



Release Note for Napatech Link™ Software Driver Version 3.12.3

Release date 2019-07-03

Description This release note applies to driver package nt_driver_3gd-linux-3.12.3

Release history from version 3.11.1 to 3.12.3

New Features

ID	Customer tracking number	Summary	Implemented in
42681	42543 (support)	The time it takes to map large host buffer memory into the client application on Linux has been reduced by a factor 5-10	3.11.2
42577	42575 (Support)	Printout of PID and process name (if the terminating process is still running) when ntsservice receives a terminating signal on linux platforms has been added.	3.12.1

Resolved Issues

ID	Customer tracking number	Summary	Found in version	Resolved in version
42716		The PTP time sync functionality is not working on NT200A02.	3.11.0	3.12.1
42535	42491 / 42654 (Supp)	The "StreamInfo" option does not work unless the "ColorInfo" option is also specified in Key test filter expression.	3.10.1	3.12.0

Known issues

ID	Customer tracking number	Summary	Found in version
42849	42845 (Support)	Package installation script overwrites ntpcap.ini file	3.12.1
42826	42818 (Support)	Failure to start ntsservice on 2 x NT100E3 in QPI bypass mode.	3.12.1
42798	42756 (Support)	When an out-of-range skew value is detected when in OS timesync mode, the reported value is very likely to be within the acceptable range.	3.7.10
42793	42785 (Support)	When running the transmit_segment_example the Ethernet FCS is not calculated correctly in case of Legacy/3Garch FPGAs (90xx/91xx/92xx).	3.12.1
42719	42701 (Support)	ntsservice hanging if specifying more than 128 tx host buffers in ntsservice.ini	3.9.1

ID	Customer tracking number	Summary	Found in version
42653	42616 (fix)	<p>When using host loopback on NT200A01 without any NIMs plugged in, it is not possible to get link on a QSFP28-LR4 NIM inserted afterwards unless FEC has been disabled (for SR modules) in the ini file</p> <p>Workaround:</p> <p>If QSFP28-LR module is to be used then either plug it in before start-up of the system or set DisableFEC=TRUE in ntsevice.ini</p>	3.11.1
42652	42616 (fix)	<p>FEC cannot be changed dynamically on NT200A01, if traffic has been applied. Hence, it is not possible to dynamically swap between SR and LR QSFP28 if unless FEC has been disabled for SR modules in the ini file</p> <p>Workaround:</p> <p>If QSFP28-LR module is to be used then either plug it in before start-up of the system or set DisableFEC=TRUE in ntsevice.ini</p>	3.11.1
42257		<p>Dynamic hostbuffers are not supported by Intel PAC A10 accelerators. Therefore NTAPI Inline features are not supported by Intel PAC A10 accelerators. However, applications using DPDK will support Inline for Intel PAC A10 accelerators.</p>	3.9.1
42256		<p>The performance when using 1 hostbuffer and small packets (64-65 bytes length) is limited to approximately 95% of the theoretical performance.</p> <p>In all other scenarios full performance (100%) can be expected.</p>	3.9.1
41150		<p>The Automatic over-temperature shutdown is not implemented yet on the Intel® Programmable Acceleration Card.</p>	3.9.0
38699		<p>Using NT_NetRxGet* or NT_NetRxGetMult* first time on newly created or reconfigured streams can lead to initial package drops when the system is configured with large hostbuffers or many client applications.</p> <p>This will only be triggered on newly created and reconfigured streams.</p> <p>Workaround:</p> <p>If packet loss is observed, to get clean statistics no traffic should be received on connected ports while streams are being started.</p>	3.7.5
38364		<p>The performance of host based transmission may be degraded in the following scenario:</p> <ol style="list-style-type: none"> 1. Local retransmit is taking place at full line rate on a subset of the ports of the adapter. 2. In parallel with 1., host based transmission is taking place on a separate port of the adapter (i.e. the combined host and local retransmit functionality is not used.) 	3.7.1
32765		<p>When using the GlobalSync feature, link down/up events causes the port to enter 'unknown' state</p>	2.9.4
14086		<p>If NUMA node zero is offline and /opt/napatech3/config/ntservice.ini does not exist, the driver cannot start because it fails to allocate memory for the default host buffer set-up.</p> <p>Workaround:</p> <p>Use an existing ntservice.ini or specify the host buffer set-up on an online NUMA node: 'opt/napatech3/bin/start.sh -o adapter0.BusId=0000:04:00.0 -o adapter0.AdapterType=NT40E3_4_PTP -o adapter0.HostBuffersRx=[4,32,1] -o adapter0.HostBuffersTx=[2,16,1]'. BusId and AdapterType are only required if there are multiple adapters in the server; the BusId can be obtained with 'lspci grep Napa'.</p>	2.8.5
10740		<p>When using a Cisco DAC pluggable, link is detected even if the other end of the cable is unplugged.</p>	2.7.0

