



# Product Change Notification

**Change Notification #:** 116196 - 01  
**Change Title:** Select Intel Atom® Automotive Processors, PCN 116196-01, Product Design, Order Code, Stepping Conversion with new Order Codes  
**Reason for Revision: Denote an additional D-1 stepping change**  
**Date of Publication:** September 04, 2018

## Key Characteristics of the Change:

Product Design, Order Code

## Forecasted Key Milestones:

<b>Date of First Availability of Post-Conversion Material:</b>	April 9, 2018
<b>Date of Qualification Data Availability:</b>	April 27, 2018
<b>Date Customer Must be Ready to Receive Post-Conversion Material:</b>	October 12, 2018

*The date of "First Availability of Post-Conversion Material" is the projected date that a customer may expect to receive the Post-Conversion Materials. This date is determined by the projected depletion of inventory at the time of the PCN publication. The depletion of inventory may be impacted by fluctuating supply and demand, therefore, although customers should be prepared to receive the Post-Converted Materials on this date, Intel will continue to ship and customers may continue to receive the pre-converted materials until the inventory has been depleted.*

## Description of Change to the Customer:

### Reason for Revision: Denote an additional D-1 Stepping Change

Intel will start transitioning the D-0 stepping of the Intel® Atom® Processor E3800 Automotive Series to D-1. The new D-1 stepping will be physically and electrically drop in compatible, no change to form and fit.

Summary of changes of the D-1 stepping:

1. Intel identified possible circuit design issues in the LPC bus, USB2.0 LS/FS and SD Card logic which may result in degradation of the LPC bus, USB2.0 LS/FS and SD Card signals over time at a rate higher than Intel's quality goals. The D-1 stepping dispositions these possible issues.
2. The D-1 stepping CPU ID will remain the same as the D-0 stepping.
  - a. The CPUID will report the processor as a D-0 stepping. D-0 and D-1 stepping can be differentiated by reading the Manufacturer ID (PCIE\_REG\_MANUFACTURER\_ID) register field - [B:0, D:31, F:0, Offset:F8h, Bits 23:16]. D-0 stepping processors will have a value of 11h and D-1 stepping processors will have a value of 13h.
3. Microcode Compatibility for D-1 stepping Intel® Atom™ Processor E3800 Product Family

**4. Certain internal conditions may cause the D-signal of one or more USB ports to get stuck at +3.3V during system power-on. The D-1 stepping dispositions this possible issue.**

As listed in the Identification Table in the corresponding NDA specification updates (RDC# 539130), microcode update (MCU) M0F30679909 (or later) should be used with D-1 stepping processors. M013067990x microcode updates, intended for D-0 stepping processors only, may work with D-1 stepping processors but this combination has not been validated and Intel recommends customers to use M0F30679909 (or later).

**Customer Impact of Change and Recommended Action:**

Intel anticipates no impact to customers as a result of the change. The following list provides specific impact to orders:

1. New S-Spec and new MM numbers are required for the D-1 stepping. See products listed in the "Products Affected/Intel Ordering Codes" table below.
2. Customers should be ready to receive the new material listed in the "Products Affected/Intel Ordering Codes" table below by the "Date Customer Must be Ready to Receive Post-Conversion Material" as shown above in the Key Milestones.
3. Customer transition to the D-1 stepping should be complete by the "Date Customer Must be Ready to Receive Post-Conversion Material" as shown above in the Key Milestone

Please contact your Intel Field Sales Representative with any questions, requests or concerns.

**Products Affected / Intel Ordering Codes:**

Marketing Name	Product Code	Pre Conversion Step	Pre Conversion S-Spec	Pre Conversion MM#	Post Conversion Step	Post Conversion S-Spec	Post Conversion MM#
Intel Atom® Processor E3845	FH8065301487719	D-0	S R2UF	950576	D-1	S R3UU	962763
Intel Atom® Processor E3827	FH8065301487920	D-0	S R2UG	950579	D-1	S R3UW	962765
Intel Atom® Processor E3826	FH8065301542217	D-0	S R2UH	950580	D-1	S R3UY	962767
Intel Atom® Processor E3825	FH8065301567315	D-0	S R2UJ	950581	D-1	S R3V0	962769
Intel Atom® Processor E3815	FH8065301567416	D-0	S R2UK	950582	D-1	S R3V2	962771
Intel Atom® Processor E3805	FH8065301989701	D-0	S R2UL	950583	D-1	S R3V4	962773

