



# Product Change Notification

## 108409 - 01

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

**Asia Pacific 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)

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# Product Change Notification

**Change Notification #:** 108409 - 01  
**Change Title:** Intel® Tunable Laser, TTX1151, PCN 108409-01, Product Design, and Order Code Change, Reason for Revision: to change verbiage on milestone  
**Date of Publication:** June 09, 2008

## Key Characteristics of the Change:

Product Design  
Order Code

## Forecasted Key Milestones:

<b>Date of Samples Availability:</b>	Aug 04, 2008
<b>Date of Qualification Data Availability:</b>	Nov 03, 2008
<b>Date Post Conversion Material is Ready for Volume Orders:</b> (actual transition schedule is agreed upon with customer outside the scope of PCN).	Aug 22, 2008
<b>Date of First Availability of Post-Conversion Material:</b>	Apr 21, 2008

*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: to change verbiage on milestone to read: "Date post-conversion material is ready for volume orders"**

As part of the continued evolution of the Intel tunable laser product line, Intel will be revising the YellowJacket product to include the TTx2 (next generation) tunable laser. The new revision of the TTx2 laser has equivalent performance to the existing generation product. Although the basic design of the laser is very similar to the current generation product, multiple changes have been made at the laser level that requires changes to the reference control electronics, firmware and test and calibration software. High level changes are listed below, for further information;

Changes

1. The cavity end mirror will change from LiNbO (Lithium Niobate) based to a Piezo-transducer architecture.
2. The butterfly package has been modified to add an additional lead for a case thermistor.
3. Several minor mechanical changes have been made to the optical assembly design for simplification and ease of manufacturing.

4. Second source manufacturers are being added at the optical sub-component level.
5. The SBSS dither frequency has been changed from 61.5kHz on YellowJacket1 to 20.83kHz on YellowJacket2 due to the end mirror change to a PZT.
6. The laser control circuit has been changed from cavity locking based on the signal derived from the laser gain medium voltage to using the signal from the photodiode.
7. Several circuits have been changed, including cavity locking circuit, SBSS transformer, and digital to analog converters, and CPU oscillator clock.
8. The -5.2 V circuit has been modified to increase product robustness.
9. Capacitors in the cavity locking circuit have been changed to COG type for higher stability.
10. The firmware has been revised to incorporate changes required for the laser and electronics listed above. In addition, several minor changes have been made to improve product robustness.

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

This product is intended to have equivalent performance as the previous generation product, with the exception of the SBSS frequency change to 20.83 kHz. However it is expected that customers may require a re-qualification of the product due to the nature of the design changes, which require component and PCB layout changes.

### **Products Affected / Intel Ordering Codes:**

<b>Pre-Affected Product Code</b>	<b>Pre-Change MM#</b>	<b>New Post- Change Product Code</b>	<b>Post Change MM#</b>
TTX115075900NC0	877188	<b>TTX115175900NC0</b>	<b>892401</b>
TTX1150759AANC0	877189	<b>TTX1151759AANC0</b>	<b>892406</b>

### **Reference Documents / Attachments:**

**Document:** \_\_\_\_\_ **Location #:** \_\_\_\_\_

### **PCN Revision History:**

<b>Date of Revision:</b>	<b>Revision Number:</b>	<b>Reason:</b>
April 22, 2008	00	Originally Published PCN
June 9, 2008	01	to change verbiage on Ready to Receive Milestone