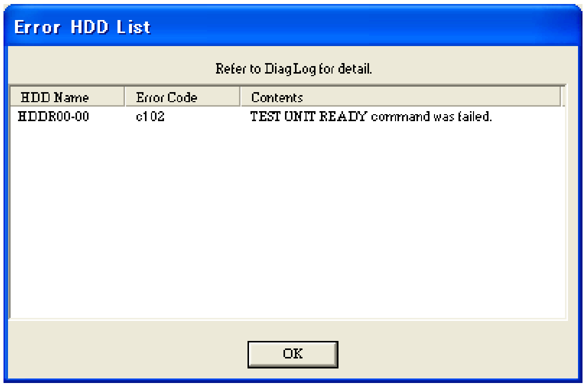
---

12. <Diagnosis end>

    Select (CL) [Exit].



13. <Displaying 'Error HDD'>
Error HDD List is displayed.
Select (CL) [OK].

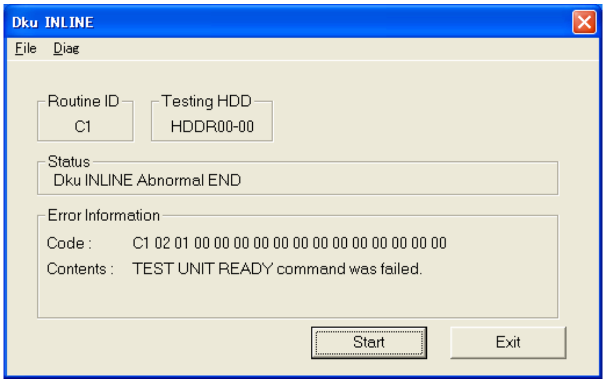


Refer to DiagLog for detail.

HDD Name	Error Code	Contents
HDDR00-00	c102	TEST UNIT READY command was failed.

---

14. <Error End>
"Dku INLINE Abnormal END" is displayed in the Status field.
Refer to "2.2 Log indication"(SVP02-30).
Select (CL) [Exit].
Go back to 12.



Routine ID: C1
Testing HDD: HDDR00-00
Status: Dku INLINE Abnormal END
Error Information
Code : C1 02 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Contents : TEST UNIT READY command was failed.

4.3 DKU PATH INLINE Test Procedures

4.3.1 A0 routine Test Procedures

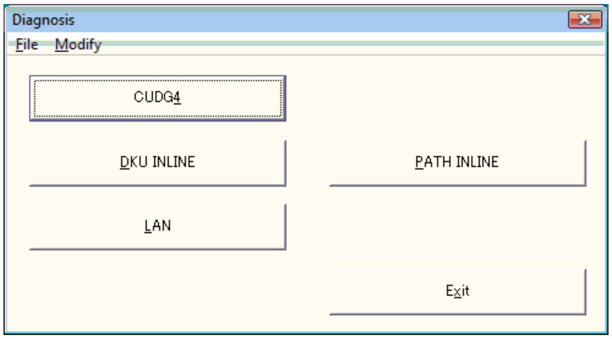
1. <Initial screen>

---

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

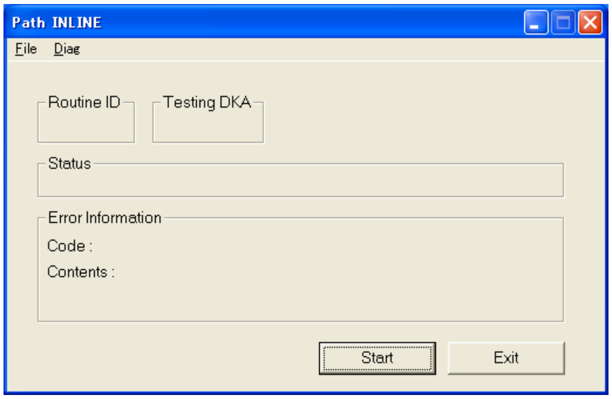
---

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

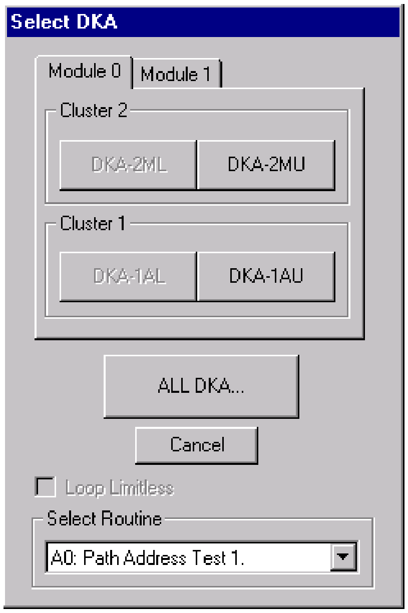


---

4. <Selecting [Start]>
Select (CL) [Start].



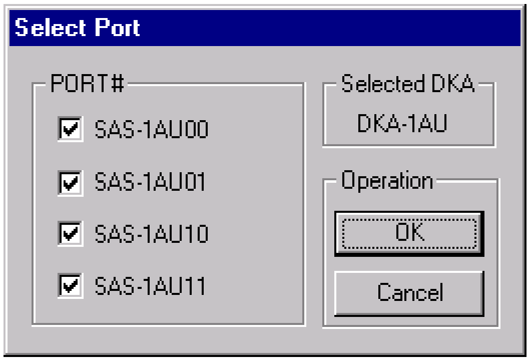
5. <Selecting Routine and the DKA>
Select the routine (A0) which is to be tested from “Select Routine”, select (CL) the DKA for which the test routine is to be executed.
If the [ALL DKA...] button is selected: Go to 7.



☐ Loop Limitless
Select Routine: A0: Path Address Test 1.

---

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.



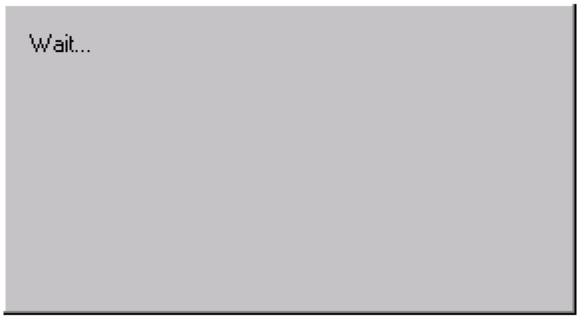
PORT#
☑ SAS-1AU00
☑ SAS-1AU01
☑ SAS-1AU10
☑ SAS-1AU11

Selected DKA: DKA-1AU

---

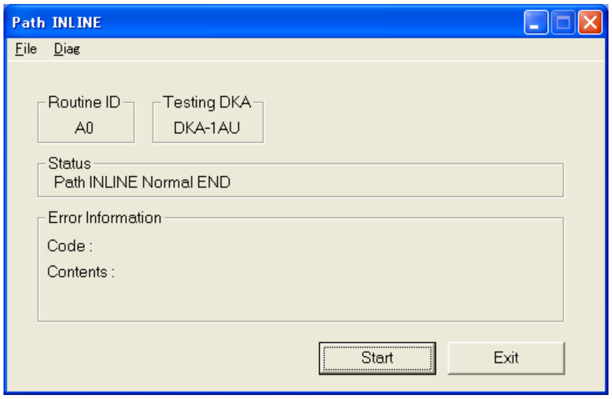
7. <Status Window>
The Status Window is displayed.

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



Wait...

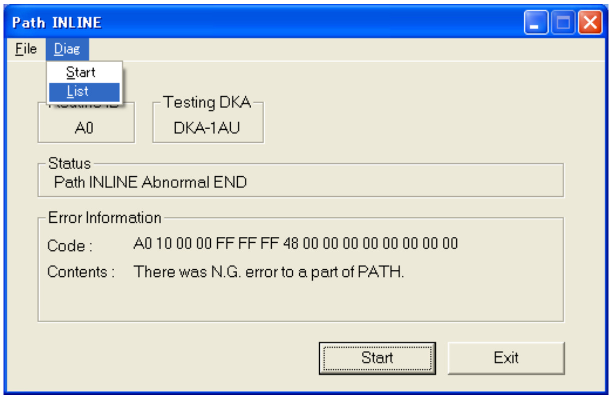
8. <Completing diagnosis>
After "Path INLINE Normal END" is displayed in the Status field, select (CL) [Exit].
Go to 13.



Routine ID: A0
Testing DKA: DKA-1AU
Status: Path INLINE Normal END
Error Information
Code :
Contents :

---

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



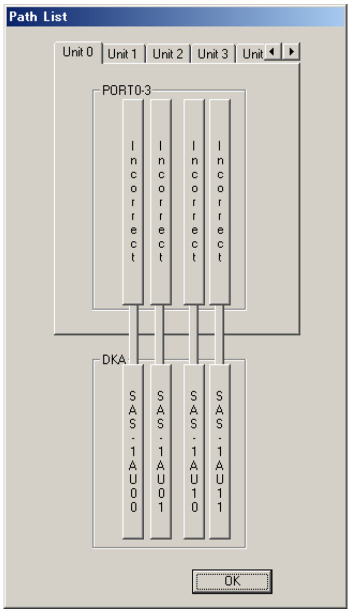
Routine ID: A0
Testing DKA: DKA-1AU
Status: Path INLINE Abnormal END
Error Information
Code : A0 10 00 00 FF FF FF 48 00 00 00 00 00 00 00 00
Contents : There was N.G. error to a part of PATH.

---

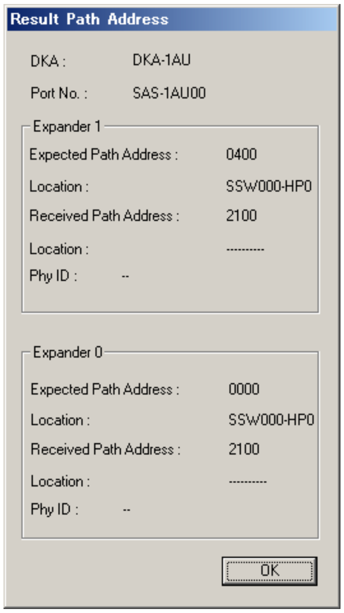
10. <Verification the incorrect part>
Select (CL) the incorrect part from [PORT].

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

If you want to display other UNIT, select (CL) [Unit Tab].



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



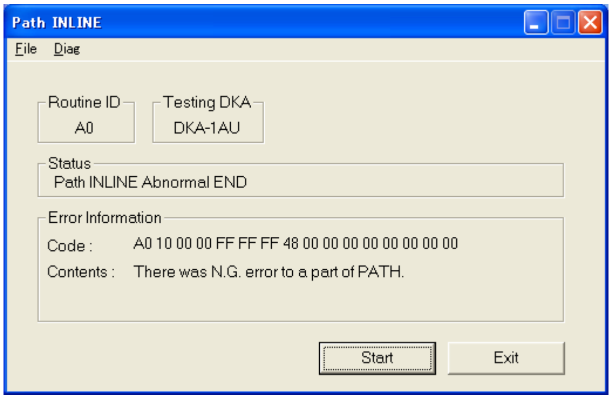
DKA : DKA-1AU
Port No. : SAS-1AU00

Expander 1
Expected Path Address : 0400
Location : SSW000-HP0
Received Path Address : 2100
Location : ---------
Phy ID : --

Expander 0
Expected Path Address : 0000
Location : SSW000-HP0
Received Path Address : 2100
Location : ---------
Phy ID : --

---

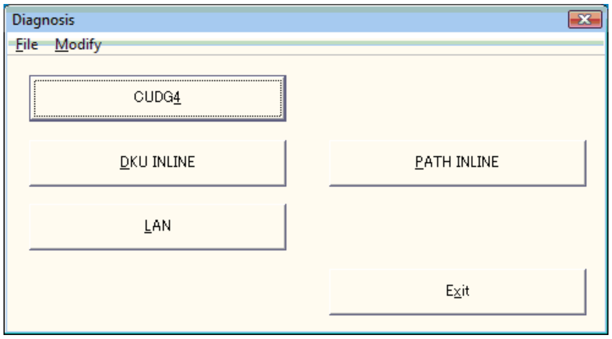
12. <DKU Path inline end>
After “Path INLINE Abnormal END” is displayed in the Status field, select (CL) [Exit].



Routine ID: A0
Testing DKA: DKA-1AU
Status: Path INLINE Abnormal END
Error Information
Code : A0 10 00 00 FF FF FF 48 00 00 00 00 00 00 00 00
Contents : There was N.G. error to a part of PATH.

---

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



4.3.2 A3 routine Test Procedures

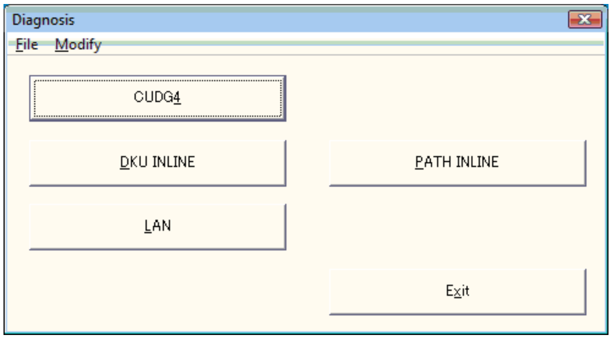
1. <Initial screen>

---

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

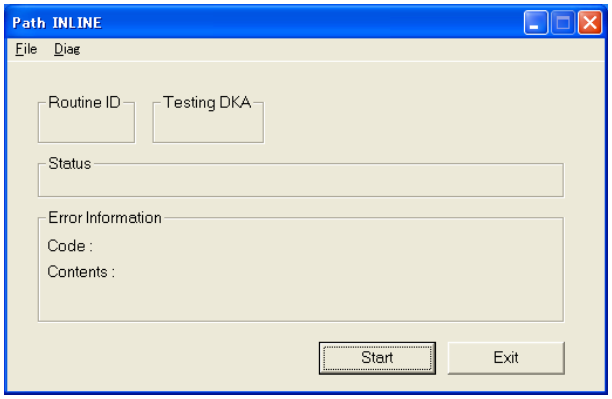
---

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

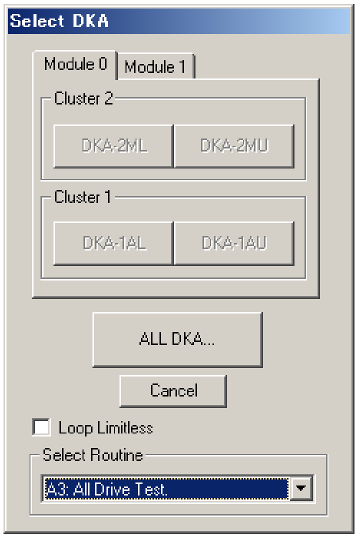


---

4. <Selecting [Start]>
   Select (CL) [Start].



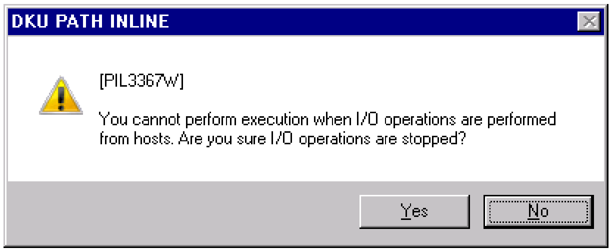
5. <Selecting the DKA >
   Select the routine (A3) which is to be tested from "Select Routine", Select (CL) the ALL DKA.
   In case you loop the diagnosis, check the "Loop Limitless" Check-Box.



☐ Loop Limitless
Select Routine: A3: All Drive Test.

---

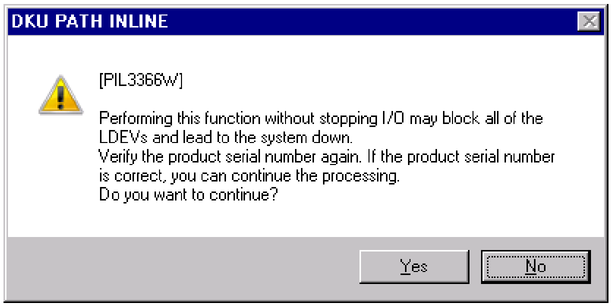
6. <I/O check>
   An inquiry "You cannot perform execution when I/O operations are performed from hosts. Are you sure I/O operations are stopped?" is displayed.
   It checks that I/O has stopped, then select (CL) the [Yes] button.



[PIL3367W]
You cannot perform execution when I/O operations are performed from hosts. Are you sure I/O operations are stopped?

---

7. <Execution check>
   An inquiry "Performing this function without stopping I/O may block all of the LDEVs and lead to the system down.
   Verify the product serial number again. If the product serial number is correct, you can continue the processing.
   Do you want to continue?" is displayed.
   Check the device manufacturer's serial number to continue to select (CL) [Yes] if they are correct.
   If different, the process is terminated select (CL) [No].



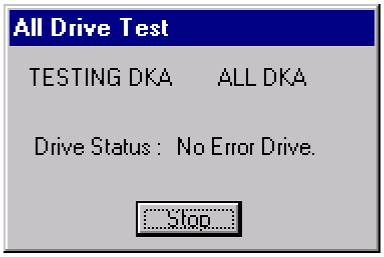
[PIL3366W]
Performing this function without stopping I/O may block all of the LDEVs and lead to the system down.
Verify the product serial number again. If the product serial number is correct, you can continue the processing.
Do you want to continue?

---

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

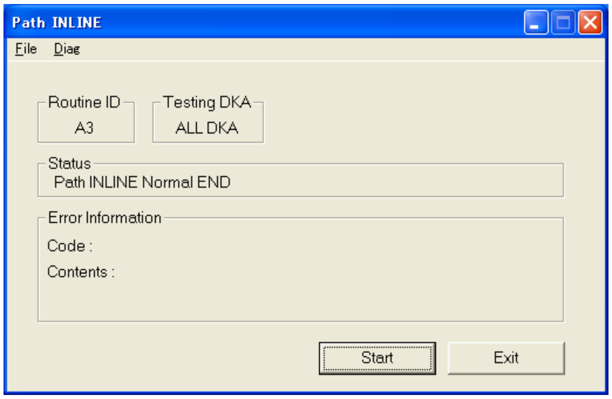
   Normal end ---------- Go to 9
   Abnormal end ------- Go to 10

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



TESTING DKA ALL DKA
Drive Status : No Error Drive.

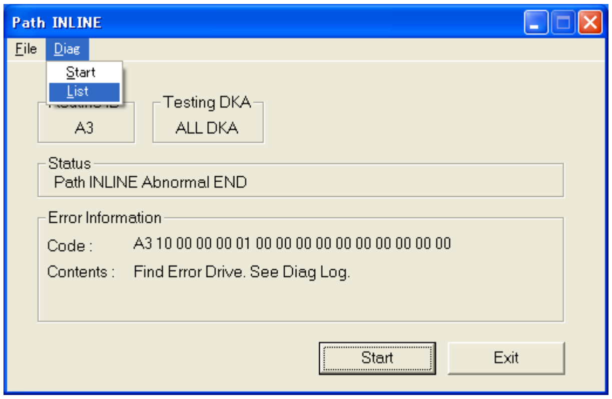
9. <DKU Path inline normal end>
After "Path INLINE NORMAL END" is displayed in the Status field, select (CL) [Exit].
Go to 14.



Routine ID: A3
Testing DKA: ALL DKA
Status: Path INLINE Normal END
Error Information
Code :
Contents :

---

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



Testing DKA: ALL DKA
A3
Status: Path INLINE Abnormal END
Error Information
Code : A3 10 00 00 00 01 00 00 00 00 00 00 00 00 00 00
Contents : Find Error Drive. See Diag Log.

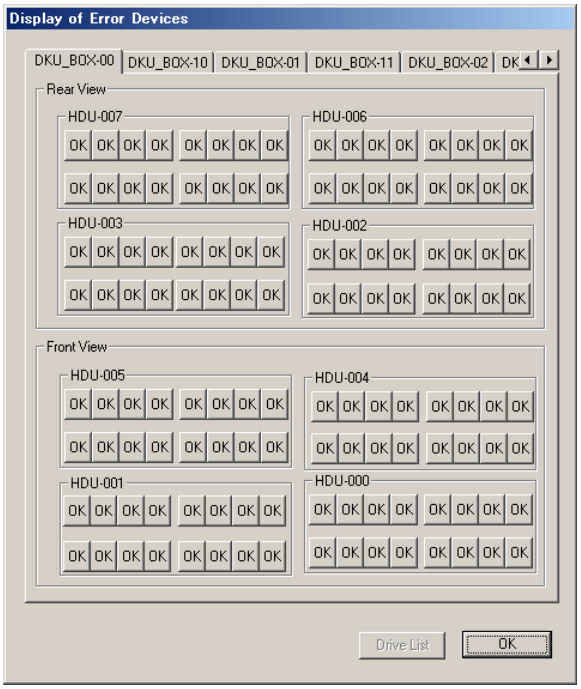
---

11. <Displaying the Error Devices>
"NG" is displayed in the PDEV installing position viewed in the R0-Unit.

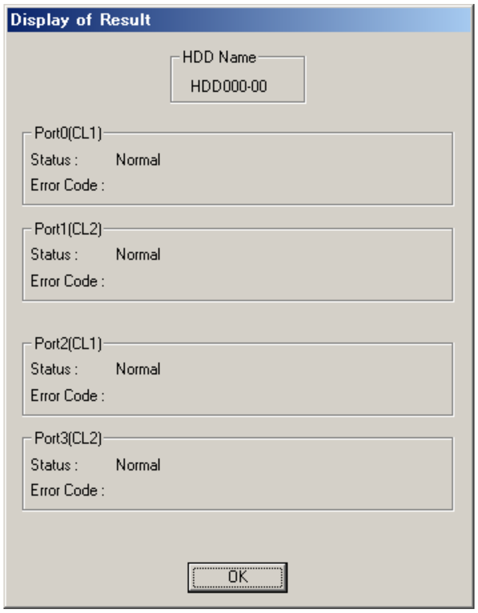
If you want to display other Unit, select (CL) [Unit Tab].

If you want to refer to more detailed information about the "NG" PDEV, select the [NG] button.
Go to 13.

"EQ" is displayed when the diagnosis ends on the way, and shows that equipped PDEV is undiagnosis.



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



HDD Name: HDD000-00

Port0(CL1)
Status : Normal
Error Code :

Port1(CL2)
Status : Normal
Error Code :

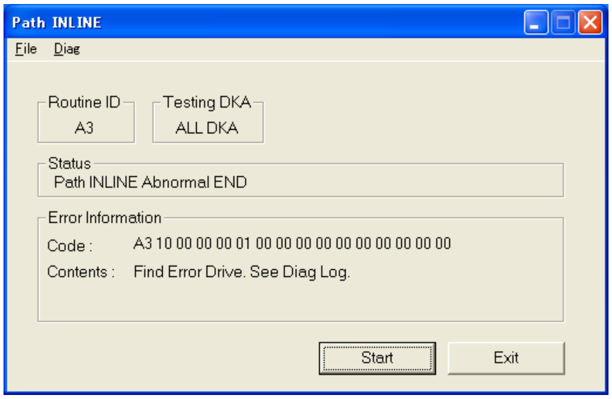
Port2(CL1)
Status : Normal
Error Code :

Port3(CL2)
Status : Normal
Error Code :

---

13. <DKU Path inline end>
    Select (CL) [Exit].

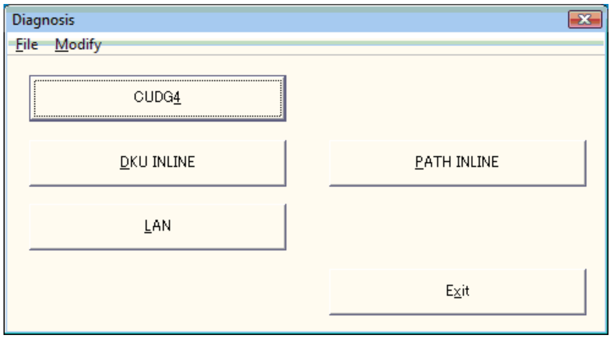
    Refer to "2.2 Log indication"(SVP02-30).



Routine ID: A3
Testing DKA: ALL DKA
Status: Path INLINE Abnormal END
Error Information
Code : A3 10 00 00 00 01 00 00 00 00 00 00 00 00 00 00
Contents : Find Error Drive. See Diag Log.

