Revision 1.0.0
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CUSTOMER ADVISORY

ADV2017

Intel® Stratix® 10 Device E-Tile Transceiver Update

Description:

Intel® is notifying customers of an important update to the Intel Stratix® 10 device E-Tile transceivers.

The Intel Quartus® Prime Settings File (QSF) assignment to preserve performance of unused transceiver channels is found not working as intended in versions of Intel Quartus Prime Pro Software prior to version 20.1.

Follow the recommended actions described in Table 1.

Recommended Actions:

Intel Stratix 10 device E-Tile customers who **do not** plan to preserve performance of unused Transceiver channel(s)/Tile(s) in future are not required to take any action, regardless of Intel Quartus® Prime Pro software version.

Intel Stratix 10 device E-Tile customers who **do** plan to preserve performance of unused Transceiver channel(s)/Tile(s) in future are requested to refer to Table 1 for recommended actions.

Table 1

Customer Design Version	Recommended Actions
Intel Quartus Prime Pro software **v19.4**	1. Upgrade design to Intel Quartus Prime Pro Software version 20.1 or later. You can find the Intel Quartus Prime Pro software version 20.1 here- https://fpgasoftware.intel.com/?edition=pro&platform=windows 2. Refer to section 3.1.10 of the updated E-Tile Transceiver PHY User Guide to note the preserve unused channel QSF assignment to be used based on design use case. You can find the updated E-Tile Transceiver PHY User Guide here- https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/ug/ug_etile_xcvr_phy.pdf 3. Upon design compilation if you see the error shown below, add the following assignments to your .qsf file- • set_instance_assignment -name HSSI_PARAMETER "refclk_divider_use_as_BTI_clock=TRUE" • set_instance_assignment -name HSSI_PARAMETER "refclk_divider_input_freq=<frequency in Hz>" Error (21636): QSF assignment PRESERVE_UNUSED_XCVR_CHANNEL has been specified to preserve unused transceiver channels in HSSI IO BANK 8B. However, no reference clock has been specified using the QSF assignments set_instance_assignment -name HSSI_PARAMETER "refclk_divider_use_as_BTI_clock=TRUE" and set_instance_assignment -name HSSI_PARAMETER "refclk_divider_input_freq=<frequency in Hz>". See E-tile User Guide for more information.

Table 1 (continued)

Customer Design Version	Recommended Actions
Intel Quartus Prime Pro software **v20.1**	Refer to section 3.1.10 of the updated E-Tile Transceiver PHY User Guide to note the preserve unused channel QSF assignment to be used based on design use case. You can find the updated E-Tile Transceiver PHY User Guide here- https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/ug/ug_etile_xcvr_phy.pdf
Intel Quartus Prime Pro software versions **excluding v19.4 & v20.1**	1. Upgrade design to Intel Quartus Prime Pro Software version 20.1 or later. You can find the Intel Quartus Prime Pro software version 20.1 here- https://fpgasoftware.intel.com/?edition=pro&platform=windows 2. Refer to section 3.1.10 of the updated E-Tile Transceiver PHY User Guide to note the preserve unused channel QSF assignment to be used based on design use case. You can find the updated E-Tile Transceiver PHY User Guide here- https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/ug/ug_etile_xcvr_phy.pdf

Products Affected:

Selected Intel Stratix 10 TX, MX, and DX E-Tile devices.

The list of affected part numbers (OPNs) can be downloaded in Excel form:
https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/pcn/adv2017-opn-list.xlsx

Change Implementation:

Table 2

Milestone	Availability
Availability of Intel Quartus Prime software version 20.1	Now
Availability of updated E-Tile Transceiver PHY User Guide	Now

Contact:

For more information, please contact your local Sales representative, or submit a question or request at the My Intel support page, log-in via:
https://www.intel.com/content/www/us/en/my-intel/fpga-sign-in.html
or submit a question to the Intel FPGA forum with ADV2017 in the title.

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https://www.intel.com/content/www/us/en/programmable/my-intel/mal-emailsub/technical-updates.html

Revision History

Date	Rev	Description
06/19/2020	1.0.0	Initial Release