ID	Customer tracking number	Summary	Found in version
9189	9137 (Support)	<p>The Linux kernel v3.8->v3.12 has a bug in the NUMA balancing code which was introduced in v3.8. See https://bugzilla.kernel.org/show_bug.cgi?id=60734</p> <p>The issue causes high execution delays on cores running on other than NUMA 0 if the feature is enabled.</p> <p>To work around the problem, disable the NUMA balancing by adding "numa_balancing=disable" to the kernel command line.</p> <p>The Linux kernel 3.13 received significant NUMA updates which fixes this issue.</p> <p>The 3.10 kernel in RHEL 7, CentOS 7 and Oracle Linux 7 (not the 3.8.13 uel kernel) contains a fix for this, thus the work around is not needed.</p>	0.1.1
8719		Setting TimeSyncTimeJumpThreshold for OS timesync to values > 0, will enable the time jump feature and results in a jump threshold of 1 second.	2.4.1
4324		3GD requires at least gcc 4.0 to build and at least glibc 2.5 to run.	1.1.0

Notes

Operating systems

The Napatech driver version applies to these operating systems:

- Linux 3.0 -> 3.19 (64-bit)
- Linux 4.0 -> 4.18 (64-bit)

The software has been qualified on: CentOS 6, CentOS 7, Ubuntu 16.04LTS and Fedora 18/23

Hardware and FPGA image compatibility

Hardware	4GA FPGA images
NT20E3-2-PTP	200-9501-02-16, 200-9501-04-04, 200-9501-06-06, 200-9501-08-06, 200-9501-09-08, 200-9501-10-07, 200-9501-15-02, 200-9501-17-02, 200-9501-18-07
NT40E3-4-PTP	200-9502-02-16, 200-9502-04-04, 200-9502-06-06, 200-9502-06-07, 200-9502-08-06, 200-9502-08-07, 200-9502-08-08, 200-9502-09-08, 200-9502-10-07
NT80E3-2-PTP	200-9503-02-16, 200-9503-04-04, 200-9503-06-05, 200-9503-08-06, 200-9503-08-07, 200-9503-08-08, 200-9503-09-08, 200-9503-10-07, 200-9503-10-09, 200-9503-15-02, 200-9503-17-02, 200-9503-18-07, 200-9503-20-04, 200-9503-08-07, 200-9519-10-05, 200-9519-10-07, 200-9519-15-02, 200-9519-17-02, 200-9519-18-07, 200-8005-10-01, 200-8005-15-02, 200-8005-17-02
NT200A01	200-9508-05-08, 200-9508-05-17, 200-9508-06-06, 200-9508-07-06, 200-9508-07-07, 200-9515-09-08, 200-9515-10-07, 200-9515-15-02, 200-9515-18-09, 200-9515-20-04, 200-9516-09-08, 200-9516-10-07, 200-9516-15-05, 200-9516-18-09, 200-9516-20-04, 200-8002-09-01, 200-8002-09-02, 200-8002-09-04, 200-8002-10-02, 200-8002-15-02, 200-9512-07-02, 200-9512-08-08, 200-9512-08-09, 200-9512-09-08, 200-9512-10-07, 200-9512-15-02, 200-9512-18-07, 200-9512-20-04, 200-9522-15-03, 200-9522-18-07, 200-9522-20-04, 200-8001-08-00, 200-8001-08-01, 200-8003-09-01, 200-8003-09-03, 200-8003-10-02, 200-8003-15-02, 200-8004-10-03, 200-8004-15-02, 200-8006-15-03
NT40A01-4x1	200-9500-06-06, 200-9500-06-07, 200-9500-08-06, 200-9500-09-08, 200-9500-10-07, 200-9500-15-02, 200-9500-18-07
NT100E3-1-PTP	200-9504-01-12, 200-9505-02-16, 200-9505-04-04, 200-9505-06-05, 200-9505-08-06, 200-9505-09-08, 200-9505-10-08, 200-9505-10-09, 200-9505-15-02, 200-9505-18-07, 200-9505-20-05
NT40A01	200-9517-09-08

Hardware	4GA FPGA images
INTEL-A10	200-7000-12-00, 200-7000-12-02, 200-7000-12-06, 200-7001-12-00, 200-7001-12-03, 200-7001-12-06
NT200A02	200-9521-18-11, 200-9521-20-04, 200-9526-18-10, 200-9526-20-04, 200-9533-20-04

Hardware	3GA FPGA images
NT4E	200-9015-42-08, 200-9015-42-13, 200-9015-42-14
NT4E-STD	200-9017-42-09, 200-9017-42-10
NT4E-INL	200-9115-42-13
NT4E2-4-PTP	200-9226-46-12, 200-9226-46-13, 200-9226-48-05, 200-9226-50-03, 200-9226-50-04, 200-9226-51-03, 200-9226-51-04
NT20E2	200-9220-44-10, 200-9220-44-12, 200-9220-45-06, 200-9220-46-09, 200-9220-47-03, 200-9220-50-03, 200-9220-50-04, 200-9220-50-05
NT20E2-PTP	200-9227-50-03, 200-9227-51-03, 200-9227-51-04
NT20E3-2-PTP	200-9233-52-13, 200-9233-53-01
NT40E3-4-PTP	200-9232-50-04, 200-9232-51-04, 200-9232-51-07, 200-9232-52-13, 200-9232-53-01
NT40E2-1	200-9222-52-05
NT40E2-4	200-9221-44-13, 200-9221-50-04

Microcontroller compatibility

- AVR-firmware v1.x
- AVR-firmware v2.x
- AVR-firmware v3.x

Test status

Complete test plan

Documentation

See the Documentation Portal, WebHelp or DN-0449 for reference documentation on Napatech Software Suite.

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