---

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



4.3.3 A2 routine Test Procedures

1. <Initial screen>

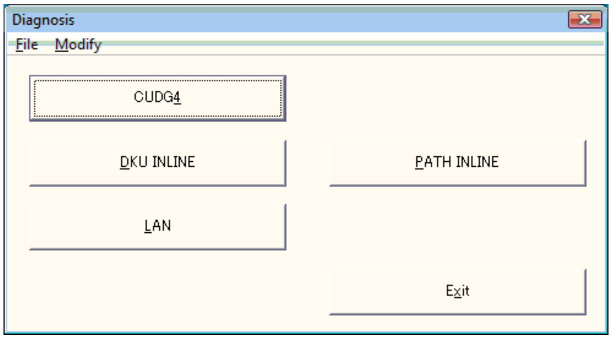
---

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

Note: Please call Technical Support Division for asking how to change the mode to Test Mode.

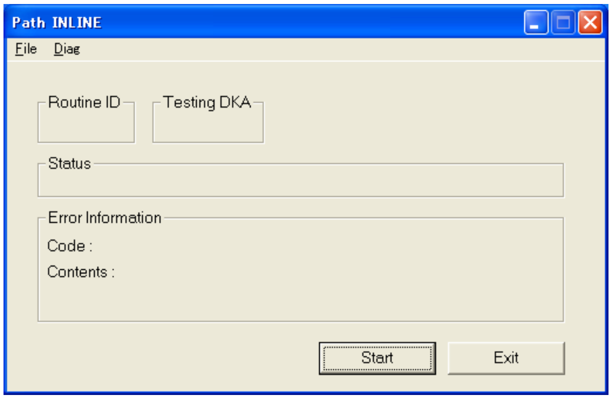
---

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

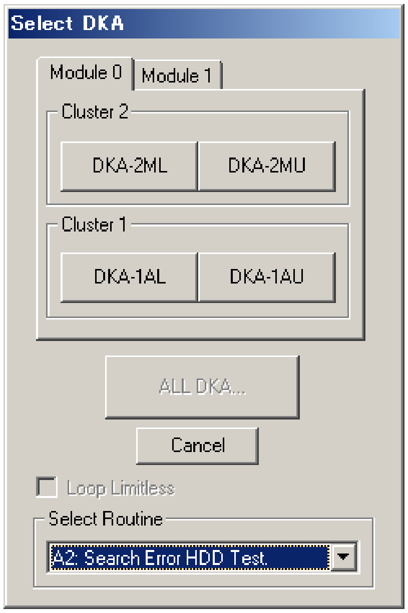


---

4. <Selecting [Start]>
Select (CL) [Start].



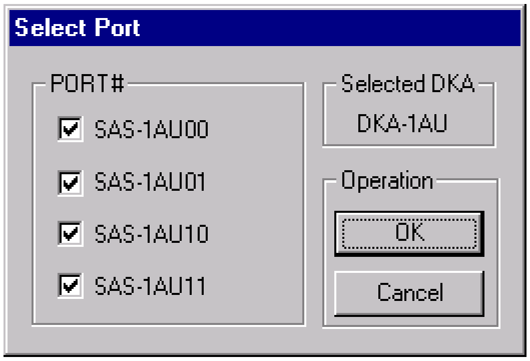
5. <Selecting Routine and the DKA>
   Select the routine (A2) which is to be tested from “Select Routine”, Select (CL) the DKA for which the test routine is to be executed.



Select Routine: A2: Search Error HDD Test

---

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.



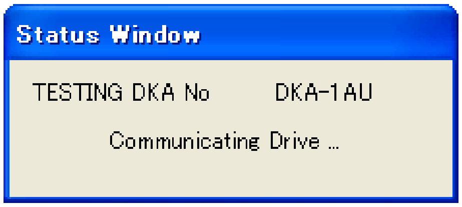
☑ SAS-1AU00
☑ SAS-1AU01
☑ SAS-1AU10
☑ SAS-1AU11

Selected DKA: DKA-1AU

---

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

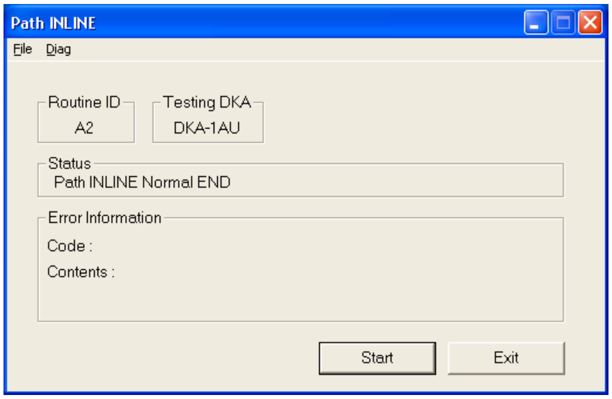
   Normal end ---------- Go to 8
   Abnormal end ------- Go to 9



TESTING DKA No DKA-1AU

Communicating Drive ...

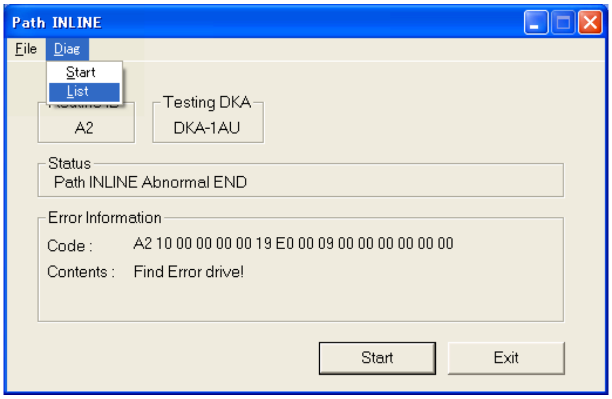
8. <DKU Path INLINE normal end>
After “Path INLINE Normal END” is displayed in the Status field, select (CL) [Exit].
Go to 13.



Routine ID: A2
Testing DKA: DKA-1AU
Status: Path INLINE Normal END
Error Information
Code :
Contents :

---

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



Routine ID: A2
Testing DKA: DKA-1AU
Status: Path INLINE Abnormal END
Error Information
Code : A2 10 00 00 00 00 19 E0 00 09 00 00 00 00 00 00
Contents : Find Error drive!

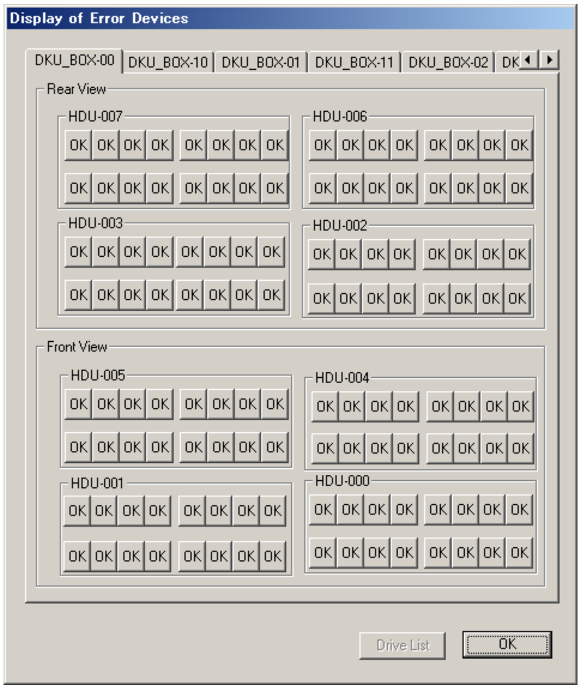
---

10. <Displaying the Error Devices>
“NG” is displayed in the PDEV installing position viewed in the R0-Unit.

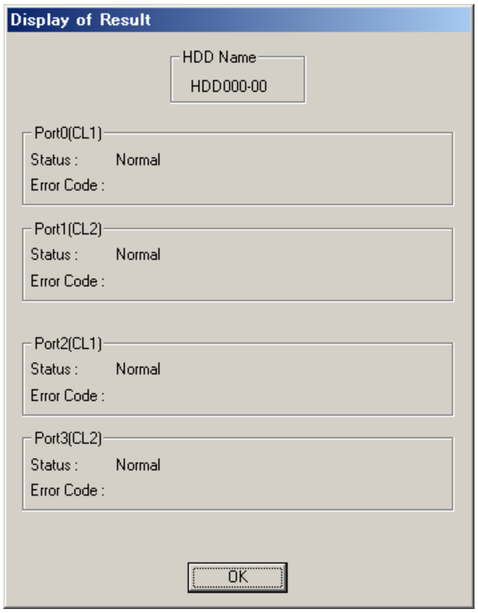
If you want to display other Unit, select (CL) [Unit Tab].

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

“EQ” is displayed when the diagnosis ends on the way, and shows that equipped PDEV is undiagnosis.



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



HDD Name: HDD000-00

Port0(CL1)
Status : Normal
Error Code :

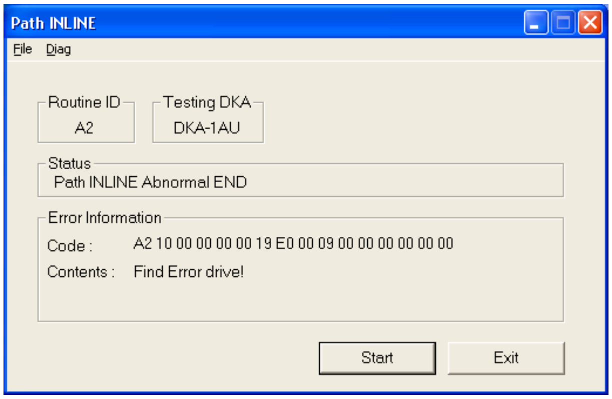
Port1(CL2)
Status : Normal
Error Code :

Port2(CL1)
Status : Normal
Error Code :

Port3(CL2)
Status : Normal
Error Code :

---

12. <DKU Path inline end>
Select (CL) [Exit].



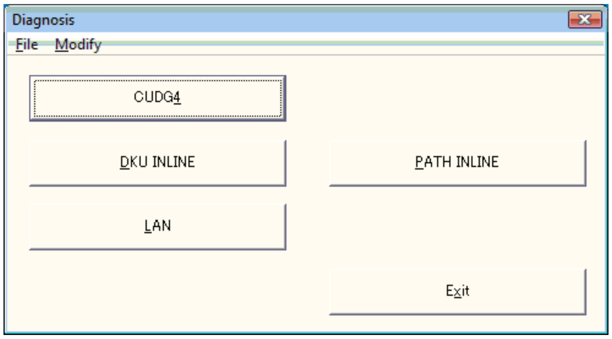
Routine ID: A2
Testing DKA: DKA-1AU

Status: Path INLINE Abnormal END

Error Information
Code : A2 10 00 00 00 00 19 E0 00 09 00 00 00 00 00 00
Contents : Find Error drive!

---

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



Blank Sheet

4.4 LAN Check Procedure

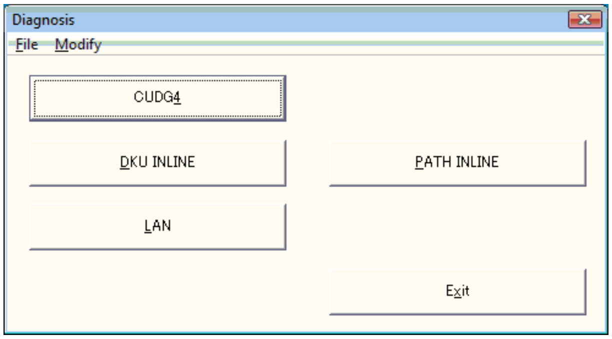
1. <Initial screen>

---

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

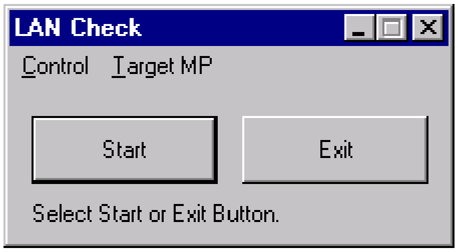
---

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



---

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

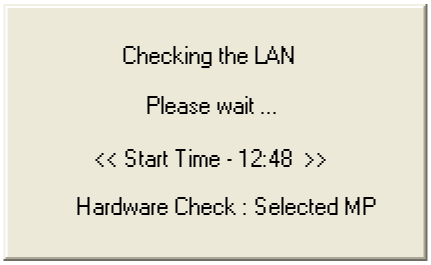


Select Start or Exit Button.

<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.



Checking the LAN

Please wait ...

<< Start Time - 12:48 >>

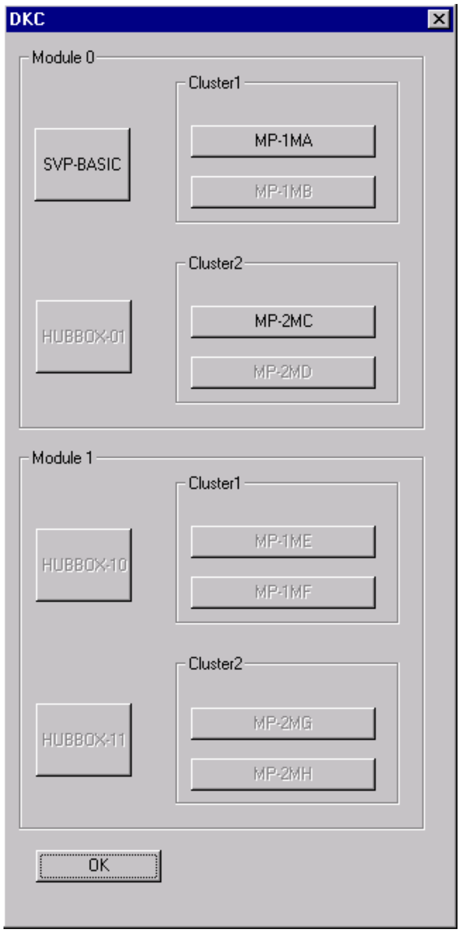
Hardware Check : Selected MP

---

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].

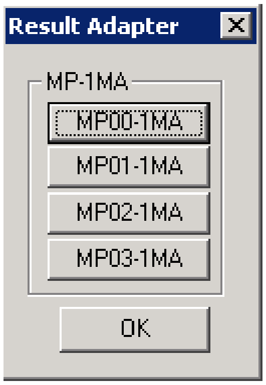
[Explanation on statuses]
The status is shown by the appearance of the button as follows:
Black : The test object is normal.
Blinking : The test object is abnormal.
Gray : The test object is not installed.



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.

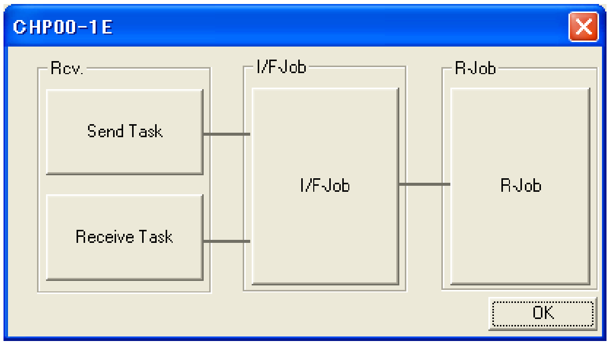
When the test object is connected by an FF-Ping but not installed:

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 Task 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]

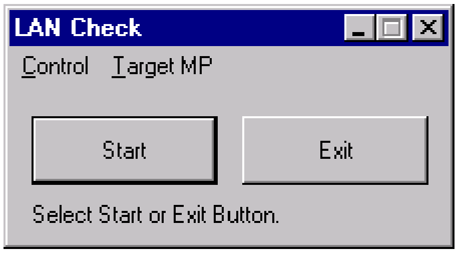
There are five types of status as shown below:

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.

---

7. <Exiting from LAN Check>

Select (CL) [Exit] in the ‘LAN Check’ window.



Select Start or Exit Button.

5. DIAG Trouble shooting

5.1 CUDG Trouble shooting

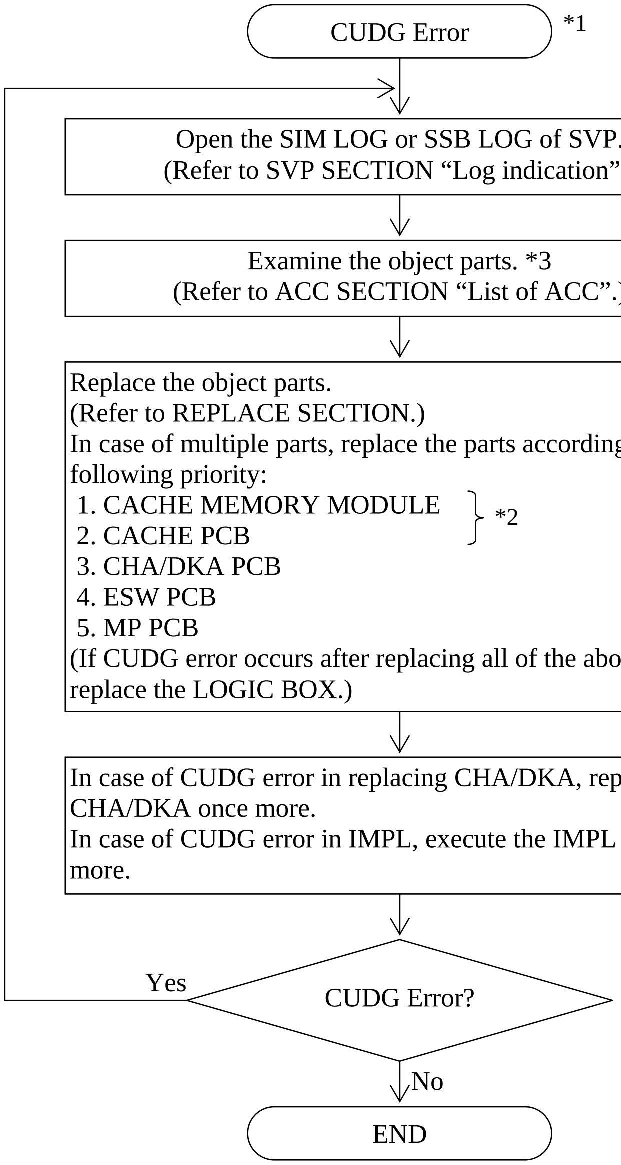
Procedures of CUDG Trouble Shooting depend on CUDG Error Opportunity.
The procedures are listed in Table 5.1-1 CUDG Trouble shooting Types.

Table 5.1-1 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).

5.1.1 CUDG3 Trouble shooting

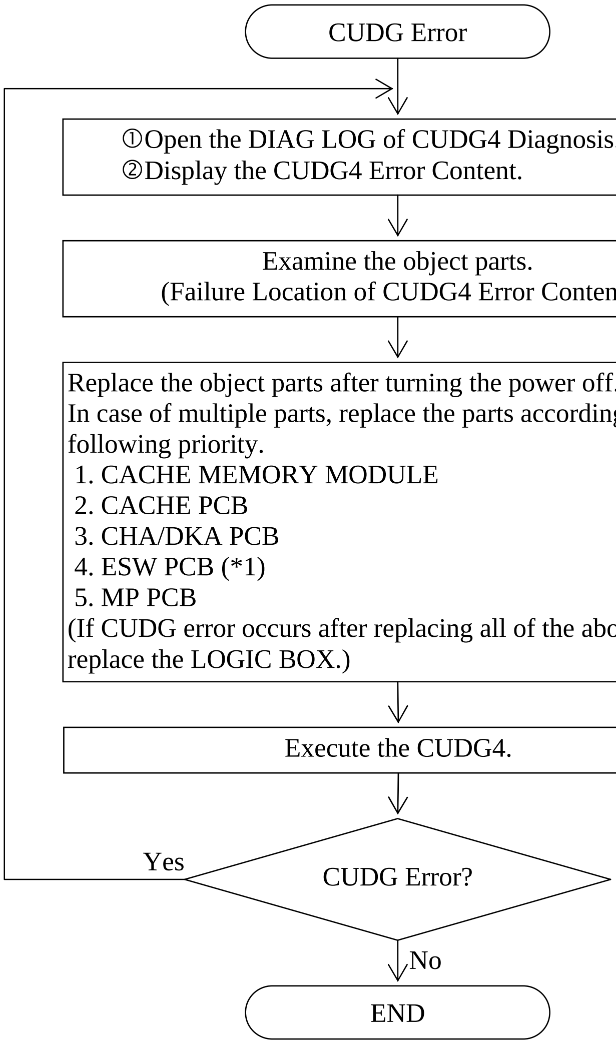

CUDG Error
*1
Open the SIM LOG or SSB LOG of SVP.
(Refer to SVP SECTION "Log indication".)
Examine the object parts. *3
(Refer to ACC SECTION "List of ACC".)
Replace the object parts.
(Refer to REPLACE SECTION.)
In case of multiple parts, replace the parts according to the following priority:
1. CACHE MEMORY MODULE
2. CACHE PCB
*2
3. CHA/DKA PCB
4. ESW PCB
5. MP PCB
(If CUDG error occurs after replacing all of the above parts, replace the LOGIC BOX.)
In case of CUDG error in replacing CHA/DKA, replace the CHA/DKA once more.
In case of CUDG error in IMPL, execute the IMPL once more.
Yes
CUDG Error?
No
END

*1: CUDG Error Code is SIM REFERENCE CODE = (7601xx) or SSB ERROR CODE = (3306).

*2: See Subsection 5.1.4 (DIAG05-60).

*3: Even if DKA (Disk Adapter PCB) is installed when the trouble of the Link error is detected by sharing CHA/DKA SLOT, "CHA-xxx" might be displayed in the Action Code (Location). When DKA is installed, Action Code (Location) is judged to be "DKA-xxx".

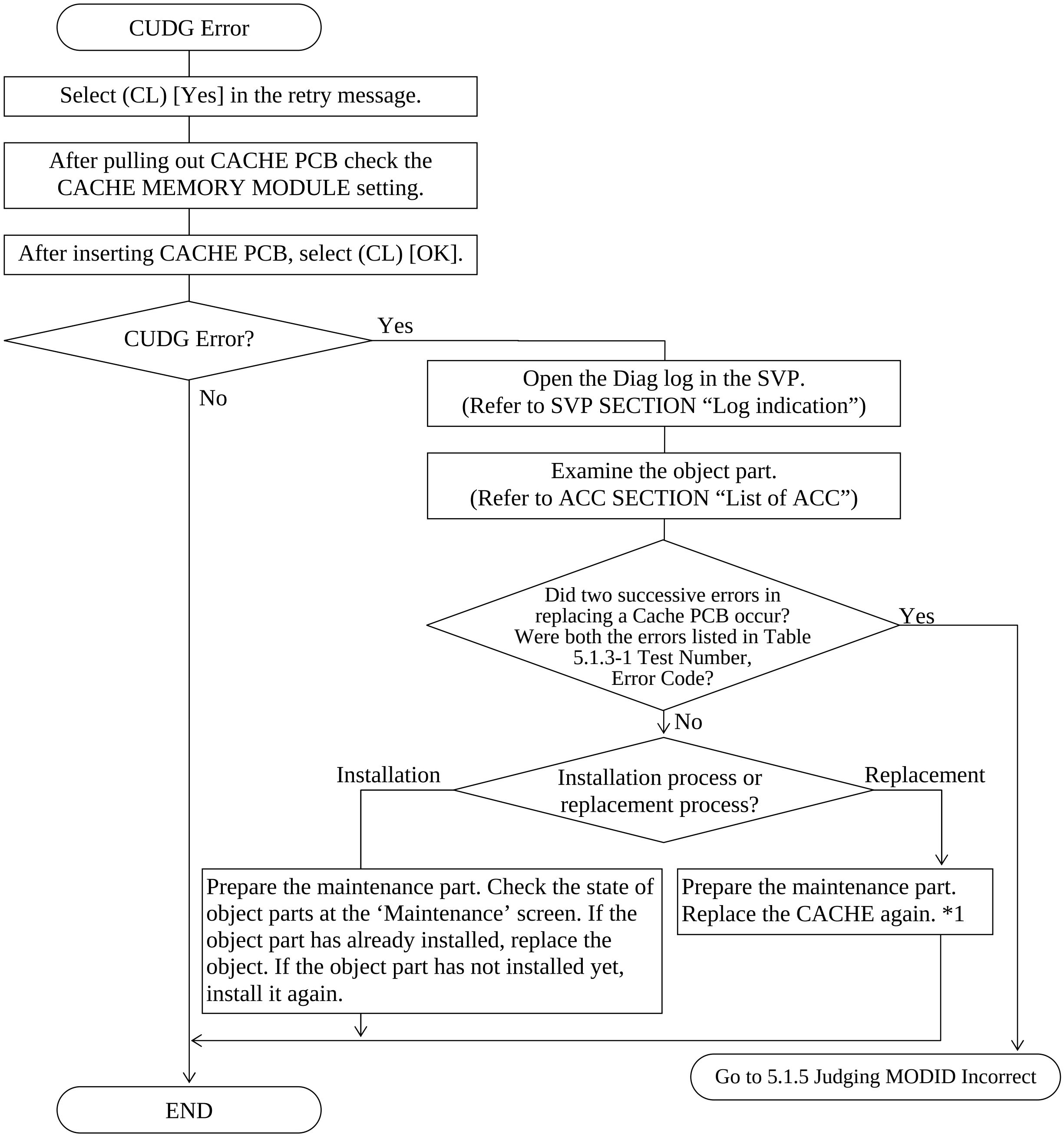
5.1.2 CUDG4 Trouble shooting


CUDG Error
①Open the DIAG LOG of CUDG4 Diagnosis.
②Display the CUDG4 Error Content.
Examine the object parts.
(Failure Location of CUDG4 Error Content)
Replace the object parts after turning the power off.
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. ESW PCB (*1)
5. MP PCB
(If CUDG error occurs after replacing all of the above parts, replace the LOGIC BOX.)
Execute the CUDG4.
CUDG Error?
Yes
No
END

*1: When ESW PK of module#0 and ESW PK of module#1 were displayed in Failure Location, Cables that connect module # 0 and module # 1 are exchanged before ESW PK is exchanged.

