

SS7 Development Package for Linux

Release Notes for V2.01

1. Overview

This release adds support for host systems using the SG430 Signalling Gateway. It includes SIGTRAN SCTP protocol software and a configuration utility SCU to configure the SIGTRAN SCTP and M3UA protocol stacks.

The release also includes additional host software for use in conjunction with the SIU131, SIU231 and SIU520 Signalling Interface Units, namely client software for the Distributed Transaction Server (DTS) functionality and the INAP API library for linking with the user's application when using the INAP protocol.

This release is fully backwards compatible with the previous release.

2. New Functionality

2.1 Support for SG430 hosts

This release includes new binaries (sctp, sctpd and scu) for use in conjunction with the Intel® NetStructure™ SG430 Signalling Gateway. The use of these binaries is described in a separate document – *SCU User Guide*. In addition to the binaries supplied as part of this release the user will need to purchase a licence to run the M3UA SIGTRAN binary and any additional user part software as these are not part of this development package.

2.1.1 sctp & sctpd binaries

The sctp and sctpd binaries provide a software implementation of the SIGTRAN Stream Control Transmission Protocol (SCTP) as specified in the IETF specification RFC2960. Full details of the modules are provided in the *SCTP Programmer's Manual U01STN*.

NOTE: The sctpd binary must execute with root permissions. In order that a normal user can run the binary with these permissions an administrator must perform the following actions on the binary.

```
chown root sctpd
chmod +s sctpd
```

2.1.2 scu configuration utility

The SCU binary is a utility that facilitates the configuration of the SIGTRAN hosts for use in conjunction with the SG430. Full details on the use of this utility are given in the *SCU User Guide - U03SGW*.

2.2 dtc binary

This release includes a new binary – dtc for use in conjunction with the SIU131, SIU231 and SIU520 Signalling Interface Units when using the Distributed Transaction Server mode of operation.

The use of this binary is documented in the appropriate SIU documentation.

2.3 INAP API library

This release includes a new library – in_api.lib for use in conjunction with the INAP protocol. This library should be linked in with the user's application. It provides a functional interface to the INAP protocol as described in the INAP Programmer's Manual.

3. Changes

3.1 ssds enhancements

Two corrections have been made in the ssds binary for interfacing with the SPC14, SPC12S and CPM8 cards.

Occasionally under heavy load when ssds was running on a very fast processor a fault condition would occur where ssds was repeating a message sent to the board multiple times. When the problem occurred it would usually cause the board to reset. The problem has been corrected.

An internal problem was identified that could cause the hot swap mechanism to become unreliable once ssds had been running for an extended period. This has now been corrected.

Intel Corporation
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SS7 Development Package for Linux

Release Notes for V2.02

1. Overview

This release is identical in terms of functionality to the previous release, however it includes additional device drivers for SPCI4, SPCI2S and CPM8 cards for specific Red Hat distributions.

The release is fully backwards compatible with the previous release.

2. New Functionality

2.1 Driver support for Red Hat 7.2 & 7.3

Additional device drivers for the SPCI4, SPCI2S and CPM8 boards are included in the Libc-6 distribution (linux24.Z). These drivers extend the range of distributions that the product supports and provides alignment with other NBD board level products.

The new device drivers are as follows:

sptpci-2.4.9-13.o	Driver built with RedHat 7.2 kernel 2.4.9-13. Verified for use with kernel versions 2.4.9-13 and 2.4.9-31.
sptpci-2.4.18-3.o	Driver built with RedHat 7.3 kernel 2.4.18-3. Verified for use with kernel versions 2.4.18-3 and 2.4.18-5.

When installing the driver on a version of Linux kernel that is different to the version it is built with it is necessary to use the '-f' flag in order to force the load.

```
insmod -f sptpci-2.4.18-3.o
```

Intel Corporation
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SS7 Development Package for Linux

Release Notes for V3.01

1. Overview

This is the first full release of the *SS7 Development Package for Linux* since V2.02. It adds support for the Intel® Net Structure™ SS7HDP SS7 Board. Full details of the operation of the SS7HD board are detailed in the *SS7HD Programmer's Manual*.

This release is fully backwards compatible with V2.02 with the exception that support for the old Libc-5 library is no longer included.

NOTE: This development package replaces any releases provided as part of the beta trial for the SS7HDP product. Any SS7HDP users must ensure they upgrade to this (V3.01) development package and follow the additional instructions as detailed in the release notes for the SS7.DC4 code file V2.00.

