



**Japan Integrated SS7 ISUP,
V5.0 FSR00 P, Release Notes**

61090302450-02P

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generated, used, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manuals, may cause interference in which case the user will be required to correct the interference at his/her own expense.

NOTICE: Customers connecting this device to the network shall, upon request of the telephone company, inform the telephone company of the particular lines such connections are made, the FCC registration number, and ringer equivalence number of this device. This information is contained on the label located on the rear panel of the system.

If this device causes harm to the network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice isn't practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation of your equipment. If they do, you will be notified in advance to give you the opportunity to maintain uninterrupted service.

If you experience trouble with the system, please contact Summa Four, Inc., 25 Sundial Avenue, Manchester, NH 03103-7251, (800) 978-6624 for repair information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected, or you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

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For further information about this product, contact:

Summa Four Inc.
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Printed In U.S.A.



This symbol on the product's nameplate means it has been tested by Electronic Testing Labs, Inc.

Table of Contents

SECTION 1 – CONTENTS OF THE RELEASE

1.1 INTRODUCTION	1-1
1.2 REFERENCES	1-1

SECTION 2 – SYSTEM REQUIREMENTS

2.1 INTRODUCTION	2-1
2.2 HARDWARE REQUIREMENTS	2-1
2.3 FIRMWARE REQUIREMENTS	2-1
2.4 SOFTWARE REQUIREMENTS	2-1

SECTION 3 – SPECIAL CONSIDERATIONS

3.1 INTRODUCTION	3-1
3.2 COMMANDS AND REPORTS	3-1
3.2.1 CktInt Requires \$DA And \$DB Reports	3-1
3.3 DEBUG FLAGS	3-1
3.4 HOST CONSIDERATIONS	3-1
3.4.1 Multiple Hosts Affect Call Handling	3-1
3.5 REDUNDANCY	3-1
3.5.1 No Switchover When Ethernet Fails	3-1
3.5.2 ASCII Terminals On Redundant Systems	3-2
3.5.3 Calls During Switchover	3-2
3.5.4 Loss of Network or SS7 Selector Switch Links	3-2
3.5.5 SDS and VCO/80 Do Not Boot Without SPARC CPU Installed	3-2
3.6 ROUTING ALARM MESSAGES TO THE CONSOLE	3-2

SECTION 4 – DESIGN CONSTRAINTS

4.1 INTRODUCTION	4-1
4.2 INITIALIZATION	4-1
4.2.1 U611070001: CktInt Loses Info. When No Host Connected	4-1
4.3 REDUNDANCY	4-1
4.3.1 U705050007: No Switchover When SS7 Is Stopped On Active Side	4-1
4.3.2 U707160004: Associated Ports Are Lost After Switchover	4-2

Table of Contents

SECTION 5 – KNOWN FUNCTIONAL CONSTRAINTS

5.1 INTRODUCTION	5-1
5.2 COMMANDS AND REPORTS	5-1
5.2.1 U708200007: Controlling Host Is Set By Rejected Command	5-1
5.3 CONFIGURATION	5-1
5.3.1 U806300006: Incorrect Baud Rates Offered	5-1
5.4 INITIALIZATION	5-1
5.4.1 U708200008: Warmboot With Autostart Takes 20 Minutes	5-1
5.4.2 U806300005: Environment Is Not Set	5-1
5.4.3 U806300005: Display of Alarm Messages	5-2
5.5 REDUNDANCY/SWITCHOVER	5-2
5.5.1 U803110006: Synchronization Failure	5-2

Preface

The *Japan Integrated SS7 ISUP, V5.0 FSR00 P, Release Notes* provide important information about Version 5.0 FSR00 P of Japan Integrated SS7 ISUP software. This information includes

- A description of the contents of the release.
- A description of the system requirements for V5.0 FSR00 P.
- A list of special considerations you should be aware of.
- A list of known design constraints.
- A list of known functional constraints and workarounds.

For information on how to install and use the Japan Integrated SS7 product, refer to the *Japan Integrated SS7, V5.0, System Supplement* (61090301550).

These release notes are intended for programmers familiar with SDS or VCO Systems, SS7 concepts, UNIX, and Ethernet.

Section 1

CONTENTS OF THE RELEASE

1.1 INTRODUCTION

Japan Integrated SS7 ISUP, Version 5.0 FSR00 P, supports the Japanese variant of SS7.

Currently, the following messages are not supported: Alerting (ALT), Charge Information (CHG), and Progress (PRG).

Also, the following parameters are not supported: Charge Area Information, Charge Information, Charge Information Type, Contractor Number, ISDN User Indicator, Mobile Communication Call Reference, and Mobile Communications Information.

This release meets the Japan standards listed in Table 1.1.