5.1.3 INLINE CUDG Trouble shooting

(1) Installation / Replacement


CUDG Error
Select (CL) [Yes] in the retry message.
After pulling out CACHE PCB check the CACHE MEMORY MODULE setting.
After inserting CACHE PCB, select (CL) [OK].
CUDG Error?
Yes
No
Open the Diag log in the SVP. (Refer to SVP SECTION “Log indication”)
Examine the object part. (Refer to ACC SECTION “List of ACC”)
Did two successive errors in replacing a Cache PCB occur? Were both the errors listed in Table 5.1.3-1 Test Number, Error Code?
Yes
No
Installation
Installation process or replacement process?
Replacement
Prepare the maintenance part. Check the state of object parts at the ‘Maintenance’ screen. If the object part has already installed, replace the object. If the object part has not installed yet, install it again.
Prepare the maintenance part. Replace the CACHE again. *1
Go to 5.1.5 Judging MODID Incorrect
END

*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 ESW PCB
⑤ MP 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).

(2) De-Installation

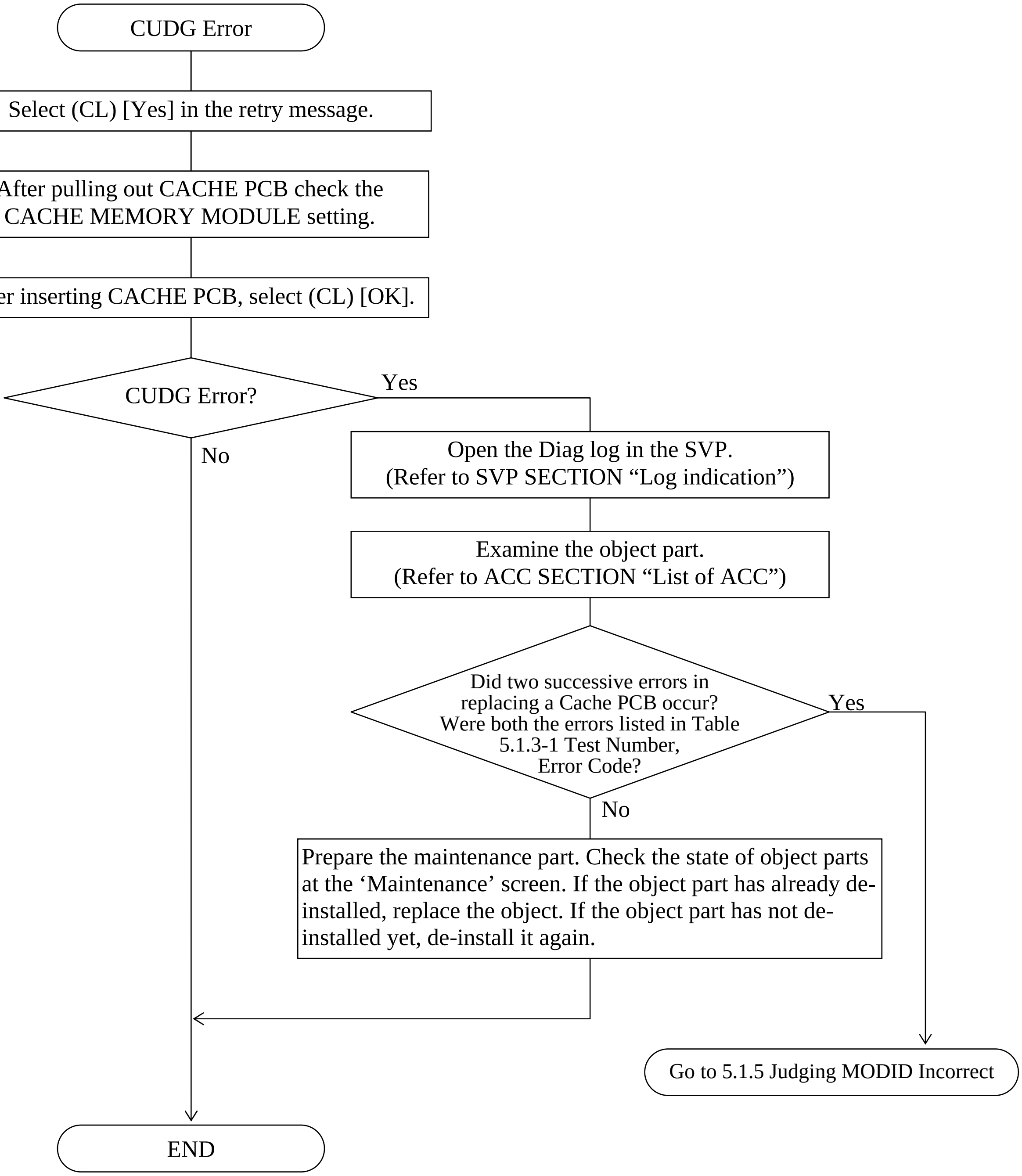
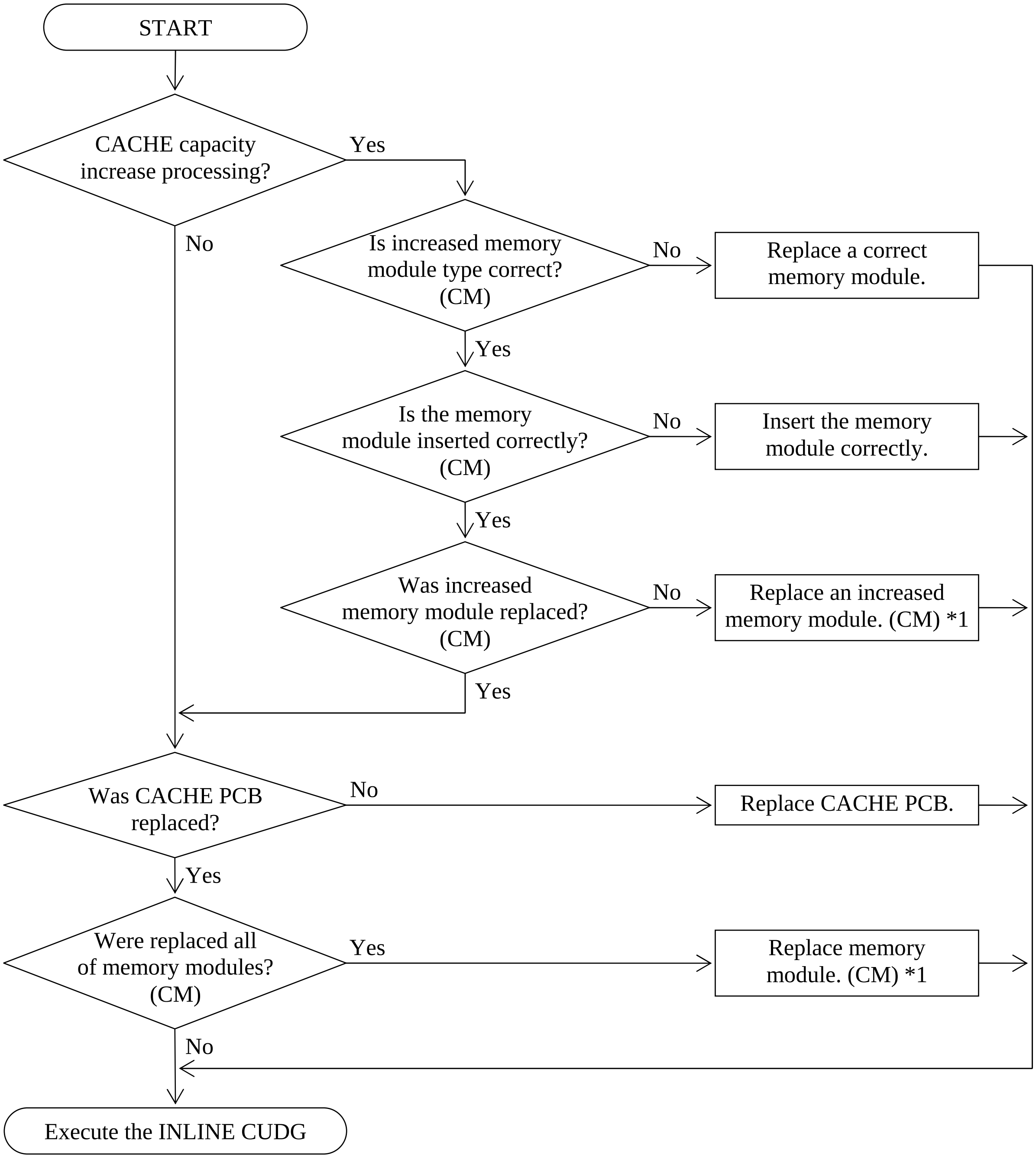

CUDG Error
Select (CL) [Yes] in the retry message.
After pulling out CACHE PCB check the CACHE MEMORY MODULE setting.
After inserting CACHE PCB, select (CL) [OK].
CUDG Error?
Yes
No
Open the Diag log in the SVP. (Refer to SVP SECTION “Log indication”)
Examine the object part. (Refer to ACC SECTION “List of ACC”)
Did two successive errors in replacing a Cache PCB occur? Were both the errors listed in Table 5.1.3-1 Test Number, Error Code?
Yes
No
Prepare the maintenance part. Check the state of object parts at the ‘Maintenance’ screen. If the object part has already de-installed, replace the object. If the object part has not de-installed yet, de-install it again.
Go to 5.1.5 Judging MODID Incorrect
END

Table 5.1.3-1 Generated by MODID fraud Test Number, Error Code

Test Number	Error Code
012a	2000
012c	2000
012c	0001

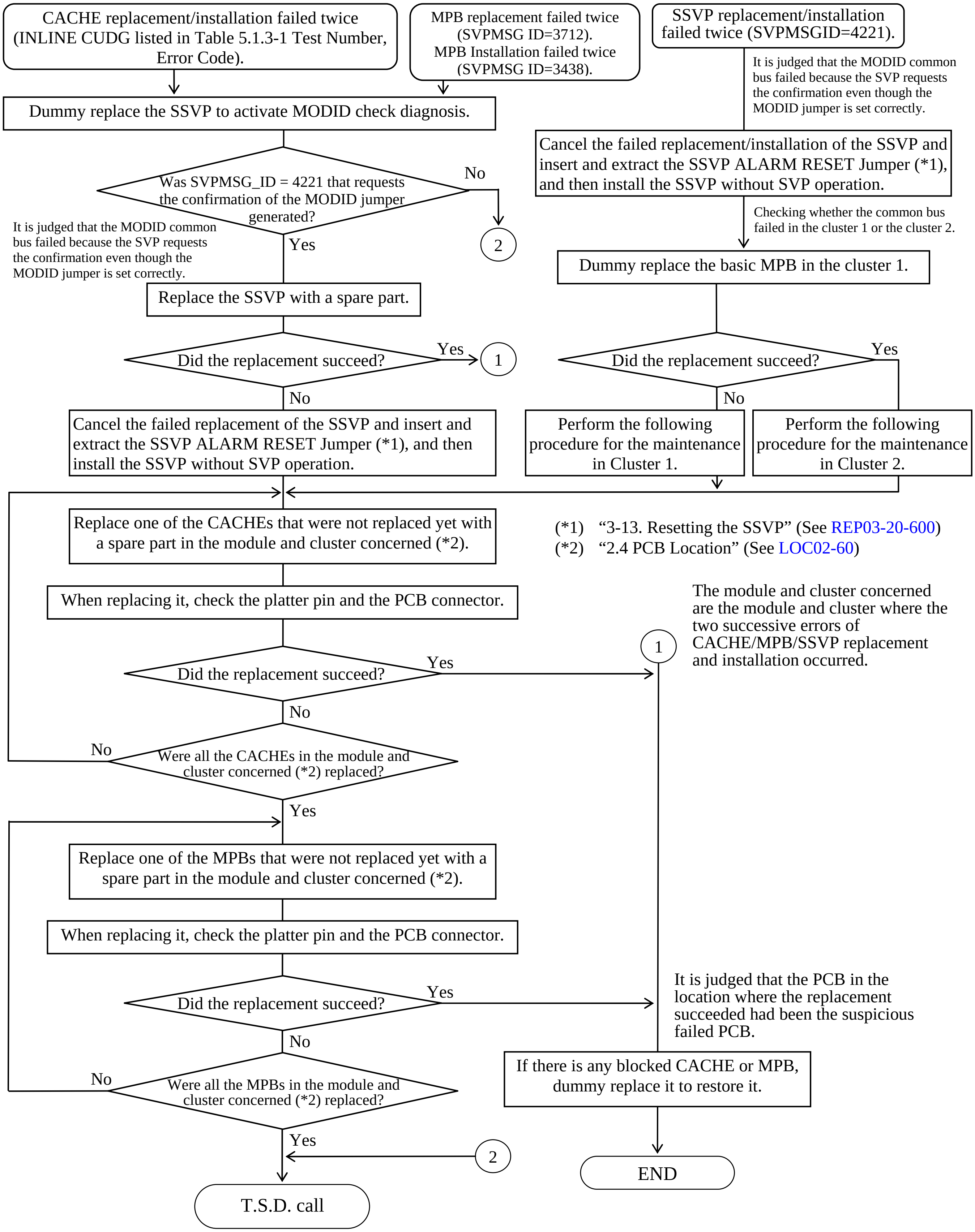
5.1.4 CACHE PCB, CACHE MEMORY MODULE Trouble shooting

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


START
CACHE capacity increase processing?
Yes
No
Is increased memory module type correct? (CM)
No
Replace a correct memory module.
Yes
Is the memory module inserted correctly? (CM)
No
Insert the memory module correctly.
Yes
Was increased memory module replaced? (CM)
No
Replace an increased memory module. (CM) *1
Yes
Was CACHE PCB replaced?
No
Replace CACHE PCB.
Yes
Were replaced all of memory modules? (CM)
Yes
Replace memory module. (CM) *1
No
Execute the INLINE CUDG

*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.

5.1.5 Judgement of MODID Incorrectness and Recovery Procedure in Case of Two Successive Errors of Replacement/Installation of CACHE/MPB/SSVP


CACHE replacement/installation failed twice (INLINE CUDG listed in Table 5.1.3-1 Test Number, Error Code).
MPB replacement failed twice (SVPMSG ID=3712). MPB Installation failed twice (SVPMSG ID=3438).
SSVP replacement/installation failed twice (SVPMSGID=4221).
Dummy replace the SSVP to activate MODID check diagnosis.
Was SVPMSG_ID = 4221 that requests the confirmation of the MODID jumper generated?
No
2
Yes
Replace the SSVP with a spare part.
Did the replacement succeed?
Yes
1
No
Cancel the failed replacement of the SSVP and insert and extract the SSVP ALARM RESET Jumper (*1), and then install the SSVP without SVP operation.
Cancel the failed replacement/installation of the SSVP and insert and extract the SSVP ALARM RESET Jumper (*1), and then install the SSVP without SVP operation.
Dummy replace the basic MPB in the cluster 1.
Did the replacement succeed?
Yes
No
Perform the following procedure for the maintenance in Cluster 1.
Perform the following procedure for the maintenance in Cluster 2.
Replace one of the CACHEs that were not replaced yet with a spare part in the module and cluster concerned (*2).
When replacing it, check the platter pin and the PCB connector.
Did the replacement succeed?
Yes
1
No
Were all the CACHEs in the module and cluster concerned (*2) replaced?
No
Yes
Replace one of the MPBs that were not replaced yet with a spare part in the module and cluster concerned (*2).
When replacing it, check the platter pin and the PCB connector.
Did the replacement succeed?
Yes
No
Were all the MPBs in the module and cluster concerned (*2) replaced?
No
Yes
2
T.S.D. call
If there is any blocked CACHE or MPB, dummy replace it to restore it.
END

It is judged that the MODID common bus failed because the SVP requests the confirmation even though the MODID jumper is set correctly.

It is judged that the MODID common bus failed because the SVP requests the confirmation even though the MODID jumper is set correctly.

Checking whether the common bus failed in the cluster 1 or the cluster 2.

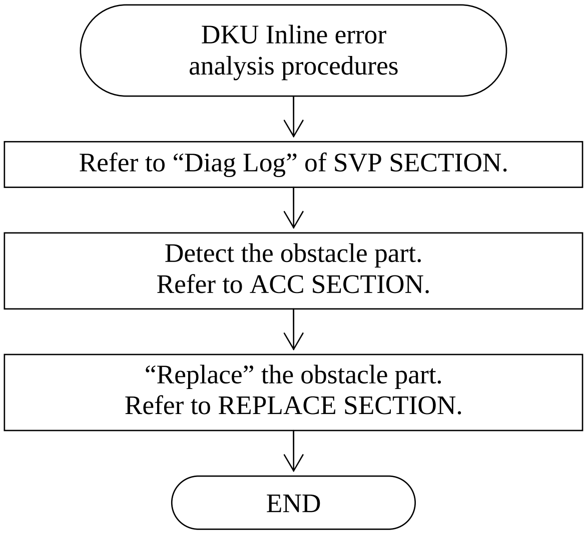
(*1) “3-13. Resetting the SSVP” (See REP03-20-600)
(*2) “2.4 PCB Location” (See LOC02-60)

The module and cluster concerned are the module and cluster where the two successive errors of CACHE/MPB/SSVP replacement and installation occurred.

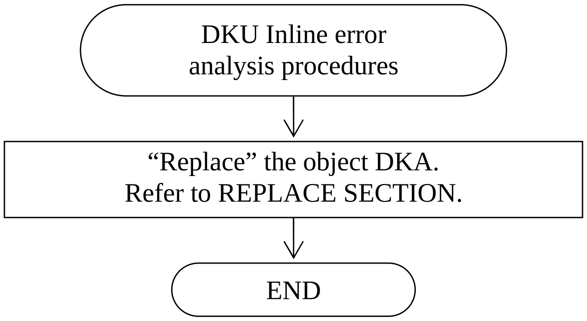
It is judged that the PCB in the location where the replacement succeeded had been the suspicious failed PCB.

5.2 DKU INLINE Trouble shooting

Trouble shoot procedures (Except Error Code = “xx e3” / “xx e4”)

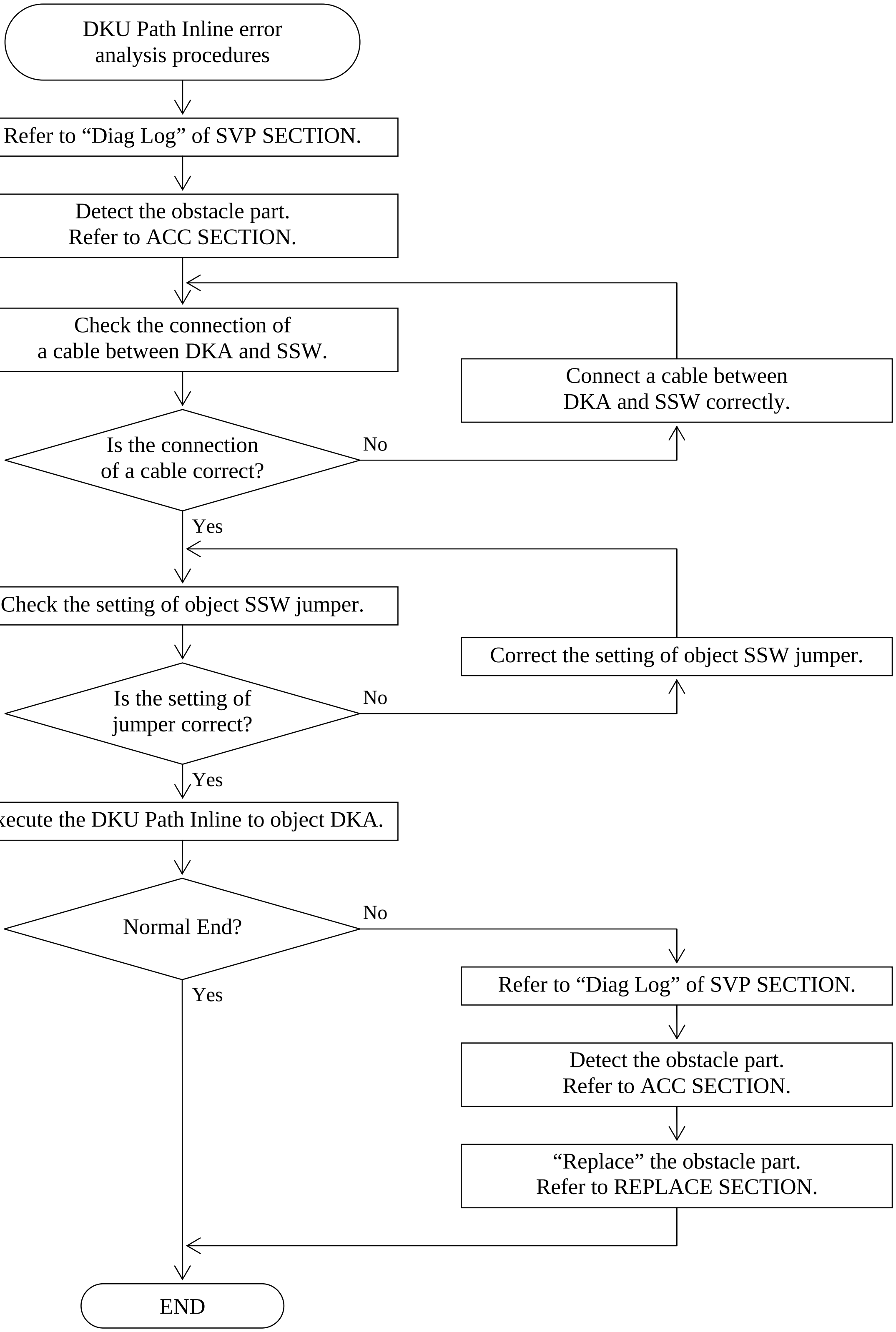

DKU Inline error analysis procedures
Refer to “Diag Log” of SVP SECTION.
Detect the obstacle part. Refer to ACC SECTION.
“Replace” the obstacle part. Refer to REPLACE SECTION.
END

Trouble shoot procedures (In case of Error Code = “xx e3” / “xx e4”)

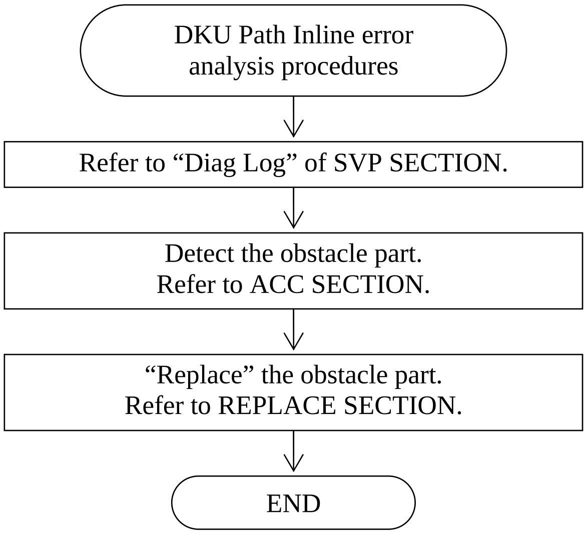

DKU Inline error analysis procedures
“Replace” the object DKA. Refer to REPLACE SECTION.
END

5.3 DKU PATH INLINE Trouble shooting

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


DKU Path Inline error analysis procedures
Refer to “Diag Log” of SVP SECTION.
Detect the obstacle part. Refer to ACC SECTION.
Check the connection of a cable between DKA and SSW.
Connect a cable between DKA and SSW correctly.
Is the connection of a cable correct?
No
Yes
Check the setting of object SSW jumper.
Correct the setting of object SSW jumper.
Is the setting of jumper correct?
No
Yes
Execute the DKU Path Inline to object DKA.
Normal End?
No
Yes
Refer to “Diag Log” of SVP SECTION.
Detect the obstacle part. Refer to ACC SECTION.
“Replace” the obstacle part. Refer to REPLACE SECTION.
END

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


DKU Path Inline error analysis procedures
Refer to “Diag Log” of SVP SECTION.
Detect the obstacle part. Refer to ACC SECTION.
“Replace” the obstacle part. Refer to REPLACE SECTION.
END

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										
01	02	03	04	05	06	07	08	09	10	Contents
XX	51									The Svp_InitMultiChain function failed.
XX	52									The Svp_RegistMultiChain function failed.
XX	53									The Svp_ExecMultChainedDkcFunc function failed.
XX	54									The Svp_GetMultiChain function failed.
XX	55									
XX	56									
XX	57									
XX	58									
XX	59									
XX	5A									
XX	5B									
XX	5C									
XX	5D									
XX	5E									

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										
01	02	03	04	05	06	07	08	09	10	Contents
XX	E0									The TEST UNIT READY command failed.
XX	E1									The Bypass Check command failed.
XX	E2									The Reset Bypass command failed.
XX	E3									Communication of between DKC and SVP was TIME OUT.
XX	E4									Communication failed.
XX	E5									Not Used
XX	E6									Not Used
XX	E8									The Start INLINE command was failed.
XX	E9									The End INLINE command failed.
XX	EA									The specified HDD does not exist.
XX	EB									SVP error (Program Error)
XX	EC									Windows error
XX	ED									SVP error (DKC-SVP Communication)

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. Refer to DIAG06-10, when there is nothing to the following error code tables.

