Dialogic® DSI SS7MD Network Interface Boards Release Notes for *.dc6 code files Document Reference: RN001SLT

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Release Notes for *.dc6 code files - V1.13

1 Overview

This is a maintenance release which corrects an issue in the multi-clock domain code file ss7mcd.dc6. All other variants of the code file are identical in functionality to the previous version.

This release is fully backwards compatible with the previous release.

1.1 Applicability

This release is necessary for any users that have multiple clocking domains and use the ss7mcd.dc6 code file. The release is suitable for all users.

2 Changes

2.1 ss7mcd.dc6 Code File

This release corrects an issue within the ss7mcd.dc6 code file which was introduced at V1.12 and prevented it from correctly supporting multiple clock domains.

Dialogic
13-Apr-11

Release Notes for *.dc6 code files - V1.12

1 Overview

This is a maintenance release which corrects potential issues which could cause the board, operating in MTP2 or AAL5 monitoring modes, to lock up in situations where there are errors on the E1/T1 interface.

This release also includes a correction to operation of MTP2 where an alignment cycle terminates with Remote Processor Outage.

This is the first full release since V1.10 and is fully backwards compatible with that release.

1.1 Applicability

This release is necessary for users operating in MTP2 or AAL5 monitoring modes, and is suitable for all users.

1.2 Resolved Customer Issues

Updates to resolve the following customer issues are included in this release: IPY00092738.

2 Changes

2.1 LIU errors cause board failure (IPY00092738)

Under certain circumstances, when operating in MTP2 monitoring mode, reception of over-length frames could cause the board to lock-up. Also when operating in AAL5 monitoring mode, reception of CRC errors could cause the board to lock-up. Typically this behavior would have been triggered as a result of errors or frame slips on the E1/T1 interface. This release corrects both issues.

2.2 MTP Initial Alignment terminated by RPO

When in the aligned ready state, on receipt of Remote Processor Outage the link previously transitioned to the In Service state instead of entering the Processor Outage state. This release corrects the issue.

Dialogic
03-Feb-11

Release Notes for *.dc6 code files - V1.10

1 Overview

This is the first full release of the code file for the Dialogic® DSI SS7MDL4 Network Interface Board since V1.08. It contains an important correction to prevent the board spontaneously shutting down and new functionality to provide additional control over LIU clock recovery.

The release is fully backwards compatible with the previous release.

1.1 Applicability

All users are advised to upgrade to this release as it includes enhancements to prevent occasional board shutdown issues.

To benefit from the enhancements contained within, the code file must be used in conjunction with either the Dialogic® DSI SS7 Development Package for Linux 6.2.0 (or later) or the Dialogic® DSI SS7 Development Package for Solaris 5.0.2 (or later).

1.2 Resolved Customer Issues

Updates to resolve the following customer issues are included in this release: IPY00091590.

2 New Functionality

2.1 LIU Clock Recovery

This release provides support to optionally exclude individual LIUs from being considered for clock recovery.

When using s7_mgt, an LIU can be excluded as a source of clock recovery by setting bit 0 in the <options> parameter in the LIU_CONFIG command.

When using message-based configuration set bit 0 in the 'clk_opt' field of the LIU_MSG_CONFIG message. The 'clk_opt' field is a 2 octet parameter commencing at offset 19.

3 Other Changes

3.1 Board Shutdown (IPY00091590)

Under certain circumstances, the board could spontaneously shutdown, potentially causing operating system 'panic' or 'confusion'. This code file when used in conjunction with drivers from the Development Packages listed above corrects this issue.

Dialogic
27-Jul-10

Release Notes for *.dc6 code files - V1.08

1 Overview

This is the first full release of the code file for the Dialogic® DSI SS7MDL4 Network Interface Board since V1.04. It adds support for termination of ATM Q.SAAL links in accordance with ITU-T Q.2140 and Q.2110, running over T1 or E1 interfaces.

The release also adds precision message time stamping to the monitor mode of operation ensuring messages received across all links (including multiple boards) are time stamped and synchronized to the main host clock.

In addition to the new features this release includes a number of enhancements to the performance to increase the maximum message throughput of the board.

The release is fully backwards compatible with the previous release.

1.1 Applicability

This code file is for use on the SS7MD Network Interface Board and must be used in conjunction with either the Dialogic® DSI SS7 Development Package for Linux V6.03 (or later) or the Dialogic® DSI SS7 Development Package for Solaris V4.03 (or later).

The ATM functionality introduced by this release is documented in full in the updated Dialogic® DSI *SS7MD Network Interface Boards Programmer's Manual, Issue 3.*

2 New Functionality

2.1 ATM Q.SAAL Operation

This release provides support for the termination of ATM Q.SAAL links in accordance with ITU-T Q.2140 and Q.2110, running over T1 or E1 interfaces.

The Q.SAAL functionality runs in conjunction with the normal Dialogic® DSI MTP3 Layer host binary and from an application perspective can be interchanged with LSL and HSL deployments. Operation in ATM mode requires the addition of cell stream configuration to the config.txt file and minor syntax changes in the MTP_LINK command.