2. New Functionality

2.1 Support for SS7HD boards

Driver support for the SS7HDP Board has been added. This includes a new version of the `ssd` binary designated `ssdh` (for use with SS7HD boards) and device drivers for use with a number of Linux kernels as detailed below. Support for both uni-processor and SMP kernels is offered, drivers for SMP kernels include “smp” at the end of the main part of the filename.

The new device drivers are as follows:

ss7hddvr-2.4.7.10.o ss7hddvr-2.4.7.10smp.o	Driver built with RedHat 7.2, kernel 2.4.7-10. Verified for use with kernel version 2.4.7-10.
ss7hddvr-2.4.9-13.o ss7hddvr-2.4.9-13smp.o	Driver built with RedHat 7.3, kernel 2.4.9-13. Verified for use with kernel versions 2.4.9-13 and 2.4.9-31.
ss7hddvr-2.4.18-3.o, ss7hddvr-2.4.18-3smp.o	Driver built with RedHat 7.3, kernel 2.4.18-3. Verified for use with kernel versions 2.4.18-3 and 2.4.18-5.
ss7hddvr-2.4.18-14.o, ss7hddvr-2.4.18-14smp.o	Driver built with RedHat 8.0, kernel 2.4.18-14. Verified for use with kernel version 2.4.18-14.

The **SS7_BOARD** board command (documented in the *SS7HD Programmer's Manual*) supports three **<run_mode>** values for use with the SS7HD board. These values are **MON** (for monitor only operation), **MTP2** (for up to 16 SS7 links at MTP2) and **MTP2-L** (for up to 64 SS7 links at MTP2).

2.2 SCTP CRC32 checksum

The SCTP module has been extended to support the CRC-32 checksum in addition to the existing Adler-32 checksum. The SCU configuration tool now configures SCTP to use CRC32 instead of Adler-32. These changes reflect the change in the specification of SCTP as defined as RFC 3309.

The implementation of the Adler 32 checksum has been corrected, previously on average 1 in 64k packets would have an incorrect checksum. In some cases this could lead to the link failing.

3. Changes

3.1 Package filename

The filename of the package has been changed from linux24.Z to dpklnx6.Z to more accurately reflect the content which contains binaries built for use with Libc-6 versions of the C runtime library.

3.2 INAP_API library removed from release

The INAP_API library is no longer included in this release. Instead it can be found in the User Part Development Package.

3.3 Additional device drivers for SPCI4, SPCI2S and CPM8 boards

Additional device drivers for the SPCI4, SPCI2S and CPM8 boards are included in the distribution. These drivers extend the range of distributions that the product supports.

For kernel versions 2.4 and greater support for both Uni-Processor and SMP kernels is provided. The set of drivers provided is as follows:

sptpci.o	Driver built with Mandrake 7.2 kernel 2.2.17-21mdk
sptpci24.o sptpci-2.4.7.10smp.o	Driver built with RedHat 7.2, kernel 2.4.7-10. Verified for use with kernel version 2.4.7-10.
sptpci-2.4.9-13.o sptpci-2.4.9-13smp.o	Driver built with RedHat 7.3, kernel 2.4.9-13. Verified for use with kernel versions 2.4.9-13 and 2.4.9-31.
sptpci-2.4.18-3.o, sptpci-2.4.18-3smp.o	Driver built with RedHat 7.3, kernel 2.4.18-3. Verified for use with kernel versions 2.4.18-3 and 2.4.18-5.
sptpci-2.4.18-14.o, sptpci-2.4.18-14smp.o	Driver built with RedHat 8.0, kernel 2.4.18-14. Verified for use with kernel version 2.4.18-14.

3.4 s7_mgt – extension of capabilities

The capacity s7_mgt has been extended to support 684 circuit groups and 128 MTP routes.

3.5 s7_log supports additional TCAP error codes

s7_log now decodes the following additional TCAP error events: TCPSWE_DBUF_LOW, TCPSWE_NO_DBUF & TCPSWE_DBUF_ABMT.

3.6 s7_mgt – parsing last line of config.txt file

A problem in the parsing of the configuration file could result in a failure to correctly interpret the last line of the 'config.txt' file. This has now been corrected.

3.7 Pulse shape definition

An additional **<build_out>** parameter has been added to the **LIU_CONFIG** command to allow the pulse shape to be specified. See the *SS7HD Programmer's Manual* for details.

This functionality is only for use with SS7HD boards.