Error Byte										
01	02	03	04	05	06	07	08	09	10	Contents
C1	01									Communication of the TEST UNIT READY command failed.
C1	02									The TEST UNIT READY command failed.
C1	03									Communication of the REQUEST SENSE command failed.
C1	04									The REQUEST SENSE command failed.
C1	05									The SENSE KEY is abnormal.
C1	06									The SENSE CODE is abnormal.
C1	07									The ADDITIONAL CODE is abnormal.

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. Refer to DIAG06-10, when there is nothing to the following error code tables.

Error Byte										
01	02	03	04	05	06	07	08	09	10	Contents
C2	01									Communication of the INQUIRY command failed.
C2	02									The INQUIRY command failed.
C2	03									The Vendor ID is abnormal.

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. Refer to DIAG06-10, when there is nothing to the following error code tables.

Error Byte										
01	02	03	04	05	06	07	08	09	10	Contents
C3	01									Communication of the STOP UNIT command failed.
C3	02									The STOP UNIT command failed.
C3	03									The Delay function failed.
C3	04									Communication of the START UNIT command failed.
C3	05									The START UNIT command failed.
C3	06									Communication of the TEST UNIT READY command failed.
C3	07									The TEST UNIT READY command failed.
C3	08									Communication of the REQUEST SENSE command failed.
C3	09									The REQUEST SENSE command failed.
C3	0A									The SENSE KEY is abnormal.
C3	0B									The SENSE CODE is abnormal.
C3	0C									The ADDITIONAL CODE is abnormal.

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. Refer to DIAG06-10, when there is nothing to the following error code tables.

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

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										
01	02	03	04	05	06	07	08	09	10	Contents
XX	51									
XX	52									
XX	53									
XX	54									
XX	55									
XX	56									
XX	57									
XX	58									
XX	59									
XX	5A									
XX	5B									
XX	5C									
XX	5D									
XX	5E									SSW that doesn’t exist in configuration information is equipped. Please confirm equipping SSW.

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																		
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	Contents
XX	A1																	
XX	A2																	
XX	A3																	
XX	A4																	
XX	A5																	
XX	A6																	
XX	A7																	
XX	A8																	
XX	A9																	
XX	AA	D#	P#	U#														SSW Error
XX	AB	D#	P#	U#										EV		RV		Invalid Phy ID
XX	AC									EV (*2)		RV						Invalid SAS address data. (*3)
XX	AD																	Invalid SAS address data. (*3) (Refer to AxAE for detail)
XX	AE	D#	P#	U#		EV (*2)		RV										Invalid SAS address data. (*3)
XX	BC	D#	P#	U#														Invalid connecting DKU Type.
XX	BE	D#	P#	U#														Invalid own DKU Type.

*2: Refer to SAS Address mapping (DIAG06-210, 220) for Expected Value.

*3: There is the possibility of a SAS cable connection mistake or a jumper setting mistake of SSW. Refer to LOCATION SECTION (LOC06-50) for the setting of the jumper socket and switch.

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										
01	02	03	04	05	06	07	08	09	10	Contents
XX	E1									The Bypass Check command failed.
XX	E2									The Reset Bypass command failed.
XX	E3									Communication of between DKC and SVP was TIME OUT.
XX	E4									Communication failed.
XX	E5									The LIP command failed.
XX	E6									The Set Bypass command failed.
XX	E8									The Start INLINE command failed.
XX	E9									The End INLINE command failed.
XX	EA									The specified HDD does not exist.
XX	EB									SVP error (Program Error)
XX	EC									Windows error
XX	ED									SVP error (DKC-SVP Communication)

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										
01	02	03	04	05	06	07	08	09	10	Contents
XX	F9									The PDEV disorder detection
XX	FA									The SVR disorder detection
XX	FB									The SVR-EX disorder detection
XX	FC	D#	P#	U#						FC cable connection error. There is the possibility of a FC cable connection mistake.
XX	FE									FC Check error. There is the possibility of a FC cable connection mistake.

D# : DKA# P# : PORT# U# : UNIT#
(*1)

*1: DKA#, PORT#, UNIT# mapping

DKA#: 0-3	PORT#: 0-3	UNIT#: 0-7
0: DKA-1AU	0: HDU-000, 004 ~ 070,074 1: HDU-001, 005 ~ 071,075 2: HDU-002, 006 ~ 072,076 3: HDU-003, 007 ~ 073,077	0: DKUBOX-00 1: DKUBOX-01 2: DKUBOX-02 3: DKUBOX-03 4: DKUBOX-04 5: DKUBOX-05 6: DKUBOX-06 7: DKUBOX-07
1: DKA-1AL		
2: DKA-2MU		
3: DKA-2ML		
DKA#: 4-7	PORT#: 0-3	UNIT#: 0-7
4: DKA-1LU	0: HDU-100, 104 ~ 170,174 1: HDU-101, 105 ~ 171,175 2: HDU-102, 106 ~ 172,176 3: HDU-103, 107 ~ 173,177	0: DKUBOX-10 1: DKUBOX-11 2: DKUBOX-12 3: DKUBOX-13 4: DKUBOX-14 5: DKUBOX-15 6: DKUBOX-16 7: DKUBOX-17
5: DKA-1LL		
6: DKA-2XU		
7: DKA-2XL		

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. Refer to from DIAG06-70 to DIAG06-100, when there is nothing to the following error code tables.

Error Byte											
01	02	03	04	05	06	07	08	09	10	11	Contents
A0	01										The Reset Bypass command failed.
A0	02										The Bypass check command failed.
A0	03										Communication of the INQUIRY command failed.
A0	04										The INQUIRY information 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 SAS cable connection mistake.
A0	0B										Bypass check error
A0	1X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in a part of the PATH.
A0	2X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in all the PATH.
A0	AA	D#	P#	U#							SSW Error
A0	AB	D#	P#	U#							Invalid Phy ID
A0	AD										Invalid SAS address data. (*3) (Refer to A0AE for detail)
A0	AE	D#	P#	U#							Invalid SAS address data. (*3)
A0	BC	D#	P#	U#							Invalid connecting DKU Type.
A0	BE	D#	P#	U#							Invalid own DKU Type.

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(0-7)S : PORT#(0-7) report (FF : Normal, Not FF : Abnormal)
(*1)

*1: DKA#, PORT#, UNIT# mapping

DKA#: 0-3	PORT#: 0-3	UNIT#: 0-7
0: DKA-1AU	0: HDU-000, 004 ~ 070,074 1: HDU-001, 005 ~ 071,075 2: HDU-002, 006 ~ 072,076 3: HDU-003, 007 ~ 073,077	0: DKUBOX-00 1: DKUBOX-01 2: DKUBOX-02 3: DKUBOX-03 4: DKUBOX-04 5: DKUBOX-05 6: DKUBOX-06 7: DKUBOX-07
1: DKA-1AL		
2: DKA-2MU		
3: DKA-2ML		
DKA#: 4-7	PORT#: 0-3	UNIT#: 0-7
4: DKA-1LU	0: HDU-100, 104 ~ 170,174 1: HDU-101, 105 ~ 171,175 2: HDU-102, 106 ~ 172,176 3: HDU-103, 107 ~ 173,177	0: DKUBOX-10 1: DKUBOX-11 2: DKUBOX-12 3: DKUBOX-13 4: DKUBOX-14 5: DKUBOX-15 6: DKUBOX-16 7: DKUBOX-17
5: DKA-1LL		
6: DKA-2XU		
7: DKA-2XL		

*2: Refer to SAS Address mapping (DIAG06-210, 220) for Expected Value.

*3: There is the possibility of a SAS cable connection mistake or a jumper setting mistake of SSW. Refer to LOCATION SECTION (LOC06-50) for the setting of the jumper socket and switch.

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. Refer to from DIAG06-70 to DIAG06-100, when there is nothing to the following error code tables.

Error Byte											
01	02	03	04	05	06	07	08	09	10	11	Contents
A1	01										The Reset Bypass command failed.
A1	02										The Bypass check command failed.
A1	03										Communication of the INQUIRY command failed.
A1	04										The INQUIRY information 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 SAS cable connection mistake.
A1	0B										Bypass check error
A1	1X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in a part of the PATH
A1	2X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in all the PATH.
A1	AA	D#	P#	U#							SSW Error
A1	AB	D#	P#	U#							Invalid Phy ID
A1	AD										Invalid SAS address data. (*3) (Refer to A1AE for detail)
A1	AE	D#	P#	U#							Invalid SAS address data. (*3)
A1	BC	D#	P#	U#							Invalid connecting DKU Type.
A1	BE	D#	P#	U#							Invalid own DKU Type.

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(0-7)S : PORT#(0-7) report (FF : Normal, Not FF : Abnormal)
(*1)

*1: DKA#, PORT#, UNIT# mapping

DKA#: 0-3	PORT#: 0-3	UNIT#: 0-7
0: DKA-1AU	0: HDU-000, 004 ~ 070,074 1: HDU-001, 005 ~ 071,075 2: HDU-002, 006 ~ 072,076 3: HDU-003, 007 ~ 073,077	0: DKUBOX-00 1: DKUBOX-01 2: DKUBOX-02 3: DKUBOX-03 4: DKUBOX-04 5: DKUBOX-05 6: DKUBOX-06 7: DKUBOX-07
1: DKA-1AL		
2: DKA-2MU		
3: DKA-2ML		
DKA#: 4-7	PORT#: 0-3	UNIT#: 0-7
4: DKA-1LU	0: HDU-100, 104 ~ 170,174 1: HDU-101, 105 ~ 171,175 2: HDU-102, 106 ~ 172,176 3: HDU-103, 107 ~ 173,177	0: DKUBOX-10 1: DKUBOX-11 2: DKUBOX-12 3: DKUBOX-13 4: DKUBOX-14 5: DKUBOX-15 6: DKUBOX-16 7: DKUBOX-17
5: DKA-1LL		
6: DKA-2XU		
7: DKA-2XL		

*2: Refer to SAS Address mapping (DIAG06-210, 220) for Expected Value.

*3: There is the possibility of a SAS cable connection mistake or a jumper setting mistake of SSW. Refer to LOCATION SECTION (LOC06-50) for the setting of the jumper socket and switch.

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. Refer to from DIAG06-70 to DIAG06-100, when there is nothing to the following error code tables.

Error Byte										
01	02	03	04	05	06	07	08	09	10	Contents
A2	01									
A2	02									
A2	03									
A2	04									
A2	05									
A2	06									
A2	07									The Drive Read command failed.
A2	08									
A2	09									
A2	0A									
A2	0B									
A2	10									ERROR DRIVE exists. (Refer to the Diag Log for details.)

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

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. Refer to from DIAG06-70 to DIAG06-100, when there is nothing to the following error code tables.

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

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

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. Refer to from DIAG06-70 to DIAG06-100, when there is nothing to the following error code tables.

Error Byte											
01	02	03	04	05	06	07	08	09	10	11	Contents
A5	01										The Reset Bypass command failed.
A5	02										The Bypass check command failed.
A5	03										Communication of the INQUIRY command failed.
A5	04										The INQUIRY information 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 SAS cable connection mistake.
A5	0B										Bypass check error
A5	1X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in a part of the PATH
A5	2X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in all the PATH.
A5	AA	D#	P#	U#							SSW Error
A5	AB	D#	P#	U#							Invalid Phy ID
A5	AD										Invalid SAS address data. (*3) (Refer to A5AE for detail)
A5	AE	D#	P#	U#							Invalid SAS address data. (*3)
A5	BC	D#	P#	U#							Invalid connecting DKU Type.
A5	BE	D#	P#	U#							Invalid own DKU Type.

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(0-7)S : PORT#(0-7) report (FF : Normal, Not FF : Abnormal)
(*1)

*1: DKA#, PORT#, UNIT# mapping

DKA#: 0-3	PORT#: 0-3	UNIT#: 0-7
0: DKA-1AU	0: HDU-000, 004 ~ 070,074 1: HDU-001, 005 ~ 071,075 2: HDU-002, 006 ~ 072,076 3: HDU-003, 007 ~ 073,077	0: DKUBOX-00 1: DKUBOX-01 2: DKUBOX-02 3: DKUBOX-03 4: DKUBOX-04 5: DKUBOX-05 6: DKUBOX-06 7: DKUBOX-07
1: DKA-1AL		
2: DKA-2MU		
3: DKA-2ML		
DKA#: 4-7	PORT#: 0-3	UNIT#: 0-7
4: DKA-1LU	0: HDU-100, 104 ~ 170,174 1: HDU-101, 105 ~ 171,175 2: HDU-102, 106 ~ 172,176 3: HDU-103, 107 ~ 173,177	0: DKUBOX-10 1: DKUBOX-11 2: DKUBOX-12 3: DKUBOX-13 4: DKUBOX-14 5: DKUBOX-15 6: DKUBOX-16 7: DKUBOX-17
5: DKA-1LL		
6: DKA-2XU		
7: DKA-2XL		

*2: Refer to SAS Address mapping (DIAG06-210, 220) for Expected Value.

*3: There is the possibility of a SAS cable connection mistake or a jumper setting mistake of SSW. Refer to LOCATION SECTION (LOC06-50) for the setting of the jumper socket and switch.

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. Refer to from DIAG06-70 to DIAG06-100, when there is nothing to the following error code tables.

Error Byte											
01	02	03	04	05	06	07	08	09	10	11	Contents
A6	01										The Reset Bypass command failed.
A6	02										The Bypass check command failed.
A6	03										Communication of the INQUIRY command failed.
A6	04										The INQUIRY information failed.
A6	05										The INQUIRY command failed.
A6	06										The Vender ID doesn’t match.
A6	07										PORT mistake. There is the possibility of a SAS cable connection mistake.
A6	0B										Bypass check error
A6	1X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in a part of the PATH
A6	2X	D#	P0S	P1S	P2S	P3S	P4S	P5S	P6S	P7S	Obstruction occurred in all the PATH.
A6	AA	D#	P#	U#							SSW Error
A6	AB	D#	P#	U#							Invalid Phy ID
A6	AD										Invalid SAS address data. (*3) (Refer to A6AE for detail)
A6	AE	D#	P#	U#							Invalid SAS address data. (*3)
A6	BC	D#	P#	U#							Invalid connecting DKU Type.
A6	BE	D#	P#	U#							Invalid own DKU Type.

D# : DKA# P# : PORT# U# : UNIT# EV : Expected Value
RV : Received Value P(0-7)S : PORT#(0-7) report (FF : Normal, Not FF : Abnormal)
(*1)

*1: DKA#, PORT#, UNIT# mapping

DKA#: 0-3	PORT#: 0-3	UNIT#: 0-7
0: DKA-1AU	0: HDU-000, 004 ~ 070,074 1: HDU-001, 005 ~ 071,075 2: HDU-002, 006 ~ 072,076 3: HDU-003, 007 ~ 073,077	0: DKUBOX-00 1: DKUBOX-01 2: DKUBOX-02 3: DKUBOX-03 4: DKUBOX-04 5: DKUBOX-05 6: DKUBOX-06 7: DKUBOX-07
1: DKA-1AL		
2: DKA-2MU		
3: DKA-2ML		
DKA#: 4-7	PORT#: 0-3	UNIT#: 0-7
4: DKA-1LU	0: HDU-100, 104 ~ 170,174 1: HDU-101, 105 ~ 171,175 2: HDU-102, 106 ~ 172,176 3: HDU-103, 107 ~ 173,177	0: DKUBOX-10 1: DKUBOX-11 2: DKUBOX-12 3: DKUBOX-13 4: DKUBOX-14 5: DKUBOX-15 6: DKUBOX-16 7: DKUBOX-17
5: DKA-1LL		
6: DKA-2XU		
7: DKA-2XL		

*2: Refer to SAS Address mapping (DIAG06-210, 220) for Expected Value.

*3: There is the possibility of a SAS cable connection mistake or a jumper setting mistake of SSW. Refer to LOCATION SECTION (LOC06-50) for the setting of the jumper socket and switch.

SAS ADDRESS Mapping (1/4)

DKA CL	HDU BOX	DKUBOX-x0 (x:0 or 1)		DKUBOX-x1 (x:0 or 1)	
		SSW (1st)		SSW (2nd)	
		Expander-0	Expander-1	Expander-0	Expander-1
CL1	0/4	0000	0400	1000	1400
	1/5	0100	0500	1100	1500
	2/6	0200	0600	1200	1600
	3/7	0300	0700	1300	1700
CL2	0/4	0001	0401	1001	1401
	1/5	0101	0501	1101	1501
	2/6	0201	0601	1201	1601
	3/7	0301	0701	1301	1701

SAS ADDRESS Mapping (2/4)

DKA CL	HDU BOX	DKUBOX-x2 (x:0 or 1)		DKUBOX-x3 (x:0 or 1)	
		SSW (3rd)		SSW (4th)	
		Expander-0	Expander-1	Expander-0	Expander-1
CL1	0/4	2000	2400	3000	3400
	1/5	2100	2500	3100	3500
	2/6	2200	2600	3200	3600
	3/7	2300	2700	3300	3700
CL2	0/4	2001	2401	3001	3401
	1/5	2101	2501	3101	3501
	2/6	2201	2601	3201	3601
	3/7	2301	2701	3301	3701

SAS ADDRESS Mapping (3/4)

DKA CL	HDU BOX	DKUBOX-x4 (x:0 or 1)		DKUBOX-x5 (x:0 or 1)	
		SSW (5th)		SSW (6th)	
		Expander-0	Expander-1	Expander-0	Expander-1
CL1	0/4	4000	4400	5000	5400
	1/5	4100	4500	5100	5500
	2/6	4200	4600	5200	5600
	3/7	4300	4700	5300	5700
CL2	0/4	4001	4401	5001	5401
	1/5	4101	4501	5101	5501
	2/6	4201	4601	5201	5601
	3/7	4301	4701	5301	5701

SAS ADDRESS Mapping (4/4)

DKA CL	HDU BOX	DKUBOX-x6 (x:0 or 1)		DKUBOX-x7 (x:0 or 1)	
		SSW (7th)		SSW (8th)	
		Expander-0	Expander-1	Expander-0	Expander-1
CL1	0/4	6000	6400	7000	7400
	1/5	6100	6500	7100	7500
	2/6	6200	6600	7200	7600
	3/7	6300	6700	7300	7700
CL2	0/4	6001	6401	7001	7401
	1/5	6101	6501	7101	7501
	2/6	6201	6601	7201	7601
	3/7	6301	6701	7301	7701

6.3 CUDG error code list

6.3.1 CUDG3 error code list

LSI classification	Test ID	Error Code	Error Contents
—	0006	0000	Config acquisition failure in INLINE CUDG.
	0007	0000	Config CMG number is unjustified of Cache PK.
	000B	0000	INLINE CUDG parameter error.
	EE00	0010	Path test parameter error.
	EE00	0020	Path test CACHE PK number conversion error.
	EE00	0030	Path test is no effective CMG.
	EE00	0060	Path test PK type acquisition error.
	EE00	0070	Path test CMA LinkUP error.
	EE00	1000	Path test LR-CM X path LinkUP error.
CMA	0101		Register WT/RD Test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Register Compare Error occurred.
	0102		Memory WT/RD Test.
		0040	CHK1 Error occurred.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0002	Data Compare Error occurred.
	0104		General Memory Test. (A)(Write Activation Part)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
	0105		General Memory Test (A)(Polling Part)
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
	0106		General Memory Test. (A)(Status Confirmation Part after Write)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Loop parity Error occurred.
	0107		General Memory Test. (A)(Read Activation Part)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.

LSI classification	Test ID	Error Code	Error Contents
CMA	0108		General Memory Test. (A)(Status Confirmation Part after READ)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Uncorrectable or Correctable Error occurred.
	0109		General Memory Test. (B)(Write Activation Part)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
	010A		General Memory Test (B)(Polling Part)
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
	010B		General Memory Test. (B)(Status Confirmation Part after Write)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Loop parity Error occurred.
	010C		General Memory Test. (B)(Read Activation Part)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
	010D		General Memory Test. (B)(Status Confirmation Part after READ)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Uncorrectable or Correctable Error occurred.
	010E		ECC Correctable Test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0001	Register Compare Error occurred.
	010F		ECC Uncorrectable Test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0001	Register Compare Error occurred.

LSI classification	Test ID	Error Code	Error Contents
CMA	0110		RAM Correctable Test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Register Compare Error occurred.
	0111		RAM Uncorrectable Test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Register Compare Error occurred.
	0114		RAM WT/RD Test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Register Compare Error occurred.
	011A		PD Check.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	DIMM type Compare error occurred.
		0002	PD Read status error occurred.
		0004	Polling time-out occurred.
		0100	CMG initialization STS error occurred.
		0200	DIMM sum check error occurred.
	0120		CMA DSCMODE SET.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
	0127		CMA Key SET.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
	0128		CMA Reset.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
	012A		CMACMA LSI version Read.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.

LSI classification	Test ID	Error Code	Error Contents
CMA	012B		CMA linkup check.
		0040	CHK1 Error occurred.
		0100	CMA linkup Error occurred.
	012C		CMA MOD ID Test.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
		0001	MOD ID value Error occurred.
	0187		DM Test.
		0040	CHK1 Error occurred.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0002	Data Compare Error occurred.
	0190		Data shift pattern WT/RD test.
		0040	CHK1 Error occurred.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0002	Data Compare Error occurred.
	0191		ECC write through WT/RD test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0002	ECC Data Compare Error occurred.
	0192		Address pattern WT/RD test.
		0040	CHK1 Error occurred.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0002	Data Compare Error occurred.
	01E0		CMA initialize.
		0100	CMA initialize loop threshold.
		0200	CMA initialize error 1.
		0300	CMA initialize error 2.

LSI classification	Test ID	Error Code	Error Contents
CMA	01F0		SH diagnosis start.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
	01F1		Battery Error Check.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
		0001	Battery Error occurred.
	01F2		SSD mounting check.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0004	SH diagnosis TOV error occurred.
		0001	SSD size type error occurred.
	01F3		SH diagnosis completion judgment.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
		0004	SH diagnosis TOV error occurred.
	01F4		SH diagnosis status check.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	STS error occurred.
	01FF		SH firmware REV Read.
		0040	CHK1 Error occurred.
		2000	REV Error occurred in Register Read.

LSI classification	Test ID	Error Code	Error Contents
MPA	0801		E-BLK part Register WT/RD test.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Error occurred in MPA.
		0300	Error occurred in MCH.
	0802		D-BLK part Register WT/RD test.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Error occurred in MPA.
		0300	Error occurred in MCH.
	0803		M-BLK part Register WT/RD test.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Error occurred in MPA.
		0300	Error occurred in MCH.
	0804		R-BLK part Register WT/RD test.
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		0200	Error occurred in MPA.
		0300	Error occurred in MCH.
	0811		E-path LinkUP test
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
	0820		Indirect WT/RD test of PM (4bytes)
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		1000	Error occurred in Indirect Write.
		2000	Error occurred in Indirect Read.
	0821		Indirect WT/RD test of PM (8bytes)
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		1000	Error occurred in Indirect Write.
		2000	Error occurred in Indirect Read.