**PCN Revision History:**

**Date of Revision:**

April 9, 2018  
**September 04, 2018**

**Revision Number:**

00  
**01**

**Reason:**

Originally Published PCN  
**Denote an additional D-1 stepping change**



# Product Change Notification

## 116196 - 01

**INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.**

A "Mission Critical Application" is any application in which failure of the Intel Product could result, directly or indirectly, in personal injury or death. SHOULD YOU PURCHASE OR USE INTEL'S PRODUCTS FOR ANY SUCH MISSION CRITICAL APPLICATION, YOU SHALL INDEMNIFY AND HOLD INTEL AND ITS SUBSIDIARIES, SUBCONTRACTORS AND AFFILIATES, AND THE DIRECTORS, OFFICERS, AND EMPLOYEES OF EACH, HARMLESS AGAINST ALL CLAIMS COSTS, DAMAGES, AND EXPENSES AND REASONABLE ATTORNEYS' FEES ARISING OUT OF, DIRECTLY OR INDIRECTLY, ANY CLAIM OF PRODUCT LIABILITY, PERSONAL INJURY, OR DEATH ARISING IN ANY WAY OUT OF SUCH MISSION CRITICAL APPLICATION, WHETHER OR NOT INTEL OR ITS SUBCONTRACTOR WAS NEGLIGENT IN THE DESIGN, MANUFACTURE, OR WARNING OF THE INTEL PRODUCT OR ANY OF ITS PARTS.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

**Should you have any issues with the timeline or content of this change, please contact the Intel Representative(s) for your geographic location listed below. No response from customers will be deemed as acceptance of the change and the change will be implemented pursuant to the key milestones set forth in this attached PCN.**

**Americas Contact:** [asmo.pcn@intel.com](mailto:asmo.pcn@intel.com)

**Asia Pacific/PRC Contact:** [apacgccb@intel.com](mailto:apacgccb@intel.com)

**Europe Email:** [eccb@intel.com](mailto:eccb@intel.com)

**Japan Email:** [jccb.ijkk@intel.com](mailto:jccb.ijkk@intel.com)

Copyright © Intel Corporation 2018. Other names and brands may be claimed as the property of others.

3D XPoint, Axxia, Basis, Basis Peak, BlueMoon, BunnyPeople, Celeron, Centrino, Cilk, Curie, Flexpipe, Intel, the Intel logo, Intel Atom, Intel CoFluent, Intel Core, Intel. Experience What's Inside, the Intel. Experience What's Inside logo, Intel Inside, the Intel Inside logo, Intel Insider, Intel Joule, Intel RealSense, Intel SingleDriver, Intel SpeedStep, Intel Unite, Intel vPro, Intel Xeon Phi, Intel XScale, InTru, the InTru logo, the InTru Inside logo, InTru soundmark, Iris, Itanium, MCS, MMX, Optane, Ostro, Pali, Pentium, picoArray, Picochip, picoXcell, Puma, Quark, SMARTi, Soletta, Sound Mark, StarPro, Stay With It, the Engineering Stay With It logo, StreamSight, Tarari, The Journey Inside, Thunderbolt, the Thunderbolt logo, Transcende, True Key, Ultrabook, VTune, Xeon, X-GOLD, XMM, X-PMU and XPOSYS are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries.

Microsoft, Windows, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries. Java is a registered trademark of Oracle and/or its affiliates. Bluetooth is a trademark owned by its proprietor and used by Intel Corporation under license. Intel Corporation uses the Palm OS\* Ready mark under license from Palm, Inc. OpenCL and the OpenCL logo are trademarks of Apple Inc. used by permission by Khronos. Learn how to use Intel Trademarks and Brands correctly at <http://www.intel.com/intel/legal/tmusage2.htm>.