



CUSTOMER ADVISORY

ADV2117

Intel® Stratix® 10 Device SmartVID Firmware Updates for Intel Quartus® Prime Pro v20.1, v20.2, v20.3, v20.4

Description:

Intel® is notifying customers of important updates related to the SmartVID Firmware affecting Intel Quartus® Prime Pro v20.1, v20.2, v20.3, v20.4.

In specific usage conditions, a firmware error directs the Voltage ID enabled voltage regulators (VR) to apply a voltage beyond the device recommended operating conditions for VCC and VCCP which may result in improper operation of the device. See Table 1 for the actions to take.

All the following conditions must be met to be impacted with this firmware error:

- Intel Stratix® 10 FPGAs with SmartVID enabled (-1V, -2V, -3V Ordering Part Numbers, see Products Affected section)
- Intel Quartus Prime Pro v20.1, v20.2, v20.3, v20.4
- FPGA is the master on PMBus.
 - Slave mode is not affected.
- VR using Direct Mode with m, b (non-zero value), R coefficient.
 - Linear Mode is not affected.
- Unit is in Volts (V).
 - Unit in Millivolts (mV) is not affected.

Table 1

Customer Design Version	Actions to Take
Intel Quartus Prime Pro v20.1, v20.2, v20.3, v20.4	Download the patch from here: https://www.intel.com/content/altera-www/global/en_us/index/support/support-resources/knowledge-base/tools/2021/can-the-sdm-firmware-cause-an-external-voltage-regulator-to-appl.html

	If impacted based on the conditions listed above, please contact your local Intel Sales or Field Applications representative, or submit a support request at the My Intel support page via: https://www.intel.com/content/www/us/en/my-intel/fpga-sign-in.html
Intel Quartus Prime Pro v19.4 and earlier	Not affected. No action necessary.
Intel Quartus Prime Pro v21.1 and newer	Error is corrected. No action necessary.

Products Affected:

All Intel Stratix 10 Devices with SmartVID enabled (--1V, -2V, -3V Ordering Part Numbers) used with the conditions listed in page 1.

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/adv2117-opn-list.xlsx>

Change Implementation:

Patches are available now for Intel Quartus Prime Pro v20.1, v20.2, v20.3, v20.4. Access the patch via the Knowledge Base (KDB) page link in Table 1 above.

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>

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To 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>

Revision History

Date	Rev	Description
04/16/2021	1.0.0	Initial Release

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