LSI classification	Test ID	Error Code	Error Contents
MPA	0822		Window WT/RD test of PM(4bytes)
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		1000	Window write error occurred.
		2000	Error occurred in Indirect Read.
	0823		Atomic write compare test.
		0040	CHK1 Error occurred.
		4000	Error occurred in Memory Write.
		8000	Error occurred in Memory Read.
		0100	Data Compare Error occurred.
		0200	Atomic Compare Write Error occurred.
	0824		Window WT/RD test of PM(8bytes)
		0040	CHK1 Error occurred.
		0100	Data Compare Error occurred.
		1000	Window write error occurred.
		2000	Error occurred in Indirect Read.
	0830		MPPK Serial Warning test.
		0040	CHK1 Error occurred.
		0100	Warning Error occurred.
	0831		Impedance test.
		0040	CHK1 Error occurred.
		0100	Impedance Error occurred.
		0200	Impedance block CHK1B error occurred.

LSI classification	Test ID	Error Code	Error Contents
SW	0C00		SW version Read.
		2000	SW version Read error occurred.
	0C01		Side band WT/RD test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C02		COM part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C03		SB part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C04		DBG part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C05		CPL part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.

LSI classification	Test ID	Error Code	Error Contents
SW	0C06		ARB part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C07		TX part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C08		PXR part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C09		PXT part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C10		BF part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C11		REG part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.

LSI classification	Test ID	Error Code	Error Contents
SW	0C12		SW4P part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C13		RX part register WT/RD test
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
		0200	SW status error occurred.
	0C20		Counter test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Register Compare Error occurred.
	0C30		PCIe loop back test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Data Compare Error occurred.
		0004	LinkUP Error occurred.
	0C31		M path test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.

LSI classification	Test ID	Error Code	Error Contents
SW	0C33		I path test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
	0C34		Xpath test.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0100	Data Compare Error occurred.
	0C35		Number of port for diagnosis table making.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
	0C36		Xpath Link Up test.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
		0100	X Path Link Down Error occurred.
	0C40		RAM WT/RD test.(1)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Data Compare Error occurred.
	0C41		RAM WT/RD test.(2)
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
		0001	Data Compare Error occurred.
		0100	RAM access permission Error occurred.
	0C50		Impedance test.
		0040	CHK1 Error occurred.
		2000	Error occurred in Register Read.
		0100	Impedance Error occurred.
	0C51		CMA dummy packet write.
		0040	CHK1 Error occurred.
		1000	Error occurred in Register Write.
		2000	Error occurred in Register Read.
	0CFF		SW diagnosis parameter check
		0000	Parameter Error occurred.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		SAS Diagnosis Initial processing.
		7701	The acquisition of Scratchpad0 of the Messaging Unit register is an error.
		7709	The value of the BAR type of Scratchpad0 is invalid.
		7801	The acquisition of IQCTO/OQCTO of MPI Main Configuration Table is an error.
		7901	The acquisition of IQPIBARx of MPI Inbound Queue Configuration Table is an error.
		7909	The value of the BAR type of IQPIBARx is invalid.
		7A01	The acquisition of IQPIOFFx of MPI Inbound Queue Configuration Table is an error.
		7B01	The acquisition of OQCIBARx of MPI Outbound Queue Configuration Table is an error.
		7B09	The value of the BAR type of OQCIBARx is invalid.
		7C01	The acquisition of OQCIOFFx of MPI Outbound Queue Configuration Table is an error.
		7D01	The acquisition of OQCIBAR0 of MPI Outbound Queue Configuration Table is an error.
		7D09	The value of the BAR type of OQCIBAR0 is invalid.
		7E01	The acquisition of OQCIOFF0 of MPI Outbound Queue Configuration Table is an error.
		1104	Beginning CHK4 check error detected.
		D101	SPC EPROM CRC check error.
		CB01	SPROM Read error.
		CB0E	SPROM Read Timeout error.
		CB0F	SPROM Read Phase number invalidity.
		CD01	SPROM Write error.
		CD0E	SPROM Write Timeout error.
		CD0F	SPROM Write Phase number invalidity.
		CE01	LM to SPC data Write error.
		CE09	LM to SPC data Write compare error.
		CE02	LM to SPC data Write MCH_DMA error.
		CE0E	LM to SPC data Write Timeout error.
		E105	PCI-Reset error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		A501	The acquisition of the standing up mode of SPC is an error.
		1204	Last CHK4 check error detected.
		2E01	CHIP-RESET: The save processing is an error.
		2E0E	CHIP-RESET: The MEMBASE-II Window switch register change is a time-out error.
		2F01	CHIP-RESET: The reset processing is an error.
		3001	CHIP-RESET: The Recovery processing is an error.
		0D01	PPCI_LMBASE:read to save error.
		0E01	PPCI_LMBASE:CUDG set error.
		0F01	PPCI_LMBASE:Write to recover error.
		9001	SAS-CTL Initialization: The Messaging Unit Registers acquisition is an error.
		9101	SAS-CTL Initialization: The Scratchpad1 acquisition is an error.
		910E	SAS-CTL Initialization: AAP_STATE is a time-out error.
		9201	SAS-CTL Initialization: The Scratchpad2 acquisition is an error.
		920E	SAS-CTL Initialization: IOP_STATE is a time-out error.
		9309	SAS-CTL Initialization: The value of the BAR type of Scratchpad0 is invalid.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		9401	SAS-CTL Initialization: The MPI Main Configuration Table acquisition is an error.
		9501	SAS-CTL Initialization: The MPI Main Configuration Table setting is an error.
		9601	SAS-CTL Initialization: The MPI Inbound Queue Configuration Table setting is an error.
		9701	SAS-CTL Initialization: The acquisition of IQPIBARx of MPI Inbound Queue Configuration Table is an error.
		9709	SAS-CTL Initialization: The value of the BAR type of IQ Pindex PCI is invalid.
		9801	SAS-CTL Initialization: The acquisition of IQPIOFFx of MPI Inbound Queue Configuration Table is an error.
		9901	SAS-CTL Initialization: The MPI Outbound Queue Configuration Table setting is an error.
		9A01	SAS-CTL Initialization: The acquisition of OQCIBARx of MPI Outbound Queue Configuration Table is an error.
		9A09	SAS-CTL Initialization: The value of the BAR type of OQ Cindex PCI is invalid.
		9B01	SAS-CTL Initialization: The acquisition of OQCIOFFx of MPI Outbound Queue Configuration Table is an error.
		9C01	SAS-CTL Initialization: The setting of the MPI OQ interruption time-out timer value is an error.
		9D01	SAS-CTL Initialization: The IB_Doorbell setting is an error.
		9E01	SAS-CTL Initialization: The Inbound Doorbell register check is an error.
		9E0E	SAS-CTL Initialization: The Inbound Doorbell register check is a time-out error.
		9F01	SAS-CTL Initialization: The acquisition of MPI_State of MPI General Status Table is an error.
		9F09	SAS-CTL Initialization: MPI_State of MPI General Status Table is not Successully Initialized MPI.
		A401	SAS-CTL Initialization: The MPI General Status Table acquisition is an error.
		A001	SAS-CTL Initialization: The MEMBASE-II Window switch register change is an error.
		A00E	SAS-CTL Initialization: The MEMBASE-II Window switch register change is a time-out error.
		A101	SAS-CTL Initialization: The setting of Transmitter Per Port Configuration 1 SAS-SATA G3 Register is an error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		A201	SAS-CTL Initialization: The MEMBASE-II Window switch register recovery is an error.
		A20E	SAS-CTL Initialization: The MEMBASE-II Window switch register recovery is a time-out error.
		A304	SAS-CTL Initialization: Last CHK4 check error detected.
		1001	SAS memory Register save/recovery: The acquisition of the MEMBASE-II Window switch register value is an error.
		A601	SAS memory Register save: The save of the DS default is an error.
		1C01	SAS memory Register save: The MEMBASE-II Window switch register change is an error.
		1C0E	SAS memory Register save: The MEMBASE-II Window switch register change is a time-out error.
		220F	SAS memory Register save: The parameter of an internal table is invalid.
		2301	SAS memory Register save: register read error.
		2801	SAS memory Register save: The acquisition of the maximum number of Que is an error.
		2901	SAS memory Register save: The save of MPI Inbound Queue Config Table is an error.
		2A01	SAS memory Register save: The save of MPI Outbound Queue Config Table is an error.
		2409	SAS memory Register save: Not recover is no save data.
		250F	SAS memory Register recovery: The parameter of an internal table is invalid.
		2601	SAS memory Register recovery: Register write error.
		2B01	SAS memory Register recovery: The recovery of MPI Inbound Queue Config Table is an error.
		2C01	SAS memory Register recovery: The recovery of MPI Outbound Queue Config Table is an error.
		A701	SAS memory Register recovery: The recovery of the DS default is an error.
		3901	SAS memory Register save/recovery: The MEMBASE-II Window switch register recovery is an error.
		390E	SAS memory Register save/recovery: The MEMBASE-II Window switch register recovery is a time-out error.
		3101	Config set: Write of the register is an error.
		B501	Config Register Read error.
		B609	Config Register Read level is out of expectation.
		3204	Config set: Last CHK4 check error detected.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		6101	Soft reset(HDA): The MEMBASE-II Window switch register save is an error.
		6701	Soft reset(HDA): Initial value (0x00000000) setting of the MEMBASE-II Window switch register is an error.
		670E	Soft reset(HDA): Initial value (0x00000000) setting of the MEMBASE-II Window switch register is a time-out error.
		3301	Soft reset(HDA): SCRATCHPAD2 read error.
		3401	Soft reset(HDA): The MEMBASE-II Window switch register save is an error.
		3501	Soft reset(HDA): The MEMBASE-II Window switch register change (0x006a0000) is an error.
		350E	Soft reset(HDA): The MEMBASE-II Window switch register change (0x006a0000) is a time-out error.
		3601	Soft reset(HDA): RB6 Access Register write error.
		3701	Soft reset(HDA): The MEMBASE-II Window switch register recovery is an error.
		370E	Soft reset(HDA): The MEMBASE-II Window switch register recovery is a time-out error.
		3A01	Soft reset(HDA): Enable register read error.
		3B01	Soft reset(HDA): Enable register write error.
		3B0E	Soft reset(HDA): Enable register change time-out error.
		3C01	Soft reset(HDA): NMI enable write error.
		3D01	Soft reset(HDA): SCRATCHPAD0 write error.
		3E01	Soft reset(HDA): The MEMBASE-II Window switch register save is an error.
		3F01	Soft reset(HDA): The MEMBASE-II Window switch register change (0x00700000) is an error.
		3F0E	Soft reset(HDA): The MEMBASE-II Window switch register change (0x00700000) is a time-out error.
		4001	Soft reset(HDA): GMS config reset register read error.
		4101	Soft reset(HDA): GMS config reset register setting error.
		4201	Soft reset(HDA): Check Enable register save error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		4301	Soft reset(HDA): Check Enable register OFF error.
		4401	Soft reset(HDA): The MEMBASE-II Window switch register recovery is an error.
		440E	Soft reset(HDA): The MEMBASE-II Window switch register recovery is a time-out error.
		B101	Soft reset(HDA): The MEMBASE-II Window switch register change (0x00700000) is an error.
		B10E	Soft reset(HDA): The MEMBASE-II Window switch register change (0x00700000) is a time-out error.
		B201	Soft reset(HDA): GPIO[0] Mode read error.
		B301	Soft reset(HDA): GPIO[0] Mode setting error.
		B401	Soft reset(HDA): The MEMBASE-II Window switch register recovery is an error.
		B40E	Soft reset(HDA): The MEMBASE-II Window switch register recovery is a time-out error.
		4501	Soft reset(HDA): SPC_Reset register read error.
		4601	Soft reset(HDA): SPC_Reset register write(IOP/AAP1=0) error.
		4701	Soft reset(HDA): SPC_Reset register read error.
		4801	Soft reset(HDA): SPC_Reset register write(BDMA_CORE/SSP=0) error.
		4901	Soft reset(HDA): SPC_Reset register read error.
		4A01	Soft reset(HDA): SPC_Reset register write(BDMA_CORE/SSP=1) error.
		4B01	Soft reset(HDA): The MEMBASE-II Window switch register save is an error.
		4C01	Soft reset(HDA): The MEMBASE-II Window switch register change (0x00700000) is an error.
		4C0E	Soft reset(HDA): The MEMBASE-II Window switch register change (0x00700000) is a time-out error.
		4D01	Soft reset(HDA): GSM Configuration and Reset Register read error.
		4E01	Soft reset(HDA): GSM Configuration and Reset Register setting error.
		4F01	Soft reset(HDA): Check Enable register recovery error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		5001	Soft reset(HDA): The MEMBASE-II Window switch register recovery is an error.
		500E	Soft reset(HDA): The MEMBASE-II Window switch register recovery is a time-out error.
		5101	Soft reset(HDA): SPC_Reset register read error.
		5201	Soft reset(HDA): SPC_Reset register write(IOP/AAP1=1) error.
		A801	Soft reset(HDA): Outbound Doorbell register setting error.
		5301	Soft reset(HDA): The MEMBASE-II Window switch register recovery is an error.
		530E	Soft reset(HDA): The MEMBASE-II Window switch register recovery is a time-out error.
		5304	Soft reset(HDA): Last CHK4 check error detected.
		540F	Phase division contradiction. (Excessive number of times)
		5401	Firmware writing: The MEMBASE-II Window switch register save is an error.
		5F01	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is an error.
		5F0E	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is a time-out error.
		5501	Firmware writing: HDAR_IDLE read error.
		5609	Firmware writing: RSP_CODE of HDAR_IDLE is not HDA mode.
		5701	Firmware writing: The MEMBASE-II Window switch register change (ISTR) is an error.
		570E	Firmware writing: The MEMBASE-II Window switch register change (ISTR) is a time-out error.
		5801	Firmware writing: ISTR erite error.
		5901	Firmware writing: The ISTR size setting to HOST_SCRATCHPAD3 is an error.
		6E01	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is an error.
		6E0E	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is a time-out error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		5A01	Firmware writing: HOST_SCRATCHPAD0 setting error.
		5B01	Firmware writing: The MEMBASE-II Window switch register change (ILA) is an error.
		5B0E	Firmware writing: The MEMBASE-II Window switch register change (ILA) is a time-out error.
		5C01	Firmware writing: ILA write error.
		8C01	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is an error.
		8C0E	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is a time-out error.
		5D01	Firmware writing: HDA command format[0x00] setting error.
		AA01	Firmware writing: HDA command format[0x04] setting error.
		AB01	Firmware writing: HDA command format[0x08] setting error.
		AC01	Firmware writing: HDA command format[0x0C] setting error.
		AD01	Firmware writing: HDA command format[0x10] setting error.
		AE01	Firmware writing: HDA command format[0x14] setting error.
		AF01	Firmware writing: HDA command format[0x18] setting error.
		B001	Firmware writing: HDA command format[0x1C] setting error.
		B004	Firmware writing: HDA command after CHK4 check error detected.
		5E01	Firmware writing: HDA Response R_CODE read error.
		5E04	Firmware writing: HDA Response R_CODE Polling CHK4 check error detected.
		5E0E	Firmware writing: HDA Response R_CODE Polling time-out error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		6001	Firmware writing: SCRATCHPAD0 read error.
		6004	Firmware writing: SCRATCHPAD0 Polling CHK4 check error detected.
		600E	Firmware writing: SCRATCHPAD0 Polling time-out error.
		D201	Firmware writing (Maintenance): HDA Response R_CODE read error.
		D20E	Firmware writing (Maintenance): HDA Response R_CODE Polling time-out error.
		D20F	Firmware writing (Maintenance): Phase number invalidity.
		D301	Firmware writing (Maintenance): SCRATCHPAD0 read error.
		D30E	Firmware writing (Maintenance): SCRATCHPAD0 Polling time-out error.
		6201	Firmware writing: SCRATCHPAD0 read error.
		6301	Firmware writing: The MEMBASE-II Window switch register change (AAP1) is an error.
		630E	Firmware writing: The MEMBASE-II Window switch register change (AAP1) is a time-out error.
		6401	Firmware writing: AAP1 write error.
		6501	Firmware writing: The AAP1 size setting to HOST_SCRATCHPAD3 is an error.
		8D01	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is an error.
		8D0E	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is a time-out error.
		8D04	Firmware writing: AAP1 write after CHK4 check error detected.
		6601	Firmware writing: SCRATCHPAD0 read error.
		6604	Firmware writing: SCRATCHPAD0 Polling CHK4 check error detected.
		660E	Firmware writing: SCRATCHPAD0 Polling time-out error.
		D401	Firmware writing (Maintenance): SCRATCHPAD0 read error.
		D40E	Firmware writing (Maintenance): SCRATCHPAD0 Polling time-out error.
		6801	Firmware writing: SCRATCHPAD0 read error.
		6901	Firmware writing: The MEMBASE-II Window switch register change (IOP) is an error.
		690E	Firmware writing: The MEMBASE-II Window switch register change (IOP) is a time-out error.
		6A01	Firmware writing: IOP write error.
		6B01	Firmware writing: The IOP size setting to HOST_SCRATCHPAD3 is an error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F50		
		8E01	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is an error.
		8E0E	Firmware writing: Initial value (0x00000000) setting of the MEMBASE-II Window switch register is a time-out error.
		8E04	Firmware writing: IOP write after CHK4 check error detected.
		6C01	Firmware writing: HOST_SCRATCHPAD0 '0'clear error.
		6C04	Firmware writing: HOST_SCRATCHPAD0 '0'clear after CHK4 check error detected.
		6D01	Firmware writing: SCRATCHPAD1 read error.
		6D04	Firmware writing: SCRATCHPAD1 Polling CHK4 check error detected.
		6D0E	Firmware writing: SCRATCHPAD1 Polling time-out error.
		6F01	Firmware writing: SCRATCHPAD2 read error.
		6F04	Firmware writing: SCRATCHPAD2 Polling CHK4 check error detected.
		6F0E	Firmware writing: SCRATCHPAD2 Polling time-out error.
		D501	Firmware writing (Maintenance): SCRATCHPAD1 read error.
		D50E	Firmware writing (Maintenance): SCRATCHPAD1 Polling time-out error.
		D601	Firmware writing (Maintenance): SCRATCHPAD2 read error.
		D60E	Firmware writing (Maintenance): SCRATCHPAD2 Polling time-out error.
		7101	Firmware writing: The MEMBASE-II Window switch register recovery is an error.
		710E	Firmware writing: The MEMBASE-II Window switch register recovery is a time-out error.
		7204	Firmware writing: Last CHK4 check error detected.
		7601	Firmware writing: The acquisition of version information on the firmware is an error.
		7301	Config register read error.
		7409	No save data of the config register.
		7501	Config register write error.
		CF0F	Phase number invalidity.
		D00F	Phase division contradiction. (Excessive number of times)

LSI classification	Test ID	Error Code	Error Contents
SAS	0F51		SAS Diagnosis 1:Non-PORT Test.
		8F01	The acquisition of the maximum number of IQ/OQ of MPI Main Config Table is an error.
		7701	The acquisition of Scratchpad0 of the Messaging Unit register is an error.
		7709	The value of the BAR type of Scratchpad0 is invalid.
		7801	The acquisition of IQCTO/OQCTO of MPI Main Configuration Table is an error.
		7901	The acquisition of IQPIBARx of MPI Inbound Queue Configuration Table is an error.
		7909	The value of the BAR type of IQPIBARx is invalid.
		7A01	The acquisition of IQPIOFFx of MPI Inbound Queue Configuration Table is an error.
		7B01	The acquisition of OQCIBARx of MPI Outbound Queue Configuration Table is an error.
		7B09	The value of the BAR type of OQCIBARx is invalid.
		7C01	The acquisition of OQCIOFFx of MPI Outbound Queue Configuration Table is an error.
		7D01	The acquisition of OQCIBAR0 of MPI Outbound Queue Configuration Table is an error.
		7D09	The value of the BAR type of OQCIBAR0 is invalid.
		7E01	The acquisition of OQCIOFF0 of MPI Outbound Queue Configuration Table is an error.
		7F01	It is an error not to adjust Pindex and Cindex of OQ to the same value.
		8601	OQ_CI register read error.
		8609	The Valid bit of IOMB of OQ is 0.
		8301	ECHO Response: OQ Cindex update error.
		B701	PCIE_DIAG_EXECUTE Response: OQ Cindex update error.
		8709	IOMB of OQ was unused Response.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F51		
		1504	Beginning CHK4 check error detected.
		150F	Phase division contradiction. (Excessive number of times)
		160F	Phase number invalidity.
		1604	Last CHK4 check error detected.
		1801	ECHO command: The acquisition of the IQ Pindex register value is an error.
		1901	ECHO command: The acquisition of the OQ Cindex register value is an error.
		1A02	ECHO command: MCH-DMA transfer to SPC is an error.
		1B02	ECHO command: MCH-DMA transfer to IQ Pindex update is an error.
		1B01	ECHO command: Confirmation read after IQ Pindex is renewed is an error.
		200E	ECHO command: Waiting that confirms the renewal of IQ Cindex is a time-out error.
		2D0E	ECHO command: Waiting that confirms the renewal of OQ Pindex is a time-out error.
		1D09	ECHO command: Response processing error.
		C809	ECHO command: HTAG of the response is mismatched.
		1E04	ECHO command: Last CHK4 check error detected.
		C502	Loopback command: Data transfer of MCH_DMA is an error.
		C702	Loopback command: Clear data transfer of MCH_DMA is an error.
		B801	Loopback command: The acquisition of the IQ Pindex register value is an error.
		B901	Loopback command: The acquisition of the OQ Cindex register value is an error.
		BA02	Loopback command: MCH-DMA transfer to SPC is an error.
		BB02	Loopback command: MCH-DMA transfer to IQ Pindex update is an error.
		BB01	Loopback command: Confirmation read after IQ Pindex is renewed is an error.
		BC0E	Loopback command: Waiting that confirms the renewal of IQ Cindex is a time-out error.
		BD0E	Loopback command: Waiting that confirms the renewal of OQ Pindex is a time-out error.
		BE09	Loopback command: HTAG of the response is mismatched.
		BF09	Loopback command: OP-Code of the response is mismatched.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F51		
		C009	Loopback command: The status of the response is an error.
		C104	Loopback command: Last CHK4 check error detected.
		C203	Loopback command: the asynchronous DMA transfer is an error.
		C304	Loopback command: the asynchronous DMA after CHK4 check error detected.
		C40D	Loopback command: Data compare is mismatched.
		0D01	Read to save PPCI_LMBASE is an error.
		0E01	The setting to PPCI_LMBASE is an error.
		0F01	The recovery of PPCI_LMBASE is an error.

