



# CUSTOMER ADVISORY

## ADV1913

### Intel® Stratix® 10 Devices L-Tile and H-Tile Transceiver Update

#### Description:

Intel® Network & Custom Logic Group (formerly Intel Programmable Solutions Group, Altera) is notifying customers of an important update to the Intel Stratix® 10 devices L-Tile and H-Tile transceivers.

It was recently determined that 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 Software prior to 18.1.1.

Customers implementing the QSF assignment to preserve performance of unused simplex transmit, simplex receive or duplex channels that will be used in the future need to migrate to Intel Quartus Prime Software version 18.1.1 or later.

Note: See Intel Stratix 10 L- and H- Tile Transceiver PHY User Guide for details on preserving performance of unused transceiver channels QSF:

<https://www.intel.com/content/www/us/en/programmable/documentation/wry1479165198810.html>

#### Recommended Actions:

Table 1

Customer Design Status	Recommended Actions
Designs not in production	For unused simplex transmit or duplex channels driven by ATX PLL or fPLL, or unused simplex receive channels, upgrade to the Intel Quartus Prime Software version 18.1.1 or later and apply the preserve unused channel performance QSF assignment.

	For unused simplex transmit or duplex channels driven by CMU PLL, upgrade to the Intel Quartus Prime Software versions 19.2 or later and apply the preserve unused channel performance QSF assignment.
Designs in production	If the unused channels intended to run at data rates greater than 12.8 Gbps, or the design is in Intel Quartus Prime Software version 18.0.1 and has been in production for more than 2 years, contact Intel for support.

Implementation of the QSF assignment causes power consumption increase per unused channel. The power increase is about 160mW per unused channel for L-Tile transceiver and about 180mW per unused channel for H-Tile transceiver.

- Use Intel Quartus Prime Software Power Analyzer to estimate the power consumption on the transceiver power supplies due to the implementation of the QSF assignment.
- If your FPGA design is partially complete, you can import the Early Power Estimator (EPE) file (<revision name>\_early\_pwr.csv) generated by the Intel Quartus Prime software into the EPE spreadsheet.

For questions or support, please contact your local Field Applications Engineer (FAE) or submit a service request at the [My Intel](#) support page.

### Products Affected:

- Intel Stratix 10 GX and SX L-Tile devices
- Intel Stratix 10 GX and SX H-Tile devices
- Intel Stratix 10 MX Devices
- Intel Stratix 10 TX 2800 and TX 2500 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/adv1913-opn-list.xlsx>

### Reason for Change:

In the Intel Quartus Prime Software versions prior to 18.1.1, the QSF assignment is found not working as intended and the performance of the unused transceiver channels,

when activated in the future, will degrade even with the QSF assignment implemented in the customer's design.

## Change Implementation

Table 2

Milestone	Availability
Intel Quartus Prime software version 18.1.1	Now
Intel Quartus Prime software version 19.2	Now

## Contact

For more information, please contact your local Field Applications Engineer (FAE) or submit a Service Request at the [My Intel](#) support page.

## Customer Notifications Subscription

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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
08/30/2019	1.0.0	Initial Release

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