Table 1.1: Japan Standards Supported by V5.0 FSR00 P

SS7 Layer	Standard
MTP-2	JT-Q701 to JT-Q703, 1994
MTP-3	JT-Q704 to JT-Q707, 1994
ISUP	JT-Q761 to JT-Q764, 1994

1.2 REFERENCES

You may want to refer to the following documents that apply to your configuration.

- *Japan Integrated SS7, V5.0, System Supplement*
- *Generic V5.0 FSR00 Release Notes*
- *V5.0 Extended API Programming Reference*

Section 2

SYSTEM REQUIREMENTS

2.1 INTRODUCTION

This section provides a listing of system requirements for running Japan Integrated SS7 ISUP, V5.0 FSR00 P. These requirements are divided into hardware, firmware and software. Contact Summa Four, Inc. Technical Support for any site-specific information.

2.2 HARDWARE REQUIREMENTS

Japan Version 5.0 FSR00 P requires the following system hardware:

- one of the following systems:
 - an SDS-1000
 - a VCO/80
 - a VCO/20 with an SS7 VME shelf
 - a VCO/4K with an SS7 VME shelf
- a SPARC CPU5V card
- 32MB RAM (2K Mode) or 64MB RAM (4K Mode) available on the system

2.3 FIRMWARE REQUIREMENTS

There are no special firmware requirements for V5.0 FSR00 P. However, the firmware in the SDS-1000 or VCO must have the appropriate revision level required by the Generic. For information, refer to the *Generic Release Notes*.

2.4 SOFTWARE REQUIREMENTS

Version 5.0 FSR00 P requires the following software:

- SDS/VCO Generic V4.2 (Standard/2K Mode only) or Generic V5.0
- Solaris Release V2.6

Valid software checksums and file sizes for the Japan Version 5.0 FSR00 P software running on Solaris V2.6 are listed in *Table 2.1*.

Table 2.1: Cktint Version: Japan Version 5.0 FSR00 P

Filename	Checksum /usr/bin/sum	Size ls -l
cktint.cpio.Z	7100 3509	1796589
install_cktint.sh	40085 11	5140

*NOTE: To get the version of cktint, run the following command in **\$XNV**:*

% version cktint

Valid software checksums and file sizes for the AccessManager Version 3.5.3 FP4 software running on Solaris V2.6 are listed in *Table 2.2*.

Table 2.2: EBS Version: 3.5.3_FP4

Filename	Checksum /usr/bin/sum	Size ls -l
ebs.cpio.Z	59379 10031	5135437
install_ebs.sh	15890 7	3523

*NOTE: To get the version of EBS, run the following command in **\$EBSHOME/access**:*

% more version.dat

Section 3

SPECIAL CONSIDERATIONS

3.1 INTRODUCTION

This section describes the special considerations you should be aware of while using Japan Integrated SS7, V5.0 FSR00 P. This section provides explanations for the following areas:

- Commands and reports
- Debug flags
- Host Considerations
- Redundancy
- Routing alarm messages to the console

3.2 COMMANDS AND REPORTS

3.2.1 CktInt Requires \$DA And \$DB Reports

Do not suppress the \$DA and \$DB Reports in your SS7 application. These reports are required by CktInt for non-SS7 to SS7 calls and SS7 to non-SS7 calls because of the disconnect control byte. Cktint must see an on-hook.

3.3 DEBUG FLAGS

Turning on the debug flags may negatively impact performance.

NOTE: Make sure all debug flags are turned off for production systems.

3.4 HOST CONSIDERATIONS

3.4.1 Multiple Hosts Affect Call Handling

Additional TCP connections affect SDS/VCO call handling capacity. Optimal performance can be achieved with four or fewer simultaneously active TCP connections.

3.5 REDUNDANCY

3.5.1 No Switchover When Ethernet Fails

If Ethernet fails, the system does not switch over.

Workaround

Add a routine to your host application that can detect when the Integrated SS7 system is unreachable and initiates a switchover.

3.5.2 ASCII Terminals On Redundant Systems

If you turn the Integrated SS7 console off, or power to the terminal is lost, the SPARC5V CPU may abort and return to the boot prompt.

It is possible to connect a single ASCII terminal to both side A and side B via an electronic A/B selector switch. However, the selector must be capable of providing surgeless, spikeless change-overs. If the selector switch does not have this feature, the SPARC5V CPU may abort and return to the boot prompt when a change-over occurs.

3.5.3 Calls During Switchover

Only stable (answered) calls are preserved by the system during a redundancy switchover.

3.5.4 Loss of Network or SS7 Selector Switch Links

The loss of any network links do not cause a switchover. Also, the loss of SS7 selector switch links do not cause a switchover. If you are going to perform maintenance on any of the links, you must first switch the system over to the standby side.

3.5.5 SDS and VCO/80 Do Not Boot Without SPARC CPU Installed

An SDS or VCO/80 system configured for SS7 does not boot if one of the SPARC CPUs is removed from the Control Subrack. The NBC does not download, the NBC's LEDs stay illuminated, and the SDS/VCO system freezes.