LSI classification	Test ID	Error Code	Error Contents
SAS	0F53		SAS Diagnosis End processing.
		1304	Beginning CHK4 check error detected.
		0C02	Clear data transfer of MCH_DMA is an error.
		1404	Last CHK4 check error detected.
		2E01	CHIP-RESET: The save processing is an error.
		2E0E	CHIP-RESET: The MEMBASE-II Window switch register change is a time-out error.
		2F01	CHIP-RESET: The reset processing is an error.
		3001	CHIP-RESET: The Recovery processing is an error.
		E105	PCI-Reset error.
		250F	SAS memory Register recovery: The parameter of an internal table is invalid.
		2601	SAS memory Register recovery: Register write error.
		2B01	SAS memory Register recovery: The recovery of MPI Inbound Queue Config Table is an error.
		2C01	SAS memory Register recovery: The recovery of MPI Outbound Queue Config Table is an error.
		A701	SAS memory Register recovery: The recovery of the DS default is an error.
		3901	SAS memory Register save/recovery: The MEMBASE-II Window switch register recovery is an error.
		390E	SAS memory Register save/recovery: The MEMBASE-II Window switch register recovery is a time-out error.
		7409	Config register recovery: Not recover is no save data.
		7501	Config register recovery: Write of the register is an error.
		C90F	Phase number invalidity.
		CA0F	Phase division contradiction. (Excessive number of times)

LSI classification	Test ID	Error Code	Error Contents
FCoE	1660		FCoE diagnosis Start processing.
		010F	Parameta Error.
		1404	FCoE diagnosis : The CHK4 detection in the top.
		1504	FCoE diagnosis : The CHK4 detection at the end.
		1804	FCoE initial : The CHK4 detection at the end.
		2601	Config. register write error.
		2004	Soft reset check : The CHK4 detection at the end.
		8101	LRP register FOP_CTL Read error.
		8209	LRP No Boot.
		8301	LRP register FOP_STS Read error.
		8409	LRP Not Active.
		1101	LRP support function : LRP MailBox error.
		1107	LRP support function : LRP MailBox Status error.
		1201	DS space reset : LRP MailBox error.
		1207	DS space reset : LRP MailBox Status error.
		1E01	GPIO Data register Write error.
		1F01	GPIO Enable register Write error.
		2001	Dummy Read error.
		2101	DMA Shutdown Control register Write error.
		1104	The CHK4 detection during polling awaiting DMA stop completion.
		2201	ISP Control/Status register Read error.
		1D0E	A time-out error awaiting DMA stop.
		2301	Soft Reset Write error.
		2401	FCoE Soft Reset: Dummy Read error.
		1204	The CHK4 detection during polling awaiting Soft Reset completion.
		2501	FCoE Soft Reset : EP_Mailbox 0 register Read error.
		1F0E	A time-out error awaiting Soft Reset completion.
		1304	FCoE Soft Reset : The CHK4 detection at the end.
		2809	A register is already finished with save.
		2801	Register save : DS data Read error.
		2901	MP search register Data Read error.
		2A01	MP search data table Data Read error.
		2701	DS initial value save error.
		2F04	Register save : The CHK4 detection at the end.
		3102	MCH_DMA error. (source DXBF clear)
		3202	MCH_DMA error. (Destination DXBF clear)

LSI classification	Test ID	Error Code	Error Contents
FCoE	1660		
		3104	The CHK4 detection in the loop top.
		3302	MCH_DMA error. (source DXBF data set)
		3801	Destination DXBF Read error.
		3204	The CHK4 detection at the loop end.
		3E0D	Data not same.
		3304	Memory Read/Write Test : The CHK4 detection at the end.
		3109	Flash Data out of the expectation
		3809	Flash Sum value error.
		3404	Flash Sum check : The CHK4 detection at the end.
		3901	Flash address register Write error.
		3504	The CHK4 detection during polling awaiting Flash data Read.
		3A01	Flash Access Address register Read error.
		3E0E	A time-out error awaiting Flash data Read.
		3B01	Flash Data register Read error.
		3604	FCoE Firmware Boot Test : The CHK4 detection at the end.
		3E0F	Classification Parameta Error.
		3D0F	Port# Parameta Error.
		1301	VP0 Port representative MP# Write error.
		1401	VP1 Port representative MP# Write error.
		2F01	VP0 Loss of Signal LM address Write error.
		3601	VP1 Loss of Signal LM address Write error.
		1501	Exchange MP# Write error.
		1601	Virtual-IMQ Length 0 clear error.
		1701	Virtual-IMQ C_Index 0 clear error.
		1801	Virtual-IMQ Length Write error.
		1901	Virtual-IMQ LM base address Write error.
		1A01	Virtual-IMQ P_Index LM address Write error.
		1B01	Virtual-IMQ C_Index Write error.
		1C01	MP search table MP# change register(L) Write error.
		1D01	MP search table MP# change register(H) Write error.
		3301	S_ID entry register table clear error.
		3401	S_ID entry register Enable setting Write error.
		1202	MCH_DMA error. (MP search data table setting)
		3209	Code_1 Firmware size error.
		3402	MCH_DMA error. (Code_1 Firmware)

LSI classification	Test ID	Error Code	Error Contents
FCoE	1660		
		3501	Code_1 Firmware Read error.
		3C0D	Code_1 Firmware Read Data not same.
		3309	Code_2 Firmware size error.
		3502	MCH_DMA error. (Code_2 Firmware)
		3701	Code_2 Firmware Read error.
		3D0D	Code_2 Firmware Read Data not same.
		3704	FCoE Firmware load : The CHK4 detection at the end.
		3602	MCH_DMA error. (ELS command list)
		7D01	RQQ In_Pointer 0 clear error.
		8001	RPQ Out_Pointer 0 clear error.
		3702	MCH_DMA error. (CB)
		3101	Clear RISC to PCI Interrupt Write error.
		3201	RISC to Host Status Read error.
		390E	A time-out error awaiting interrupt clear completion.
		4001	NIC Status register Read error.
		4109	NIC Func-ID out of the expectation.
		4101	NIC Outgoing Mailbox top address get error.
		4201	NIC Process Address register Write error.
		4104	The CHK4 detection during polling awaiting NIC Outgoing Mailbox Read.
		4301	NIC Processor Address register Read error.
		4B0E	A time-out error awaiting NIC Outgoing Mailbox Read.
		4401	NIC Processor Data register Read error.
		4209	NIC Outgoing Mailbox out of the expectation.
		4501	NIC Host Command/Status register Read error.
		4601	NIC Clear Host to RISC Interrupt Write error.
		4701	NIC Status register Read error.
		4309	NIC Func-ID out of the expectation.
		4801	NIC Incoming Mailbox top address get error.
		4901	NIC Processor Address register ‘0’ Write error.
		4A01	NIC Processor Data register Write error.
		4B01	NIC Process Address register Write error.
		4204	The CHK4 detection during polling awaiting NIC Incoming Mailbox Write.
		4C01	NIC Processor Address register Read error.
		4C0E	A time-out error awaiting NIC Incoming Mailbox Write.
		4D01	NIC Host Command/Status register Write error.

LSI classification	Test ID	Error Code	Error Contents
FCoE	1660		
		4E01	NIC : Dummy Read error.
		4F01	NIC Status register Read error.
		4409	NIC Func-ID out of the expectation.
		5001	NIC Outgoing Mailbox top address get error.
		4304	The CHK4 detection during polling awaiting NIC Outgoing Mailbox Read.
		5101	NIC Status register Read error.
		4D0E	A time-out error awaiting NIC Mailbox command completion.
		5201	NIC Process Address register Write error.
		4404	The CHK4 detection during polling awaiting NIC Outgoing Mailbox Read.
		5301	NIC Processor Address register Read error.
		4E0E	A time-out error awaiting NIC Outgoing Mailbox Read.
		5401	NIC Processor Data register Read error.
		5501	NIC Clear Host to RISC Interrupt Write error.
		6001	NIC : Dummy Read error.
		4107	NIC Get Firmware Stat command error.
		4509	NIC Get Firmware Stat : Firmware state is NOT Ready.
		6101	FCoE Mailbox exec : Incoming Mailbox Write error.
		6201	FCoE Mailbox exec : Dummy Read error.
		6301	FCoE Mailbox exec : Set Host to RISC Interrupt Write error.
		6401	FCoE Mailbox exec : Dummy Read error.
		4504	The CHK4 detection during polling awaiting FCoE Outgoing Mailbox completion.
		6501	FCoE Mailbox exec : ISP to PCI Interrupt Status register Read error.
		4F0E	A time-out error awaiting FCoE Outgoing Mailbox completion.
		6601	FCoE Mailbox exec : RISC to Host Status register Read error.
		4609	FCoE Mailbox exec : RISC to Host Interrupt Request is OFF.
		3E01	FCoE Mailbox exec : Host Command and Control register Write error.
		3F01	FCoE Mailbox exec : Dummy Read error.
		4709	FCoE Mailbox exec : RISC to Host Status out of the expectation.
		6701	FCoE Mailbox exec : FCoE Outgoing Mailbox Read error.
		6801	FCoE Mailbox exec : Host Command and Control register Write error.
		3001	FCoE Mailbox exec : Dummy Read error.
		4207	No Operation command error.
		4307	Execute Firmware command error.
		4407	Mailbox Register Test command error.

LSI classification	Test ID	Error Code	Error Contents
FCoE	1660		
		4F0D	Mailbox Register Test Data comparison error.
		4517	Verify Checksum command error.
		4607	About Firmware command error.
		4809	About Firmware Ver. Value NG.
		4707	Load RISC RAM command error.
		4807	Dump RISC RAM command error.
		4907	Set Transmit Parameters command error.
		4A07	Initialize Multiple Queue command error.
		4B07	Set Additional Firmware Options command error.
		4D07	Initialize Firmware-Multipule ID command error.
		4E07	Set Parameters command error.
		5507	Initialize Firmware command error.
		4F07	Get Firmware Stat command error.
		4909	Get Firmware Stat : Firmware state is NOT Ready.
		5007	Set Port Configuration command error.
		5107	Get Port Configuration command error.
		1001	LRP MailBox error.
		1007	LRP MailBox status error.
	1661		FCoE diagnosis Test proc.
		010F	Parameta Error.
		1504	FCoE diagnosis : The CHK4 detection at the end.
		1904	FCoE test: The CHK4 detection at the end.
		6101	FCoE Mailbox exec : Incoming Mailbox Write error.
		6201	FCoE Mailbox exec : Dummy Read error.
		6301	FCoE Mailbox exec : Set Host to RISC Interrupt Write error.
		6401	FCoE Mailbox exec : Dummy Read error.
		4504	The CHK4 detection during polling awaiting FCoE Outgoing Mailbox completion.
		6501	FCoE Mailbox exec : ISP to PCI Interrupt Status register Read error.
		4F0E	A time-out error awaiting FCoE Outgoing Mailbox completion.
		6601	FCoE Mailbox exec : RISC to Host Status register Read error.
		4609	FCoE Mailbox exec : RISC to Host Interrupt Request is OFF.
		3E01	FCoE Mailbox exec : Host Command and Control register Write error.
		3F01	FCoE Mailbox exec : Dummy Read error.
		4709	FCoE Mailbox exec : RISC to Host Status out of the expectation.
		6701	FCoE Mailbox exec : FCoE Outgoing Mailbox Read error.

LSI classification	Test ID	Error Code	Error Contents
FCoE	1661		
		6801	FCoE Mailbox exec : Host Command and Control register Write error.
		3001	FCoE Mailbox exec : Dummy Read error.
		4207	No Operation command error.
		4407	Mailbox Register Test command error.
		4F0D	Mailbox Register Test Data comparison error.
		4C07	Diagnostic Loopback command error.
		4007	Host Memory Copy command error.
		5007	Set Port Configuration command error.
		5107	Get Port Configuration command error.
		1101	LRP support function : LRP MailBox error.
		1107	LRP support function : LRP MailBox Status error.
		5104	IOCB Test : The CHK4 detection at the end.
		5204	IOCB Test2 : The CHK4 detection at the end.
		5502	IOCB request : MCH_DMA error. (RQQ)
		5701	IOCB request : Clear RISC to PCI Interrupt Write error.
		5801	IOCB request : Dummy Read error.
		5901	IOCB request : RQQ In-Pointer Write error.
		5A01	IOCB request : Dummy Read error.
		5B01	IOCB response : Virtual-IMQ C_Index(DS) Read error.
		5304	The CHK4 detection during polling awaiting IOCB completion.
		5E0E	A time-out error awaiting IOCB completion.
		5109	IOCB response : ENTRY STATUS is Not '0'.
		5209	IOCB response : IOCB_HANDLE not same.
		5309	IOCB response : 2nd IOCB response error.
		5409	IOCB response : Invalid Asynchronous event.
		5C01	IOCB response : Virtual-IMQ C_Index Write error.
		5607	IOCB response is nothing.
		5207	No Operation command error.
		5307	Mailbox Register Test command error.
		5D0D	Mailbox Register Test Data comparison error.
		5407	Host Memory Copy command error.
		6102	MCH_DMA error. (source DXBF clear)
		6202	MCH_DMA error. (Destination DXBF clear)
		6104	The CHK4 detection before transfer.
		6302	MCH_DMA error. (source DXBF data set)
		6901	Destination DXBF Read error.

LSI classification	Test ID	Error Code	Error Contents
FCoE	1661		
		6204	The CHK4 detection after transfer.
		6C0D	Transfer Data not same.
		6304	Host Memory Copy check : The CHK4 detection at the end.
		4F0E	A time-out error awaiting 0x80308012 Asynchronous event.
		6109	Loop mode not same.
		6404	Loopback check : The CHK4 detection at the end.
		6402	Loopback transfer : MCH_DMA error. (source DXBF clear)
		6502	Loopback transfer : MCH_DMA error. (Destination DXBF clear)
		7801	Loopback transfer : DS0 clear Write error.
		7901	Loopback transfer : DS1 clear Write error.
		6504	Loopback transfer : The CHK4 detection before transfer
		6802	Loopback transfer : MCH_DMA error. (source DXBF)
		6902	Loopback transfer : MCH_DMA error. (source DXBF)
		6A02	Loopback transfer : MCH_DMA error. (source DXBF)
		6A01	Loopback transfer : Destination DXBF Read error.
		7A01	Loopback transfer : DS0 Write error.
		6B01	Loopback transfer : DS1 Read error.
		6C02	Loopback transfer : MCH_DMA error. (source DXBF)
		6C01	Loopback transfer : DS0 Read error.
		6D02	Loopback transfer : MCH_DMA error. (source DXBF)
		6D01	Loopback transfer : DS1 Read error.
		7B01	Loopback transfer : DS0 Write error.
		6E01	Loopback transfer : Destination DXBF Read error.
		7C01	Loopback transfer : DS1 Write error.
		6F01	Loopback transfer : Destination DXBF Read error.
		6604	Loopback transfer : The CHK4 detection after transfer.
		6D0D	Loopback transfer : Transfer Data not same.
		1001	LRP MailBox error.
		1007	LRP MailBox status error.
	1662		FCoE diagnosis End proc.
		010F	Parameta Error.
		1604	FCoE diagnosis : The CHK4 detection in the top.
		1704	FCoE diagnosis : The CHK4 detection at the end.
		1302	MCH_DMA error. (RQQ DXBF clear)
		1A04	FCoE end : The CHK4 detection at the end.

LSI classification	Test ID	Error Code	Error Contents
FCoE	1662		
		2601	Config. register write error.
		2004	Soft reset check : The CHK4 detection at the end.
		8101	LRP register FOP_CTL Read error.
		8209	LRP No Boot.
		8301	LRP register FOP_STS Read error.
		8409	LRP Not Active.
		1101	LRP support function : LRP MailBox error.
		1107	LRP support function : LRP MailBox Status error.
		1201	DS space reset : LRP MailBox error.
		1207	DS space reset : LRP MailBox Status error.
		1E01	GPIO Data register Write error.
		1F01	GPIO Enable register Write error.
		2001	Dummy Read error.
		2101	DMA Shutdown Control register Write error.
		1104	The CHK4 detection during polling awaiting DMA stop completion.
		2201	ISP Control/Status register Read error.
		1D0E	A time-out error awaiting DMA stop.
		2301	Soft Reset Write error.
		2401	FCoE Soft Reset : Dummy Read error.
		1204	The CHK4 detection during polling awaiting Soft Reset completion.
		2501	FCoE Soft Reset : EP_Mailbox 0 register Read error.
		1F0E	A time-out error awaiting Soft Reset completion.
		1304	FCoE Soft Reset : The CHK4 detection at the end.
		2E01	DS initial value recovery error.
		2B01	Register recovery : DS data Write error.
		2C01	MP search register Data Write error.
		2D01	MP search data table Data Write error.
		2F04	Register recovery : The CHK4 detection at the end.
		2F09	PCI reset register value out of the expectation.
		E105	PCI Reset error.
		1001	LRP MailBox error.
		1007	LRP MailBox status error.

LSI classification	Test ID	Error Code	Error Contents
MHUB	1814		MF DMA Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
	1815		MF DMA DXBF → LM Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		5004	MPA indirect read error (DMA Data Transfer)
		5007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		5009	DMA Data Transfer Execution Time Out Error occurred
		5013	CHK2 Error occurred
		501E	DMA Status Other Factor Error occurred
		5024	Field Status Cancel bit occurred
		5025	CCW Status Cancel bit occurred
		5104	MPA indirect read error (CHK4 check)
		5123	CHK4 Error occurred
	1816		MF DMA DXBF ↔ Cache Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		5004	MPA indirect read error (DMA Data Transfer)
		5007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		5009	DMA Data Transfer Execution Time Out Error occurred
		5013	CHK2 Error occurred
		501E	DMA Status Other Factor Error occurred
		5024	Field Status Cancel bit occurred
		5025	CCW Status Cancel bit occurred
		5104	MPA indirect read error (CHK4 check)
		5123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
MHUB	1817		MF DMA PARM → DXBF Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		5004	MPA indirect read error (DMA Data Transfer)
		5007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		5009	DMA Data Transfer Execution Time Out Error occurred
		5013	CHK2 Error occurred
		501E	DMA Status Other Factor Error occurred
		5024	Field Status Cancel bit occurred
		5025	CCW Status Cancel bit occurred
		5104	MPA indirect read error (CHK4 check)
		5123	CHK4 Error occurred
	181A		MF DMA Byte Aline Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		5004	MPA indirect read error (DMA Data Transfer)
		5007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		5009	DMA Data Transfer Execution Time Out Error occurred
		5013	CHK2 Error occurred
		501E	DMA Status Other Factor Error occurred
		5024	Field Status Cancel bit occurred
		5025	CCW Status Cancel bit occurred
		5104	MPA indirect read error (CHK4 check)
		5123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1901		Main diagnosis control
		0040	CHK1 Error occurred
		0002	HARD ADPMODE Read Error occurred
		0003	Illegal Parameter Error occurred
		001F	Illegal HARD ADPMODE Error occurred
		0021	Illegal PCB type
		0022	CMA LSI Revision Read Error occurred
		0032	FE/BE-PK maintenance No effective P-Path
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
	1903		Register Test
		0040	CHK1 Error occurred
		0019	Data Compare Error occurred (Register Read/Compare Test)
		001C	Data Compare Error occurred (Register Write/Read Test)
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
		1804	MPA indirect read error (Register Read/Compare Test)
		1A04	MPA indirect read error (Register Write/Read Test)
		1B05	MPA indirect write error (Register Write/Read Test)
		1D04	MPA indirect read error (Register Read Test)
	1904		Internal RAM Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0006	Data Compare Error occurred
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
		1005	MPA indirect write error (DRB Write)
		1104	MPA indirect read error (DRB Read)
		1105	MPA indirect read error (DRB Write)
	1906		DXBF Write/Read Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0007	MCH-DMA Data Transfer Error occurred
		0009	DXBF Write/Read end waiting Time Out Error occurred
		000A	Status Error occurred
		000B	ECC Uncollectable Error occurres
		000C	ECC Address Error occurres

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1906		
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
	1907		DXBF Direct Access Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred
		0009	DXBF Write/Read end waiting Time Out Error occurred
		000A	Status Error occurred
		000B	ECC Uncollectable Error occurres
		000C	ECC Address Error occurres
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
	1908		DRR Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
	1909		DRR Parity account/Verify Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0006	DRB check code Compare Error occurred
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
		1104	MPA indirect read error (DRB Read)
		1105	MPA indirect write error (DRB Read)
		2007	MCH-DMA Data Transfer Error occurred
		2009	DRR Data Transfer Execution Time Out Error occurred
		2304	MPA indirect read error (CHK2 check)
		2313	CHK2 DMA Factor Error occurred
		2314	CHK2 SW Factor Error occurred
		2315	CHK2 CM Factor Error occurred
		2316	CHK2 Error Status detected
		2317	CHK2 Illegal HSN Status detected
		2318	CHK2 Unknown Factor Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1909		
		2104	MPA indirect read error (CHK4 check)
		2123	CHK4 Error occurred
	190A		DRR ShadowImage Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0006	DRB check code Compare Error occurred
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
		1104	MPA indirect read error (DRB Read)
		1105	MPA indirect write error (DRB Read)
		2007	MCH-DMA Data Transfer Error occurred
		2009	DRR Data Transfer Execution Time Out Error occurred
		2304	MPA indirect read error (CHK2 check)
		2313	CHK2 DMA Factor Error occurred
		2314	CHK2 SW Factor Error occurred
		2315	CHK2 CM Factor Error occurred
		2316	CHK2 Error Status detected
		2317	CHK2 Illegal HSN Status detected
		2318	CHK2 Unknown Factor Error occurred
		2104	MPA indirect read error (CHK4 check)
		2123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	190C		DRR Cache Format Write Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0006	DRB check code Compare Error occurred
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred
		1104	MPA indirect read error (DRB Read)
		1105	MPA indirect write error (DRB Read)
		2007	MCH-DMA Data Transfer Error occurred
		2009	DRR Data Transfer Execution Time Out Error occurred
		2304	MPA indirect read error (CHK2 check)
		2313	CHK2 DMA Factor Error occurred
		2314	CHK2 SW Factor Error occurred
		2315	CHK2 CM Factor Error occurred
		2316	CHK2 Error Status detected
		2317	CHK2 Illegal HSN Status detected
		2318	CHK2 Unknown Factor Error occurred
		2104	MPA indirect read error (CHK4 check)
		2123	CHK4 Error occurred
	190D		Async DMA Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0104	MPA indirect read error (CHK4 check)
		0123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	190E		Async DMA DXBF → LM Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		001B	DMA Data Transfer data SUM value Compare Error occurred
		3004	MPA indirect read error (DMA Data Transfer)
		3005	MPA indirect write error (DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred
		301E	DMA Status Other MP Factor Error occurred
		3304	MPA indirect read error (DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred
		3314	CHK2 SW Factor Error occurred
		3315	CHK2 CM Factor Error occurred
		3316	CHK2 Error Status detected
		3317	CHK2 Illegal HSN Status detected
		3318	CHK2 Unknown Factor Error occurred
		3104	MPA indirect read error (CHK4 check)
		3123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	190F		Async DMA DXBF ↔ Cache Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		0010	EDV DMA securing function error return
		0011	EDV DMA start function error return
		0012	EDV DMA end function error return
		3004	MPA indirect read error (DMA Data Transfer)
		3005	MPA indirect write error (DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred
		301E	DMA Status Other MP Factor Error occurred
		3304	MPA indirect read error (DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred
		3314	CHK2 SW Factor Error occurred
		3315	CHK2 CM Factor Error occurred
		3316	CHK2 Error Status detected
		3317	CHK2 Illegal HSN Status detected
		3318	CHK2 Unknown Factor Error occurred
		3104	MPA indirect read error (CHK4 check)
		3123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1910		Async DMA Remote CRC Test
		0040	CHK1 Error occurred
		0006	OCRC Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		3004	MPA indirect read error (DMA Data Transfer)
		3005	MPA indirect write error (DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred
		301E	DMA Status Other MP Factor Error occurred
		3304	MPA indirect read error (DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred
		3314	CHK2 SW Factor Error occurred
		3315	CHK2 CM Factor Error occurred
		3316	CHK2 Error Status detected
		3317	CHK2 Illegal HSN Status detected
		3318	CHK2 Unknown Factor Error occurred
		3104	MPA indirect read error (CHK4 check)
		3123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1911		Async DMA Encryption Test
		0040	CHK1 Error occurred
		0004	MPA indirect read error
		0005	MPA indirect write error
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred
		0009	DXBF Setting end waiting Time Out Error occurred
		000D	KEY Status Error occurred
		3004	MPA indirect read error (DMA Data Transfer)
		3005	MPA indirect write error (DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred
		301E	DMA Status Other MP Factor Error occurred
		3304	MPA indirect read error (DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred
		3314	CHK2 SW Factor Error occurred
		3315	CHK2 CM Factor Error occurred
		3316	CHK2 Error Status detected
		3317	CHK2 Illegal HSN Status detected
		3318	CHK2 Unknown Factor Error occurred
		3104	MPA indirect read error (CHK4 check)
		3123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1912		Sync DMA Protocol chip ↔ Cache Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred
		3004	MPA indirect read error (Async DMA Data Transfer)
		3005	MPA indirect write error (Async DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (Async DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred (Async DMA)
		301E	DMA Status Other MP Factor Error occurred (Async DMA)
		3304	MPA indirect read error (Async DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred (Async DMA)
		3314	CHK2 SW Factor Error occurred (Async DMA)
		3315	CHK2 CM Factor Error occurred (Async DMA)
		3316	CHK2 Error Status detected (Async DMA)
		3317	CHK2 Illegal HSN Status detected (Async DMA)
		3318	CHK2 Unknown Factor Error occurred (Async DMA)
		3104	MPA indirect read error (CHK4 check) (Async DMA)
		3123	CHK4 Error occurred (Async DMA)
		4004	MPA indirect read error (Sync DMA Data Transfer)
		4005	MPA indirect write error (Sync DMA Data Transfer)
		4007	MCH-DMA Data Transfer Error occurred (Sync DMA Parameter Transmit)
		4009	DMA Data Transfer Execution Time Out Error occurred (Sync DMA)
		401E	DMA Status Other MP Factor Error occurred (Sync DMA)
		4304	MPA indirect read error (Sync DMA Data Transfer)
		4313	CHK2 DMA Factor Error occurred (Sync DMA)
		4314	CHK2 SW Factor Error occurred (Sync DMA)
		4315	CHK2 CM Factor Error occurred (Sync DMA)
		4316	CHK2 Error Status detected (Sync DMA)
		4317	CHK2 Illegal HSN Status detected (Sync DMA)
		4318	CHK2 Unknown Factor Error occurred (Sync DMA)
		4104	MPA indirect read error (CHK4 check) (Sync DMA)
		4123	CHK4 Error occurred (Sync DMA)

