Revision 1.0.0
PCN Issue Date: 04/19/2019

PROCESS CHANGE NOTIFICATION

PCN1904

Alternate Assembly Site for Selected Stratix® Device Family Products

Change Description:

Intel Programmable Solutions Group ("Intel PSG", formerly Altera) is announcing qualification of the Advanced Semiconductor Engineering Inc., Kaohsiung (ASEK) as an additional assembly site for selected Stratix device family products.

ASEK is a long-time qualified, high-volume assembly site for several Flip Chip product families. Please refer to PCN1205 for previous product qualification at ASEK: https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/pcn/pcn1205.pdf.

Table 1: Assembly Site Change

	Current Site	Additional Site
Assembly Site	Amkor Technology Korea, Inc. (ATK)	Advanced Semiconductor Engineering Inc., Kaohsiung (ASEK)
Country of Origin	Korea	Taiwan

Note 1: There are no changes to the Bill of Materials (BOM). ASEK will use the same materials as ATK.

Products Affected:

Table 2

Product Family	Package – Pin Count
Stratix II	FBGA – 484/672/780/1020/1508 HBGA - 484
Stratix V	FBGA – 1152/1517/1760/1932

The list of affected OPNs can be downloaded in Excel form:
https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/pcn/pcn1904-opn-list.xlsx

Recommended Action

Customers are requested to:

1. Acknowledge receipt of this notification.
2. Review and inform us, at the earliest convenience, any questions or concerns regarding this change.

Please refer to the "Product Transition Dates" for the key milestones.

Upon implementation, Intel will ship materials from either ATK or ASEK.

Product Transition Dates:

Customers are requested to take note of the key dates shown in the table below.

Table 3

Milestone	***Date***
Last date to acknowledge receipt of this notification[1]	July 3, 2019
Estimated earliest shipment date of changed products[2]	September 27, 2019

Note 1: J-STD-046, section 3.2.3.1b, stipulates that lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change.

Note 2: Effective the earliest ship date listed above, Intel PSG may begin the shipment of changed products.

Intel reserves the right to continue shipment of pre-change product after the change implementation date, and customers will receive shipments of either pre-change or post-change product.

Reason for Change:

The qualification of an additional production assembly site for the affected devices supports supply chain risk mitigation.

Impact and Benefit of Change:

The change will not impact the form, fit, and function of the product. Product datasheet and package specifications remain the same. There is no change to the Bill of Materials (BOM).

Additional qualification has been performed to further evaluate the quality and reliability performance of ASEK for the products specific to this PCN (See Qualification Data Section, Table 4).

Method to Identify Change Product:

COO (Country of Origin): Taiwan. This is visible on both the label and the top mark.

Qualification Data:

Qualification testing was performed to further evaluate the quality and reliability performance of ASEK for the products specific to this PCN (See Qualification Data Section, Table 4).

Table 4: ASEK Qualification Data

Note: All tests passed with zero failures

Test	Time point	Conditions	Vehicle Device	Lot	Results
Temperature Cycle Test (TCB)Note 1	1000 Cycles	-55°C /125°C	5SGXA7 F1517	H3020	0/30
			5SGXA7 F1517	H3021	0/30
			5SGXA7 F1932	H3022	0/29
			5SEE9 H1517	EAAAR00503	0/25
Temperature Humidity Bias (THB) Note 1	1000hrs	85ºC/85% RH	5SGXA7 F1517	H3037	0/26
			5SGXA7 F1517	H3038	0/27
			5SGXA7 F1932	H3022	0/29
			5SEE9 H1517	EAAAR00503	0/29
Unbiased Highly Accelerated Stress Test (uHAST)Note 1	96hrs	130°C / 85%RH	5SGXA7 F1517	H3020	0/26
			5SGXA7 F1517	H3021	0/30
			5SGXA7 F1932	H3022	0/30
			5SEE9 H1517	EAAAR00503	0/25
Board Level Temp CyclingNote 2	7259 Cycles	0 / 100°C	F1760	N/A	0/30

Note 1: Preconditioning performed according to J-STD-020, MSL4 @ 260C reflow

Note 2: Rel#: 12040016, 12040017, 12040015, 13050006, 12050028, 12050030, 12040015, 13070016, 13050006

Note 3: Qualification testing and sample size based on standard J-STD-020 requirements

Contact

For more information, please contact your Sales representative or submit a Service Request at the My Intel support page.

Customer Notifications Subscription

Customers that have subscribed to Intel PSG's customer notification mailing list will receive the PCN document automatically via email.

If you would like to receive customer notifications by email, please subscribe to our customer notification mailing list at:
https://www.intel.com/content/www/us/en/programmable/my-intel/mal-emailsub/technical-updates.html

Intel PSG references J-STD-046 guidelines for PCN.
In accordance with J-STD-046, this change is deemed acceptable to the customer if no acknowledgement is received within 30 days from date of notification.

Revision History

Date	Rev	Description
04/19/2019	1.0.0	Initial Release