3.6 ROUTING ALARM MESSAGES TO THE CONSOLE

To route alarm messages to the system console, complete the following steps:

1. Start the MML utility by entering the following command and pressing **Return**:

```
mml 0
```

2. At the system prompt, enter the following command and press **Return**:

```
MODIFY-ALARM-CONFIG:DISPLAY=ON;
```

3. Exit the MML utility by entering the following command and pressing **Return**:

```
EXIT;;
```

Section 4

DESIGN CONSTRAINTS

4.1 INTRODUCTION

Summa Four, Inc. has identified and evaluated design constraints in Japan Integrated SS7 ISUP V5.0 FSR00 P. This section provides explanations and, where applicable, workarounds in the area that follows:

- Initialization
- Redundancy

4.2 INITIALIZATION

4.2.1 U611070001: CktInt Loses Info. When No Host Connected

CktInt does not maintain a socket connection dedicated to the SDS/VCO. If no host is connected, circuit state change information from the system is lost.

4.3 REDUNDANCY

4.3.1 U705050007: No Switchover When SS7 Is Stopped On Active Side

The system does not switch over automatically when one of the following conditions occur:

- If the Active CktInt and EBS stacks are stopped
- If CktInt hangs or dies
- If any EBS stack process dies and the MONITOR_OPTION is OFF (needs to be off to fix the problem where the Ethernet cable is detached and the system will flip flop sides).

Work Around

Set the All Host Link Failure Action, on the SDS System Host Configuration Screen, to Conditional Switchover. When the Conditional Switching option is selected, a major alarm is generated if all host links fail and a system switchover is initiated if the Standby controller is on-line (file sync. completed) and has active host links.

4.3.2 U707160004: Associated Ports Are Lost After Switchover

CktInt associates ports as specified in the SS7 \$49 Command and the association is maintained until call tear down. If the controlling port is an SDS/VCO port, and the associated port is an SS7 port, the two ports are associated until one or the other is released by the host. When one of the ports is released, CktInt automatically releases the other.

However, if the system switches over while the call is stable, CktInt, on what is now the Active side, has no knowledge of port association established prior to switchover. This is because the CktInt on side A does not communicate with CktInt on side B and vice versa. If the host attempts to release the call by its port association, the release will fail.

If the system switches over a second time, and the call is still stable, the CktInt module that established the port association is now on the Active side, and host can release the call by its port association.

Workaround

Do not use the port association option in host applications.

Section 5

KNOWN FUNCTIONAL CONSTRAINTS

5.1 INTRODUCTION

Summa Four, Inc. has identified and evaluated functional constraints in Japan Integrated SS7 ISUP V5.0 FSR00 P. This section provides explanations, and where applicable, workarounds for functional constraints in the areas that follow:

- Commands and Reports
- Configuration
- Initialization
- Redundancy/Switchover

5.2 COMMANDS AND REPORTS

5.2.1 U708200007: Controlling Host Is Set By Rejected Command

If an SS7 \$49 Command is rejected, the host that sent the command becomes permanently associated with the circuit (or circuit group) specified in the command. This may stop other hosts from using the circuit.

Workaround

To clear this condition, perform a circuit or circuit group reset.

5.3 CONFIGURATION

5.3.1 U806300006: Incorrect Baud Rates Offered

Japan Integrated SS7 runs at 48000 bps, however, the software does not currently offer this option in the BR field of MTP Level 2 Provisioning. Since Integrated SS7 only acts as a DTE link, the DCE actually determines the appropriate baud rate and there is no functional impact.

5.4 INITIALIZATION

5.4.1 U708200008: Warmboot With Autostart Takes 20 Minutes

If autostart is configured and the system is warm booted, it will take at least 20 minutes for the SS7 software to start.

5.4.2 U806300005: Environment Is Not Set

When AccessISUP comes up, the message "Environment is not set correctly" is displayed. There is no operational impact except the EBS log cannot be turned on.

5.4.3 U806300005: Display of Alarm Messages

Whenever EBS is started, all the alarms are displayed on the console, even if the alarm display is set to OFF in the MTP Level 2 Provisioning configuration mml file.

Workaround

After EBS software is up, manually run the following command:

```
mml 0 MODIFY-ALARM-CONFIG:DISPLAY=OFF
```

5.5 REDUNDANCY/SWITCHOVER

5.5.1 U803110006: Synchronization Failure

If EBS and cktint are brought down and back up on the standby side, sometimes the “tli” process does not sync up with the tli process on the active side and the following messages are repeatedly displayed:

```
srv_connect:: An event requires attention
```

```
Enabling connect timer ....
```

This impacts the redundancy operation of the system.

Workaround

Kill tli processes on both sides. Then, bring both tli processes back up.