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	191D		Async DMA LA Check Read Test
		0040	CHK1 Error occurred
		0006	OCRC Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		3004	MPA indirect read error (DMA Data Transfer)
		3005	MPA indirect write error (DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred
		301E	DMA Status Other MP Factor Error occurred
		3304	MPA indirect read error (DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred
		3314	CHK2 SW Factor Error occurred
		3315	CHK2 CM Factor Error occurred
		3316	CHK2 Error Status detected
		3317	CHK2 Illegal HSN Status detected
		3318	CHK2 Unknown Factor Error occurred
		3104	MPA indirect read error (CHK4 check)
		3123	CHK4 Error occurred
	191E		Async DMA T10CRC Check Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred (Test data Transmit)
		3004	MPA indirect read error (DMA Data Transfer)
		3005	MPA indirect write error (DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred
		301E	DMA Status Other MP Factor Error occurred
		3304	MPA indirect read error (DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred
		3314	CHK2 SW Factor Error occurred
		3315	CHK2 CM Factor Error occurred
		3316	CHK2 Error Status detected
		3317	CHK2 Illegal HSN Status detected
		3318	CHK2 Unknown Factor Error occurred
		3104	MPA indirect read error (CHK4 check)
		3123	CHK4 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	192F		Sync DMA Protocol chip → LM Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred
		4004	MPA indirect read error (Sync DMA Data Transfer)
		4005	MPA indirect write error (Sync DMA Data Transfer)
		4007	MCH-DMA Data Transfer Error occurred (Sync DMA Parameter Transmit)
		4009	DMA Data Transfer Execution Time Out Error occurred (Sync DMA)
		401E	DMA Status Other MP Factor Error occurred (Sync DMA)
		4304	MPA indirect read error (Sync DMA Data Transfer)
		4313	CHK2 DMA Factor Error occurred (Sync DMA)
		4314	CHK2 SW Factor Error occurred (Sync DMA)
		4315	CHK2 CM Factor Error occurred (Sync DMA)
		4316	CHK2 Error Status detected (Sync DMA)
		4317	CHK2 Illegal HSN Status detected (Sync DMA)
		4318	CHK2 Unknown Factor Error occurred (Sync DMA)
		4104	MPA indirect read error (CHK4 check) (Sync DMA)
		4123	CHK4 Error occurred (Sync DMA)
	1930		Sync DMA Protocol chip → LM Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred
		4004	MPA indirect read error (Sync DMA Data Transfer)
		4005	MPA indirect write error (Sync DMA Data Transfer)
		4007	MCH-DMA Data Transfer Error occurred (Sync DMA Parameter Transmit)
		4009	DMA Data Transfer Execution Time Out Error occurred (Sync DMA)
		401E	DMA Status Other MP Factor Error occurred (Sync DMA)
		4304	MPA indirect read error (Sync DMA Data Transfer)
		4313	CHK2 DMA Factor Error occurred (Sync DMA)
		4314	CHK2 SW Factor Error occurred (Sync DMA)
		4315	CHK2 CM Factor Error occurred (Sync DMA)
		4316	CHK2 Error Status detected (Sync DMA)
		4317	CHK2 Illegal HSN Status detected (Sync DMA)
		4318	CHK2 Unknown Factor Error occurred (Sync DMA)
		4104	MPA indirect read error (CHK4 check) (Sync DMA)
		4123	CHK4 Error occurred (Sync DMA)

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	1931		Sync DMA Protocol chip ↔ Cache Data Transfer Test
		0040	CHK1 Error occurred
		0006	Data Compare Error occurred
		0007	MCH-DMA Data Transfer Error occurred
		3004	MPA indirect read error (Async DMA Data Transfer)
		3005	MPA indirect write error (Async DMA Data Transfer)
		3007	MCH-DMA Data Transfer Error occurred (Async DMA Parameter Transmit)
		3009	DMA Data Transfer Execution Time Out Error occurred (Async DMA)
		301E	DMA Status Other MP Factor Error occurred (Async DMA)
		3304	MPA indirect read error (Async DMA Data Transfer)
		3313	CHK2 DMA Factor Error occurred (Async DMA)
		3314	CHK2 SW Factor Error occurred (Async DMA)
		3315	CHK2 CM Factor Error occurred (Async DMA)
		3316	CHK2 Error Status detected (Async DMA)
		3317	CHK2 Illegal HSN Status detected (Async DMA)
		3318	CHK2 Unknown Factor Error occurred (Async DMA)
		3104	MPA indirect read error (CHK4 check) (Async DMA)
		3123	CHK4 Error occurred (Async DMA)
		4004	MPA indirect read error (Sync DMA Data Transfer)
		4005	MPA indirect write error (Sync DMA Data Transfer)
		4007	MCH-DMA Data Transfer Error occurred (Sync DMA Parameter Transmit)
		4009	DMA Data Transfer Execution Time Out Error occurred (Sync DMA)
		401E	DMA Status Other MP Factor Error occurred (Sync DMA)
		4304	MPA indirect read error (Sync DMA Data Transfer)
		4313	CHK2 DMA Factor Error occurred (Sync DMA)
		4314	CHK2 SW Factor Error occurred (Sync DMA)
		4315	CHK2 CM Factor Error occurred (Sync DMA)
		4316	CHK2 Error Status detected (Sync DMA)
		4317	CHK2 Illegal HSN Status detected (Sync DMA)
		4318	CHK2 Unknown Factor Error occurred (Sync DMA)
		4104	MPA indirect read error (CHK4 check) (Sync DMA)
		4123	CHK4 Error occurred (Sync DMA)
	193C		Sync DMA Test
		0040	CHK1 Error occurred

LSI classification	Test ID	Error Code	Error Contents
LRP	191F		LRP CUDG Diagnosis.
		4014	Beginning CHK4 check error detected.
		1011	Initial processing: The MailBOX LRP_MAIN_STOP execution of LRP0 is an error.
		1021	Initial processing: The MailBOX LRP_MAIN_STOP execution of LRP1 is an error.
		1051	Initial processing: Confirmation Read after Write error.
		10FF	Initial processing: Phase division contradiction. (Excessive number of times)
		1111	Initial processing: LRP Stop FOP_ERR0_EN Register Evacuation error.
		1121	Initial processing: LRP Stop FOP_ERR1_EN Register Evacuation error.
		1131	Initial processing: Disabling of the FOP_ERR0_EN register of the LRP stop processing is an error.
		1141	Initial processing: Disabling of the FOP_ERR1_EN register of the LRP stop processing is an error.
		1151	Initial processing: The register dummy read after disabling the error detection of the LRP stop processing is an error.
		1161	Initial processing: LRP_STOP of the LRP stop processing is an error.
		1171	Initial processing: The LRP_STATUS confirmation read of the LRP stop processing is an error.
		1189	Initial processing: The ACT bit of LRP of the LRP stop processing is not '0'.
		11B1	Initial processing: The INT_STATUS0 read of the LRP stop processing is an error.
		11C1	Initial processing: The LRP_STOP error status reset of the LRP stop processing is an error.
		11D1	Initial processing: The reset signal release of the LRP stop processing is an error.
		11E1	Initial processing: The FOP_CLR of the LRP stop processing is an error.
		1191	Initial processing: The FOP_ERR1_EN register recovery of the LRP stop processing is an error.
		11A1	Initial processing: The FOP_ERR0_EN register recovery of the LRP stop processing is an error.

LSI classification	Test ID	Error Code	Error Contents
LRP	191F		
		1031	Initial processing: Interruption reset of MailBOX is an error.
		1041	Initial processing: Reset of the FOP interruption is an error.
		10EF	Initial processing: Phase number invalidity.
		1611	Initial processing: The setting of the LRP script address is an error.
		1621	Initial processing: Confirmation read after the LRP script address set is an error.
		1639	Initial processing: The LRP script address setting value and confirmation read value are the Compare error.
		1641	Initial processing: The LRP script address Read error.
		4C11	The DS read of the DS default save is an error.
		4C21	The DS write of the DS default recovery is an error.
		4024	Last CHK4 check error detected.
		4062	A phase number error.
		40FF	Phase division contradiction. (Excessive number of times)

LSI classification	Test ID	Error Code	Error Contents
LRP	1920		LRP CS Memory Diagnosis.
		5711	The set of 0 ~ 3 byte data of the CS memory write is an error.
		5721	The set of 4 ~ 7 byte data of the CS memory write is an error.
		5731	The set of 8 ~ 11 byte data of the CS memory write is an error.
		5741	The set of 12 ~ 15 byte data of the CS memory write is an error.
		5751	The write request to the CS memory is an error.
		5771	The write completion confirmation of the CS memory is an error.
		578E	Time-out error of write completion waiting of CS memory.
		5811	The read request to the CS memory is an error.
		5831	The read completion confirmation of the CS memory is an error.
		584E	Time-out error of read completion waiting of CS memory.
		5851	The set of 0 ~ 3 byte data of the CS memory read is an error.
		5861	The set of 4 ~ 7 byte data of the CS memory read is an error.
		5871	The set of 8 ~ 11 byte data of the CS memory read is an error.
		5881	The set of 12 ~ 15 byte data of the CS memory read is an error.
		5411	Error information representative STATUS get is an error.
		542C	The error of the LRP register is detected.
		5431	Warning information get is an error.
		544C	The warning of the LRP register is detected.
		5035	CS memory compare error.
		551F	LRP operation mode change: Invalid Parameter(s).
		5521	LRP operation mode change: register write error.
		5531	LRP operation mode change: register read error.
		5549	LRP operation mode change: register compare error.
		5044	Last CHK4 check error detected.
	1921		LRP DS Memory Diagnosis.
		6011	DS data write error.
		6021	DS data read error.
		6411	Error information representative STATUS get is an error.
		642C	The error of the LRP register is detected.
		6431	Warning information get is an error.
		644C	The warning of the LRP register is detected.
		6036	DS memory compare error.
		6044	Last CHK4 check error detected.

LSI classification	Test ID	Error Code	Error Contents
LRP	1922		LRP CUDG Program loading.
		201F	Invalid Parameter(s).
		2048	Sum value error of load module before transfer.
		2911	before the DXBF transfer: Transfer check data Write error.
		2931	before the DXBF transfer: Transfer check data Read error.
		293D	before the DXBF transfer: Transfer check data Compare error.
		2921	MCH-DMA transfer to DXBF is an error.
		2941	MCH-DMA transfer end check: check data Read error.
		295E	Transfer time-out to DXBF.
		20A1	The dummy read after transfer it is an error.
		2A11	DXBF to LM read error.
		2A28	DXBF to LM read Sum value error.
		2051	DXBF Version information read error.
		2063	DXBF Version information is '0'.
		2B71	LRP version dump collection error of LR.

LSI classification	Test ID	Error Code	Error Contents
LRP	1923		LRP Internal(assembler) Diagnosis.
		7011	passes to the assembler: LM Low address set error.
		7021	passes to the assembler: LM High address set error.
		7031	passes to the assembler: MP number for LR set error.
		7211	LRP assembler start processing: Start address reset error.
		7221	LRP assembler start processing: The start setting to FOP_CTL is an error.
		7231	LRP assembler start processing: Read of FOP_STS is an error.
		7249	LRP assembler start processing: Not ACT state.
		7251	LRP assembler start processing: The hard LOG restart is an error.
		7411	Error information representative STATUS get is an error.
		742C	The error of the LRP register is detected.
		7431	Warning information get is an error.
		744C	The warning of the LRP register is detected.
		7111	LRP Stop FOP_ERR0_EN Register Evacuation error.
		7121	LRP Stop FOP_ERR1_EN Register Evacuation error.
		7131	Disabling of the FOP_ERR0_EN register of the LRP stop processing is an error.
		7141	Disabling of the FOP_ERR1_EN register of the LRP stop processing is an error.
		7151	The register dummy read after disabling the error detection of the LRP stop processing is an error.
		7161	LRP_STOP of the LRP stop processing is an error.
		7171	The LRP_STATUS confirmation read of the LRP stop processing is an error.
		7189	The ACT bit of LRP of the LRP stop processing is not '0'.
		71B1	LRP_STOP process: Read error of INT_STATUS0.
		71C1	LRP_STOP process: An error state reset error.
		71D1	LRP_STOP process: A reset signal cancel error.
		71E1	LRP_STOP process: FOP_CLR error.
		7191	The FOP_ERR1_EN register recovery of the LRP stop processing is an error.
		71A1	The FOP_ERR0_EN register recovery of the LRP stop processing is an error.
		706E	Time-out error of assembler completion waiting.
		707A	Assembler completion error end.
		7084	Last CHK4 check error detected.

LSI classification	Test ID	Error Code	Error Contents
LRP	1924		LRP Main Diagnosis.
		1011	Initial processing: The MailBOX LRP_MAIN_STOP execution of LRP0 is an error.
		1021	Initial processing: The MailBOX LRP_MAIN_STOP execution of LRP1 is an error.
		1051	Initial processing: Confirmation Read after Write error.
		10FF	Initial processing: Phase division contradiction. (Excessive number of times)
		1111	Initial processing: LRP Stop FOP_ERR0_EN Register Evacuation error.
		1121	Initial processing: LRP Stop FOP_ERR1_EN Register Evacuation error.
		1131	Initial processing: Disabling of the FOP_ERR0_EN register of the LRP stop processing is an error.
		1141	Initial processing: Disabling of the FOP_ERR1_EN register of the LRP stop processing is an error.
		1151	Initial processing: The register dummy read after disabling the error detection of the LRP stop processing is an error.
		1161	Initial processing: LRP_STOP of the LRP stop processing is an error.
		1171	Initial processing: The LRP_STATUS confirmation read of the LRP stop processing is an error.
		1189	Initial processing: The ACT bit of LRP of the LRP stop processing is not ‘0’.
		11B1	Initial processing: The INT_STATUS0 read of the LRP stop processing is an error.
		11C1	Initial processing: The LRP_STOP error status reset of the LRP stop processing is an error.
		11D1	Initial processing: The reset signal release of the LRP stop processing is an error.
		11E1	Initial processing: The FOP_CLR of the LRP stop processing is an error.
		1191	Initial processing: The FOP_ERR1_EN register recovery of the LRP stop processing is an error.
		11A1	Initial processing: The FOP_ERR0_EN register recovery of the LRP stop processing is an error.
		1031	Initial processing: Interruption reset of MailBOX is an error.
		1041	Initial processing: Reset of the FOP interruption is an error.
		10EF	Initial processing: Phase number invalidity.

LSI classification	Test ID	Error Code	Error Contents
LRP	1924		
		1611	Initial processing: The setting of the LRP script address is an error.
		1621	Initial processing: Confirmation read after the LRP script address set is an error.
		1639	Initial processing: The LRP script address setting value and confirmation read value are the Compare error.
		1641	Initial processing: The LRP script address Read error.
		8C11	The DS read of the DS default save is an error.
		3011	Write for DS '0'clear memory is an error.
		3411	After clear the DS memory: Error information representative STATUS get is an error.
		342C	After clear the DS memory: The error of the LRP register is detected.
		3431	After clear the DS memory: Warning information get is an error.
		344C	After clear the DS memory: The warning of the LRP register is detected.
		8C21	The DS write of the DS default recovery is an error.
		8211	LRP mainmicro start processing: Start address reset error.
		8221	LRP mainmicro start processing: The start setting to FOP_CTL is an error.
		8231	LRP mainmicro start processing: Read of FOP_STS is an error.
		8249	LRP mainmicro start processing: Not ACT state.
		8251	LRP mainmicro start processing: The hard LOG restart is an error.
		8411	Error information representative STATUS get is an error.
		842C	The error of the LRP register is detected.
		8431	Warning information get is an error.
		844C	The warning of the LRP register is detected.
		8014	Beginning CHK4 check error detected.
		8004	Last CHK4 check error detected.
		8062	Phase number invalidity.
		80FF	Phase division contradiction. (Excessive number of times)
	1925		LRP Main Program loading.
		201F	Invalid Parameter(s).
		201E	Phase division contradiction. (Excessive number of times)
		2048	Sum value error of load module before transfer.
		2911	before the DXBF transfer: Transfer check data Write error.
		2931	before the DXBF transfer: Transfer check data Read error.
		293D	before the DXBF transfer: Transfer check data Compare error.
		2921	MCH-DMA transfer to DXBF is an error.
		2941	MCH-DMA transfer end check: check data Read error.
		295E	Transfer time-out to DXBF.

LSI classification	Test ID	Error Code	Error Contents
LRP	1925		
		20A1	The dummy read after transfer it is an error.
		2A11	DXBF to LM read error.
		2A28	DXBF to LM read Sum value error.
		2051	DXBF Version information read error.
		2063	DXBF Version information is '0'.
		2B71	LRP version dump collection error of LR.
	1927		LRP Micro-exchange.
		A011	It failed in the operation state acquisition of LRP0.
		A021	It failed in the operation state acquisition of LRP1.
		A031	It failed in the acquisition of representative MP number for the error-reporting of LRP0.
		A041	It failed in the acquisition of representative MP number for the error-reporting of LRP1.
		A052	Cannot be micro-exchanged because there is no LRP while operating.
		AB51	LRP version to LM save error.
		B641	Load module version check: The DXBF script address acquisition is an error.
		B011	Load module version check: Error of the acquisition of version information in DXBF.
		A641	The DXBF script address acquisition is an error.
		201F	Program loading: Invalid Parameter(s).
		201E	Phase division contradiction. (Excessive number of times)
		2048	Program loading: Sum value error of load module before transfer.
		2911	before the DXBF transfer: Transfer check data Write error.
		2931	before the DXBF transfer: Transfer check data Read error.
		293D	before the DXBF transfer: Transfer check data Compare error.
		2921	Program loading: MCH-DMA transfer to DXBF is an error.
		2941	MCH-DMA transfer end check: check data Read error.
		295E	Transfer time-out to DXBF.
		20A1	Program loading: The dummy read after transfer it is an error.
		2A11	Program loading: DXBF to LM read error.
		2A28	Program loading: DXBF to LM read Sum value error.
		2051	Program loading: DXBF Version information read error.
		2063	Program loading: DXBF Version information is '0'.

LSI classification	Test ID	Error Code	Error Contents
LRP	1927		
		2B71	LRP version dump collection error of LR.
		A087	Save: EDV_MaiBOX execution of GET_LR_STATUS is an error.
		A097	Change: EDV_MaiBOX execution of SET_LRP_SUPPORT is an error.
		A0A7	EDV_MaiBOX execution of LRP_WAIT is an error.
		A0B7	LRP_WAIT retry over error.
		A611	The setting of the LRP script address is an error.
		A621	Confirmation read after the LRP script address set is an error.
		A639	The LRP script address setting value and confirmation read value are the Compare error.
		ABC1	LRP Restart: LRP version dump collection error of LR.
		D021	Error of Write to DS for DS version information.
		A0D7	EDV_MaiBOX execution of LRP_RERUN is an error.
		A0E7	Recovery: EDV_MaiBOX execution of SET_LRP_SUPPORT is an error.