Full details of the operation of ATM Q.SAAL links are provided in the Dialogic® DSI *SS7MD Network Interface Boards Programmer's Manual*, Issue 3.

2.2 Precision Time Stamping for Monitored Links

This release supports precision time stamping of all received messages when operating in monitoring mode. The timestamp in presented as 'seconds' and 'fractional seconds' using the notion of host time taken from the host machine.

Full details of the operation of time stamping are provided in the Dialogic® DSI *SS7MD Network Interface Boards Programmer's Manual*, Issue 3.

2.3 Enhanced Message Throughput Performance

This release includes performance optimizations which have increased the message throughput to 30,000 MSU/s[1] for both Linux and Solaris Operating Systems.

2.4 Thermal Protection

This release provides support for the on-board thermal sensor which guards against hardware failure due to inadequate cooling from the host chassis. If the board gets too hot then it will be automatically shutdown.

Full details of the operation of the thermal sensor are provided in the Dialogic® DSI *SS7MD Network Interface Boards Programmer's Manual*, Issue 3.

Dialogic
17-Jul-09

[1] Stated performance achieved for:
Linux with a single Dialogic® DSI SS7MDL4 Network Interface Board in a Dell PowerEdge 6950 (8 x 1.6GHz CPU) running Linux 2.6.18-53.1.19.el5
Solaris with a single Dialogic® DSI SS7MDL4 Network Interface Board in a SunFire V445 (4 x 1.593 GHz UltraSPARC IIIi processors) running Solaris 10.

Release Notes for *.dc6 code files - V1.04

1 Overview

This is the first release of the code file for the Dialogic® DSI SS7MDL4 Network Interface Board.

1.1 Applicability

This code file is for use on the SS7MD Network Interface Board and must be used in conjunction with either the Dialogic® DSI SS7 Development Package for Linux V6.01 (or later) or the Dialogic® DSI SS7 Development Package for Solaris V4.01 (or later). Previous versions of the Development Package and code file used during the field trial should be discarded.

These release notes should be used in conjunction with the published user documentation: Dialogic® DSI *SS7MD Network Interface Boards Programmer's Manual Issue 1*

2 New Functionality

2.1 Support for SS7MD Board

This release provides support for the Dialogic® DSI SS7MD Network Interface Board. There are two code files available for the SS7MD board.

The **ss7.dc6** code file should be used for SS7MD boards running the LSL, HSL or ATM run modes.

The **ima.dc6** code file should be used for SS7MD boards running the IMA run mode.

3 Advisory

3.1 Board Enumeration

For applications which require consistency between physical and logical board ids customers are advised to use Geographic Addressing Board Serial Number Address mode as described in section 8.7.1 of the Dialogic® DSI SS7MD Network Interface Boards Programmer's Manual.

3.2 Received Message Timestamping

This release of the SS7MD code file does not support Received Message Timestamping as described in section 4.9 of the Dialogic® DSI SS7MD Network Interface Boards Programmer's Manual. This functionality will be included in a later release of the code file.

If timestamping is enabled the API_MSG_RX_INDT message 'seconds' and 'fraction_seconds' parameters are undefined.

3.3 Operation with other Signaling Boards Types

The SS7MD board can be used in the same chassis as a Dialogic® DSI SS7HD Network Interface Board (PCI and PCIe form factors).

Users wishing to configure both SS7MD and SS7HD boards should contact Dialogic support for additional information.

3.4 AAL5 Monitoring Example config.txt

The AAL5 Monitoring example config.txt in section 4.7 of the SS7MD Programmer's Manual Issue 1 contains errors and will not work as provided.

The following example has been corrected:

```
************************************************************************
* Example Protocol Configuration File (config.txt) for use with
* Dialogic(R) DSI SS7MD Network Interface Boards.
************************************************************************
*
* SS7_BOARD <board_id> <board_type> <flags> <code_file> <run_mode>
SS7_BOARD 0 SS7MD 0x0001 ss7.dc6 ATM
*
* LIU_CONFIG <board_id> <liu_id> <liu_type> <line_code> <frame_format>
<crc_mode> [<build_out>]
LIU_CONFIG 0 0 6 1 1 1 0
*
* ATM_CONFIG <options> <num_streams>
ATM_CONFIG 0x0000 4
*
*
* ATM_STREAM <id> <board_id> <cellstream_id> <liu_id> <options>
<ima_frame_len> <max_frame_len>
* <def_vpi> <def_vci> <timeslot>
ATM_STREAM 3 0 1 0 0x00 0 4096 12 10 0xfffefffe
*
* MONITOR_LINK <link_id> <board_id> <blink> <stream> <timeslot>
<user_module> <filter>
* <flags> <phys_mask> [<data_rate>]
MONITOR_LINK 0 3 0 9 128 0x0d 0 0x0000 0x00 ATM
*
************************************************************************
```

Dialogic
27-Apr-09