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		Tachyon Transfer:DXBF→LM.
		11x4 *1	Beginning CHK4 check error detected.
		1Cx1 *1	Ending Processing to close a light port is an error.
		7ExF *1	Phase number invalidity.
		86xF *1	Phase division contradiction. (Excessive number of times)
		60xF *1	Initial processing: Invalid Parameter(s).
		60x9 *1	Initial processing: Invalid Package Detected.
		71x1 *1	Initial processing: The enable MailBOX setting is an error.
		95x1 *1	Initial processing: The change(Interruption OFF) in the LRP_SUPPORT function of MAIL_BOX is an error.
		72x7 *1	Initial processing: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		7Cx9 *1	Initial processing: Invalid Package Detected.
		2Cx1 *1	Initial processing: SFP optical power OFF setting failure.
		73x1 *1	Initial processing: Tachyon_Soft_Reset error.
		2Ex1 *1	Initial processing: The dummy read after Tachyon_Soft_Reset is an error.
		2Fx1 *1	Initial processing: The Device_Control re-setting after Tachyon_Soft_Reset is an error.
		74x1 *1	Initial processing: Virtual ERQ_RESET error.
		96x1 *1	Initial processing: DS reset of Mail_BOX is an error.
		75x7 *1	Initial processing: The MAIL_BOX(DS reset) error status was detected.
		97x1 *1	Initial processing: The change(Interruption + command Distribution) in the LRP_SUPPORT function of MAIL_BOX is an error.
		76x7 *1	Initial processing: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		7FxF *1	Initial processing: Phase number invalidity.
		85xF *1	Initial processing: Phase division contradiction. (Excessive number of times)
		81x1 *1	Initial processing: The acquisition of FOP_CTL of LRP is an error.
		82x9 *1	Initial processing: The start bit of LRP is off.
		83x1 *1	Initial processing: The acquisition of FOP_STS of LRP is an error.
		84x9 *1	Initial processing: The ACT bit of LRP is off.
		91x1 *1	Initial processing: The setting of FC port representative MP is an error.
		90x1 *1	Initial processing: Loss of Signal address setting error.
		92x1 *1	Initial processing: The MP crack of exchange is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		A3x1 *1	Initial processing: '0'Clear virtual IMQ Length is an error.
		A4x1 *1	Initial processing: '0'Clear virtual IMQ C_Index is an error.
		A5x1 *1	Initial processing: The setting of virtual IMQ Length is an error.
		A6x1 *1	Initial processing: The setting of virtual IMQ LM Base physical address is an error.
		A7x1 *1	Initial processing: The setting of virtual IMQ P_Index LM physical address is an error.
		A8x1 *1	Initial processing: The setting of virtual IMQ C_Index 0 is an error.
		A9x1 *1	Initial processing: '0'Clear virtual SFQ Length is an error.
		AAx1 *1	Initial processing: '0'Clear virtual SFQ C_Index is an error.
		ABx1 *1	Initial processing: The setting of virtual SFQ Length is an error.
		ACx1 *1	Initial processing: The setting of virtual SFQ LM Base physical address is an error.
		ADx1 *1	Initial processing: The setting of virtual SFQ C_Index 0 is an error.
		AEx1 *1	Initial processing: The setting of virtual ERQ C_Index LM physical address is an error.
		AFx1 *1	Initial processing: The setting of correspondence MP number virtual ERQ area0-7 is an error.
		B1x1 *1	Initial processing: The setting of correspondence MP number virtual ERQ area8-F is an error.
		B2x1 *1	Initial processing: The setting of virtual ERQ enable is an error.
		B3x9 *1	Initial processing: Invalid Package Detected.
		B3x1 *1	Initial processing: The setting for 8-F of the MP retrieval register initialization is an error.
		B4x1 *1	Initial processing: The setting for 0-7 of the MP retrieval register initialization is an error.
		B5x1 *1	Initial processing: The setting of the S_ID entry register of the MP retrieval is an error.
		B6x2 *1	Initial processing: MCH-DMA transfer error.
		3Fx1 *1	Initial processing: The setting of Device Control of the Tachyon config is an error.
		93x9 *1	Initial processing: Invalid Package Detected.
		94x1 *1	Initial processing: The setting of Uncorrectable Error Mask Register of the Tachyon config is an error.
		9Ax1 *1	Initial processing: The setting of Device Control 2 of the Tachyon config is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		B8x1 *1	Initial processing: The setting of MEMBASEL of the Tachyon config is an error.
		B9x1 *1	Initial processing: The setting of MEMBASEH of the Tachyon config is an error.
		BAx1 *1	Initial processing: The setting of CLSIZE of the Tachyon config is an error.
		BBx1 *1	Initial processing: The setting of CFGCMD of the Tachyon config is an error.
		BDx1 *1	Initial processing: The setting of ADV_ERR_CTL of the Tachyon config is an error.
		BCx1 *1	Initial processing: The setting of STS/CMD of the Tachyon config is an error.
		20x1 *1	Beginning processing: The setting of the PPCI_LMBASE0 register is an error.
		21x1 *1	Beginning processing: The setting of the PPCI_LMBASE1 register is an error.
		12x1 *1	End processing: The clearness of the error processing end waiting state of MAIL_BOX is an error.
		23x1 *1	End processing: The change(Interruption OFF) in the LRP_SUPPORT function of MAIL_BOX is an error.
		23x7 *1	End processing: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		28x1 *1	End processing: Optical power OFF failed.
		24x1 *1	End processing: Tachyon_Soft_Reset error.
		25x1 *1	End processing: The Device_Control setting after Tachyon_Soft_Reset is an error.
		26x1 *1	End processing: Virtual ERQ_RESET error.
		27x1 *1	End processing: DS reset of Mail_BOX is an error.
		27x7 *1	End processing: The MAIL_BOX(DS reset) error status was detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		C8x9 *1	Register save/recovery: Invalid Package Detected.
		CEx1 *1	Register save: The save of the DS default is an error.
		C8x1 *1	Register save: The save of the data of the MP retrieval table is an error.
		98x1 *1	Register save: The acquisition of the state of LRP_SUPPORT of MAIL_BOX is an error.
		C9x7 *1	Register save: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		CAx1 *1	Register save: register save error.
		CBx1 *1	Register recovery: register recovery error.
		99x1 *1	Register recovery: The recovery of LRP_SUPPORT state of MAIL_BOX is an error.
		CCx7 *1	Register recovery: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		CDx1 *1	Register recovery: The recovery of the data of the MP retrieval table is an error.
		CFx1 *1	Register recovery: The recovery of the DS default is an error.
		33x1 *1	Initial processing: The setting of INTEN of the Tachyon memory register is an error.
		34x1 *1	Initial processing: The setting of ERQ Length of the Tachyon memory register is an error.
		36x1 *1	Initial processing: The setting of ERQ Base of the Tachyon memory register is an error.
		35x1 *1	Initial processing: The setting of ERQ Consumer Index Address of the Tachyon memory register is an error.
		37x1 *1	Initial processing: The setting of SFQ Length of the Tachyon memory register is an error.
		38x1 *1	Initial processing: The setting of SFQ Base of the Tachyon memory register is an error.
		39x1 *1	Initial processing: The setting of IMQ Length of the Tachyon memory register is an error.
		3Bx1 *1	Initial processing: The setting of IMQ Base of the Tachyon memory register is an error.
		3Ax1 *1	Initial processing: The setting of IMQ Producer Index Address of the Tachyon memory register is an error.
		9Bx1 *1	Initial processing: The setting of MOR Configuration of the Tachyon memory register is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		3Cx1 *1	Initial processing: The setting of SEST Length of the Tachyon memory register is an error.
		3Dx1 *1	Initial processing: The setting of SEST Base Register of the Tachyon memory register is an error.
		7Dx1 *1	Initial processing: The setting of Serial Command and Status Register of the Tachyon memory register is an error.
		29x1 *1	Initial processing: The acquisition of Configuration 1 Register of the Tachyon memory register is an error.
		3Ex1 *1	Initial processing: The setting of QE4 Configuration 1 Register of the Tachyon memory register is an error.
		88x1 *1	Initial processing: The setting of FC PHY PISO control Register of the Tachyon memory register is an error.
		89x1 *1	Initial processing: The setting of FC PHY TX 8G Configration1 of the Tachyon memory register is an error.
		8Ax1 *1	Initial processing: The setting of FC PHY TX 8G Configration2 of the Tachyon memory register is an error.
		8Bx1 *1	Initial processing: The setting of FC PHY TX 4G Configration1 of the Tachyon memory register is an error.
		8Cx1 *1	Initial processing: The setting of FC PHY TX 4G Configration2 of the Tachyon memory register is an error.
		8Dx1 *1	Initial processing: The setting of FC PHY TX 2G Configration1 of the Tachyon memory register is an error.
		8Ex1 *1	Initial processing: The setting of FC PHY TX 2G Configration2 of the Tachyon memory register is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		42x1 *1	Initial processing: The setting of QE4 Configuration 1 Register(T10mode) of the Tachyon memory register is an error.
		43x1 *1	Initial processing: The setting of QE4 Configuration 2 Register of the Tachyon memory register is an error.
		44x1 *1	Initial processing: The setting of Function Control Register of the Tachyon memory register is an error.
		46x1 *1	Initial processing: The setting of Frame Manager Configuration 3 Register of the Tachyon memory register is an error.
		2Dx1 *1	Initial processing: BAD_CHAR dummy read error.
		47x1 *1	Initial processing: The setting of Frame Manager Configuration 1 Register of the Tachyon memory register is an error.
		48x1 *1	Initial processing: Register dummy read error.
		78x1 *1	Initial processing: The setting of Frame Manager Configuration 5 Register(optical port open) of the Tachyon memory register is an error.
		79x1 *1	Initial processing: The setting of Frame Manager Configuration 5 Register(optical port close) of the Tachyon memory register is an error.
		7Ax1 *1	Initial processing: Register dummy read error.
		7Bx1 *1	Initial processing: The acquisition of Frame Manager Status Register of the Tachyon memory register is an error.
		49x9 *1	Initial processing: Frame Manager Status Register of the Tachyon memory register is Loss of Signal.
		80xF *1	Initial processing: Phase number invalidity.
		87xF *1	Initial processing: Phase division contradiction. (Excessive number of times)
		4Cx1 *1	Linkup processing: The setting of Frame Manager Primitive Register is an error.
		4Dx1 *1	Linkup processing: The setting of Frame Manager Control Register(LIP) is an error.
		4Ex1 *1	Linkup processing: Register dummy read error.
		4Fx1 *1	Linkup processing: The setting of Frame Manager Control Register(Offline) is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		50x1 *1	Linkup processing: Register dummy read error.
		4Ax1 *1	Linkup processing: The acquisition of Frame Manager Link Status 1 Register(BAD CHAR CHK) is an error.
		4BxE *1	Linkup processing: BAD CHAR CHK is a time-out error.
		51x1 *1	Linkup processing: The setting of Frame Manager Control Register(Initialize) is an error.
		52x1 *1	Linkup processing: Register dummy read error.
		53xE *1	Linkup processing: IMQ-PIndex doesn't become an expected value, and the time-out error.
		54x1 *1	Linkup processing: The setting(+1) of IMQ_C-Index is an error.
		55x1 *1	Linkup processing: Register dummy read error.
		57x1 *1	Linkup processing: The setting(+1) of IMQ_C-Index is an error.
		58x1 *1	Linkup processing: The setting of SFQ_C-Index is an error.
		59x1 *1	Linkup processing: The acquisition of Frame Manager Status Register is an error.
		5Ax9 *1	Linkup processing: Frame Manager Status Register is outside the expected value.
		5Bx1 *1	Linkup processing: The acquisition of Frame Manager Received AL_PA Register is an error.
		5Cx9 *1	Linkup processing: ACQ_ALPA of Frame Manager Received AL_PA Register is outside the expected value.
		5Dx1 *1	Linkup processing: The setting of My ID Register is an error.
		5Ex1 *1	Linkup processing: The setting of Frame Manager Status Register(INT STS CLR) is an error.
		5Fx1 *1	Linkup processing: The acquisition of Frame Manager Link Status 1 Register(LINK STS CLR) is an error.
		61x1 *1	Linkup processing: The acquisition of Frame Manager Link Status 1 Register(LINK STS CLR CHECK) is an error.
		62x9 *1	Linkup processing: Link Status is not cleared.
		40x4 *1	Linkup processing: Last CHK4 check error detected.
		13x2 *1	MCH-DMA transfer to DXBF is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192C		
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.
		02xD *1	Transfer data compare error.
		14x4 *1	Last CHK4 check error detected.
		12x4 *1	Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192D		Tachyon Transfer:DXBF→DXBF.
		15x2 *1	MCH-DMA transfer to DXBF is an error.
		16x2 *1	MCH-DMA transfer to DXBF clear is an error.
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.
		02xD *1	Transfer data compare error.
		16x4 *1	Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	192E		Tachyon Big Size Transfer:DXBF→DXBF.
		17x2 *1	MCH-DMA transfer to DXBF is an error.
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.
		02xD *1	Transfer data compare error.
		18x4 *1	Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		Oracle check sum Transfer:0 Test.
		20x1 *1	Beginning processing: The setting of the PPCI_LMBASE0 register is an error.
		21x1 *1	Beginning processing: The setting of the PPCI_LMBASE1 register is an error.
		12x1 *1	End processing: The clearness of the error processing end waiting state of MAIL_BOX is an error.
		23x1 *1	End processing: The change(Interruption OFF) in the LRP_SUPPORT function of MAIL_BOX is an error.
		23x7 *1	End processing: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		28x1 *1	End processing: Optical power OFF failed.
		24x1 *1	End processing: Tachyon_Soft_Reset error.
		25x1 *1	End processing: The Device_Control setting after Tachyon_Soft_Reset is an error.
		26x1 *1	End processing: Virtual ERQ_RESET error.
		27x1 *1	End processing: DS reset of Mail_BOX is an error.
		27x7 *1	End processing: The MAIL_BOX(DS reset) error status was detected.
		C8x9 *1	Register save/recovery: Invalid Package Detected.
		CEx1 *1	Register save: The save of the DS default is an error.
		C8x1 *1	Register save: The save of the data of the MP retrieval table is an error.
		98x1 *1	Register save: The acquisition of the state of LRP_SUPPORT of MAIL_BOX is an error.
		C9x7 *1	Register save: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		CAx1 *1	Register save: register save error.
		CBx1 *1	Register recovery: register recovery error.
		99x1 *1	Register recovery: The recovery of LRP_SUPPORT state of MAIL_BOX is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		CCx7 *1	Register recovery: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		CDx1 *1	Register recovery: The recovery of the data of the MP retrieval table is an error.
		CFx1 *1	Register recovery: The recovery of the DS default is an error.
		60xF *1	Initial processing: Invalid Parameter(s).
		60x9 *1	Initial processing: Invalid Package Detected.
		71x1 *1	Initial processing: The enable MailBOX setting is an error.
		95x1 *1	Initial processing: The change(Interruption OFF) in the LRP_SUPPORT function of MAIL_BOX is an error.
		72x7 *1	Initial processing: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		7Cx9 *1	Initial processing: Invalid Package Detected.
		2Cx1 *1	Initial processing: SFP optical power OFF setting failure.
		73x1 *1	Initial processing: Tachyon_Soft_Reset error.
		2Ex1 *1	Initial processing: The dummy read after Tachyon_Soft_Reset is an error.
		2Fx1 *1	Initial processing: The Device_Control re-setting after Tachyon_Soft_Reset is an error.
		74x1 *1	Initial processing: Virtual ERQ_RESET error.
		96x1 *1	Initial processing: DS reset of Mail_BOX is an error.
		75x7 *1	Initial processing: The MAIL_BOX(DS reset) error status was detected.
		97x1 *1	Initial processing: The change(Interruption + command Distribution) in the LRP_SUPPORT function of MAIL_BOX is an error.
		76x7 *1	Initial processing: The MAIL_BOX(LRP_SUPPORT function) error status was detected.
		7FxF *1	Initial processing: Phase number invalidity.
		85xF *1	Initial processing: Phase division contradiction. (Excessive number of times)
		81x1 *1	Initial processing: The acquisition of FOP_CTL of LRP is an error.
		82x9 *1	Initial processing: The start bit of LRP is off.
		83x1 *1	Initial processing: The acquisition of FOP_STS of LRP is an error.
		84x9 *1	Initial processing: The ACT bit of LRP is off.
		90x1 *1	Initial processing: Loss of Signal address setting error.
		91x1 *1	Initial processing: The setting of FC port representative MP is an error.
		92x1 *1	Initial processing: The MP crack of exchange is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		A3x1 *1	Initial processing: '0'Clear virtual IMQ Length is an error.
		A4x1 *1	Initial processing: '0'Clear virtual IMQ C_Index is an error.
		A5x1 *1	Initial processing: The setting of virtual IMQ Length is an error.
		A6x1 *1	Initial processing: The setting of virtual IMQ LM Base physical address is an error.
		A7x1 *1	Initial processing: The setting of virtual IMQ P_Index LM physical address is an error.
		A8x1 *1	Initial processing: The setting of virtual IMQ C_Index 0 is an error.
		A9x1 *1	Initial processing: '0'Clear virtual SFQ Length is an error.
		AAx1 *1	Initial processing: '0'Clear virtual SFQ C_Index is an error.
		ABx1 *1	Initial processing: The setting of virtual SFQ Length is an error.
		ACx1 *1	Initial processing: The setting of virtual SFQ LM Base physical address is an error.
		ADx1 *1	Initial processing: The setting of virtual SFQ C_Index 0 is an error.
		AEx1 *1	Initial processing: The setting of virtual ERQ C_Index LM physical address is an error.
		AFx1 *1	Initial processing: The setting of correspondence MP number virtual ERQ area0-7 is an error.
		B1x1 *1	Initial processing: The setting of correspondence MP number virtual ERQ area8-F is an error.
		B2x1 *1	Initial processing: The setting of virtual ERQ enable is an error.
		B3x9 *1	Initial processing: Invalid Package Detected.
		B3x1 *1	Initial processing: The setting for 8-F of the MP retrieval register initialization is an error.
		B4x1 *1	Initial processing: The setting for 0-7 of the MP retrieval register initialization is an error.
		B5x1 *1	Initial processing: The setting of the S_ID entry register of the MP retrieval is an error.
		B6x2 *1	Initial processing: MCH-DMA transfer error.
		3Fx1 *1	Initial processing: The setting of Device Control of the Tachyon config is an error.
		93x9 *1	Initial processing: Invalid Package Detected.
		94x1 *1	Initial processing: The setting of Uncorrectable Error Mask Register of the Tachyon config is an error.
		9Ax1 *1	Initial processing: The setting of Device Control 2 of the Tachyon config is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		B8x1 *1	Initial processing: The setting of MEMBASEL of the Tachyon config is an error.
		B9x1 *1	Initial processing: The setting of MEMBASEH of the Tachyon config is an error.
		BAx1 *1	Initial processing: The setting of CLSIZE of the Tachyon config is an error.
		BBx1 *1	Initial processing: The setting of CFGCMD of the Tachyon config is an error.
		BDx1 *1	Initial processing: The setting of ADV_ERR_CTL of the Tachyon config is an error.
		BCx1 *1	Initial processing: The setting of STS/CMD of the Tachyon config is an error.
		33x1 *1	Initial processing: The setting of INTEN of the Tachyon memory register is an error.
		34x1 *1	Initial processing: The setting of ERQ Length of the Tachyon memory register is an error.
		36x1 *1	Initial processing: The setting of ERQ Base of the Tachyon memory register is an error.
		35x1 *1	Initial processing: The setting of ERQ Consumer Index Address of the Tachyon memory register is an error.
		37x1 *1	Initial processing: The setting of SFQ Length of the Tachyon memory register is an error.
		38x1 *1	Initial processing: The setting of SFQ Base of the Tachyon memory register is an error.
		39x1 *1	Initial processing: The setting of IMQ Length of the Tachyon memory register is an error.
		3Bx1 *1	Initial processing: The setting of IMQ Base of the Tachyon memory register is an error.
		3Ax1 *1	Initial processing: The setting of IMQ Producer Index Address of the Tachyon memory register is an error.
		9Bx1 *1	Initial processing: The setting of MOR Configuration of the Tachyon memory register is an error.
		3Cx1 *1	Initial processing: The setting of SEST Length of the Tachyon memory register is an error.
		3Dx1 *1	Initial processing: The setting of SEST Base Register of the Tachyon memory register is an error.
		7Dx1 *1	Initial processing: The setting of Serial Command and Status Register of the Tachyon memory register is an error.
		29x1 *1	Initial processing: The acquisition of Configuration 1 Register of the Tachyon memory register is an error.
		3Ex1 *1	Initial processing: The setting of QE4 Configuration 1 Register of the Tachyon memory register is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		88x1 *1	Initial processing: The setting of FC PHY PISO control Register of the Tachyon memory register is an error.
		89x1 *1	Initial processing: The setting of FC PHY TX 8G Configration1 of the Tachyon memory register is an error.
		8Ax1 *1	Initial processing: The setting of FC PHY TX 8G Configration2 of the Tachyon memory register is an error.
		8Bx1 *1	Initial processing: The setting of FC PHY TX 4G Configration1 of the Tachyon memory register is an error.
		8Cx1 *1	Initial processing: The setting of FC PHY TX 4G Configration2 of the Tachyon memory register is an error.
		8Dx1 *1	Initial processing: The setting of FC PHY TX 2G Configration1 of the Tachyon memory register is an error.
		8Ex1 *1	Initial processing: The setting of FC PHY TX 2G Configration2 of the Tachyon memory register is an error.
		42x1 *1	Initial processing: The setting of QE4 Configuration 1 Register(T10mode) of the Tachyon memory register is an error.
		43x1 *1	Initial processing: The setting of QE4 Configuration 2 Register of the Tachyon memory register is an error.
		44x1 *1	Initial processing: The setting of Function Control Register of the Tachyon memory register is an error.
		46x1 *1	Initial processing: The setting of Frame Manager Configuration 3 Register of the Tachyon memory register is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		2Dx1 *1	Initial processing: BAD_CHAR dummy read error.
		47x1 *1	Initial processing: The setting of Frame Manager Configuration 1 Register of the Tachyon memory register is an error.
		48x1 *1	Initial processing: Register dummy read error.
		78x1 *1	Initial processing: The setting of Frame Manager Configuration 5 Register(optical port open) of the Tachyon memory register is an error.
		79x1 *1	Initial processing: The setting of Frame Manager Configuration 5 Register(optical port close) of the Tachyon memory register is an error.
		7Ax1 *1	Initial processing: Register dummy read error.
		7Bx1 *1	Initial processing: The acquisition of Frame Manager Status Register of the Tachyon memory register is an error.
		49x9 *1	Initial processing: Frame Manager Status Register of the Tachyon memory register is Loss of Signal.
		80xF *1	Initial processing: Phase number invalidity.
		87xF *1	Initial processing: Phase division contradiction. (Excessive number of times)
		4Cx1 *1	Linkup processing: The setting of Frame Manager Primitive Register is an error.
		4Dx1 *1	Linkup processing: The setting of Frame Manager Control Register(LIP) is an error.
		4Ex1 *1	Linkup processing: Register dummy read error.
		4Fx1 *1	Linkup processing: The setting of Frame Manager Control Register(Offline) is an error.
		50x1 *1	Linkup processing: Register dummy read error.
		4Ax1 *1	Linkup processing: The acquisition of Frame Manager Link Status 1 Register(BAD CHAR CHK) is an error.
		4BxE *1	Linkup processing: BAD CHAR CHK is a time-out error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		51x1 *1	Linkup processing: The setting of Frame Manager Control Register(Initialize) is an error.
		52x1 *1	Linkup processing: Register dummy read error.
		53xE *1	Linkup processing: IMQ-PIndex doesn't become an expected value, and the time-out error.
		54x1 *1	Linkup processing: The setting(+1) of IMQ_C-Index is an error.
		55x1 *1	Linkup processing: Register dummy read error.
		57x1 *1	Linkup processing: The setting(+1) of IMQ_C-Index is an error.
		58x1 *1	Linkup processing: The setting of SFQ_C-Index is an error.
		59x1 *1	Linkup processing: The acquisition of Frame Manager Status Register is an error.
		5Ax9 *1	Linkup processing: Frame Manager Status Register is outside the expected value.
		5Bx1 *1	Linkup processing: The acquisition of Frame Manager Received AL_PA Register is an error.
		5Cx9 *1	Linkup processing: ACQ_ALPA of Frame Manager Received AL_PA Register is outside the expected value.
		5Dx1 *1	Linkup processing: The setting of My ID Register is an error.
		5Ex1 *1	Linkup processing: The setting of Frame Manager Status Register(INT STS CLR) is an error.
		5Fx1 *1	Linkup processing: The acquisition of Frame Manager Link Status 1 Register(LINK STS CLR) is an error.
		61x1 *1	Linkup processing: The acquisition of Frame Manager Link Status 1 Register(LINK STS CLR CHECK) is an error.
		62x9 *1	Linkup processing: Link Status is not cleared.
		40x4 *1	Linkup processing: Last CHK4 check error detected.
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.
		E1x4 *1	Beginning CHK4 check error detected.
		E0xF *1	Phase number invalidity.
		DFxF *1	Phase division contradiction. (Excessive number of times)
		E3x4 *1	Last CHK4 check error detected.
		E3x1 *1	The clearness of the error processing end waiting state of MAIL_BOX is an error.
		E4xF *1	The error was detected in the data creation.
		E5x2 *1	MCH-DMA transfer to parameter register is an error.
		E6xE *1	The sending back data waiting is a time-out error.
		F3x2 *1	MCH-DMA transfer to DXBF is an error.
		F8x9 *1	STATUS of the sending back data is an error.
		F9x4 *1	Last CHK4 check error detected.
		FAx2 *1	MCH-DMA transfer to DXBF is an error.
		E7x9 *1	STATUS of the sending back data is an error.
		E8x4 *1	Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1940		
		F1x1 *1	SUMCHK register read error.
		F2x1 *1	SUMCHK register write error.
		F4x1 *1	SUMCHK error-reset error.
		F5x1 *1	CHECK_SUM_ERROR_STATUS of SUMCHK register read error.
		F6x9 *1	The error of CHECK_SUM_ERROR_STATUS of SUMCHK register was detected.
		F7x2 *1	MCH-DMA transfer to DXBF clear is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1941		Oracle check sum Transfer:Block_MSK Test.
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1941		
		E4xF *1	The error was detected in the data creation.
		E5x2 *1	MCH-DMA transfer to parameter register is an error.
		E6xE *1	The sending back data waiting is a time-out error.
		FBx2 *1	MCH-DMA transfer to DXBF is an error.
		E9x9 *1	STATUS of the sending back data is an error.
		EAx4 *1	Last CHK4 check error detected.
		F1x1 *1	SUMCHK register read error.
		F2x1 *1	SUMCHK register write error.
		F4x1 *1	SUMCHK part error reset is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1942		Oracle check sum Transfer:Magic#_MSK Test.
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1942		
		E4xF *1	The error was detected in the data creation.
		E5x2 *1	MCH-DMA transfer to parameter register is an error.
		E6xE *1	The sending back data waiting is a time-out error.
		FCx2 *1	MCH-DMA transfer to DXBF is an error.
		EBx9 *1	STATUS of the sending back data is an error.
		ECx4 *1	Last CHK4 check error detected.
		F1x1 *1	SUMCHK register read error.
		F2x1 *1	SUMCHK register write error.
		F4x1 *1	SUMCHK part error reset is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1944		Oracle check sum Transfer:LRC-OK Test.
		63x1 *1	transfer processing: The acquisition of Virtual IMQ C-Index is an error.
		64x2 *1	transfer processing: MCH-DMA transfer to SEST(TRE) is an error.
		65x2 *1	transfer processing: MCH-DMA transfer to sfs(FCHS) is an error.
		66x2 *1	transfer processing: MCH-DMA transfer to SEST(IRE) is an error.
		67x2 *1	transfer processing: MCH-DMA transfer to ERQ(IRB) is an error.
		68xE *1	transfer processing: ERQ-CIndex is not renewed and the time-out error.
		69xE *1	transfer processing: IMQ_P-Index is not renewed and the time-out error.
		6Ax9 *1	transfer processing: The content of the 1st IMQ is an error outside the expected value.
		6Bx1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		41x1 *1	transfer processing: Register dummy read error.
		6CxE *1	transfer processing: IMQ_P-Index(2) is not renewed and the time-out error.
		6Dx9 *1	transfer processing: The content of the 2nd IMQ is an error outside the expected value.
		6Ex1 *1	transfer processing: The setting(+1) of IMQ_C-Index is an error.
		6Fx1 *1	transfer processing: Register dummy read error.
		70x4 *1	transfer processing: Last CHK4 check error detected.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
Tachyon	1944		
		E4xF *1	The error was detected in the data creation.
		E5x2 *1	MCH-DMA transfer to parameter register is an error.
		E6xE *1	The sending back data waiting is a time-out error.
		FEx2 *1	MCH-DMA transfer to DXBF is an error.
		EFx9 *1	STATUS of the sending back data is an error.
		F0x4 *1	Last CHK4 check error detected.
		F1x1 *1	SUMCHK register read error.
		F2x1 *1	SUMCHK register write error.
		F4x1 *1	SUMCHK part error reset is an error.

*1: x: Port Number

LSI classification	Test ID	Error Code	Error Contents
LR/MHUB	19B0		LRP Micro install (Online FC)
		0002	HARD ADPMODE Read Error occurred
		001F	Illegal HARD ADPMODE Error occurred

*1: x: Port Number

6.3.2 CUDG4 error code list

Test Number			Error Contents
xxyy	xx		Module Number
		01	Module #0
		02	Module #1
	yy		Error Part
		F0 - FF	The error is detected by the MP PK diagnosis.
		70 - 7A	The error is detected by the MPA LSI diagnosis.
		60 - 6A	The error is detected by the SW LSI diagnosis.
		40 - 4E	The error is detected by the CMA LSI diagnosis and the cache memory diagnosis.
		02 - 36	The error is detected by the LR/MHUB diagnosis.