



Product Change Notification

106336 - 01

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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.

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Product Change Notification

Change Notification #: 106336 - 01
Change Title: Intel® TXN13600 Tunable Laser Transponder, PCN 106336-01, Product Design, Order Code, Manufacturing and Assembly Site Transfer, RoHS Compliance, Mechanical Modifications, Firmware Upgrade, Reason for Revision: to add note on custom firmware
Date of Publication: January 26, 2007

Key Characteristics of the Change:

Product Design

Forecasted Key Milestones:

Date of Samples Availability:	May 22, 2006
Date of Qualification Data Availability:	May 19, 2006
Date Customer Must be Ready to Receive Post-Conversion Material:	Aug 22, 2006
Date of First Availability of Post-Conversion Material:	May 26, 2006

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 add note on custom firmware

Intel has provided revised firmware to ensure full compatibility with customer's line card software. If and when a future line card software release is planned, Intel strongly recommends incorporating changes to line card software per Intel application note. This will ensure compatibility with next generation transponders and a more robust response to high rate of commands on the I2C interface.

The TXN13600 full band tunable laser based transponder will be built on a manufacturing line brought up at a contract manufacturer (CM) in Malaysia. Assembly and test processes in the (CM) are equivalent to current Newark, California manufacturing facility.

The transponder built at the CM in Malaysia will have the following changes:

Hardware

1. Second manufacturing site for tunable laser at a CM in Thailand
2. Second source for PCB(assembly) at CM in Malaysia.
3. Second source of Mach-Zender modulator
4. Modifications for RoHS compliance with lead-free exemption
 - a. Replacement with cadmium free components per table below.
 - b. Use of non-leaded components as leaded components become EOL

These parts are substitute parts from the same vendors. They have been fully qualified by the vendors and functionally qualified by Intel. A detailed list of changes is given in the following table.

Description	Changes
Modulator Driver	Non-RoHS capacitor is replaced with Cd free capacitor
Capacitor	Non-RoHS capacitor on board is replaced with Cd free capacitor
Tunable laser	Non-RoHS thermistor is replaced with RoHS compliant thermistor

Table: Modifications to non-leaded parts due to scarcity/EOL

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Description	Changes
IC (control signal path): TSSOP16	Plating changed to matte Sn(Pb Free)
Diode	Plating changed to matte Sn (Pb Free)
Micro controller: TQFP100	Plating changed to matte Sn (Pb- Free)
Memory: TSSOP8	Plating changed to matte Sn (Pb Free)
Memory TSSOP8	Plating changed to matte Sn (Pb Free)

Table: Modifications to non-leaded parts due to scarcity/EOL

Mechanical:

1. Second source on housing and EMI shields.
2. The housing have a modified chamfert (corners have a smaller round edge)
3. Removed Washers from housing assembly
4. A splice protector added between modulator and laser for additional safety

5. Label change with new Intel logo on TXN module, package and test report. Location of logo will remain unchanged.
6. Redesign of fiber spool tray to hold splice protector

Firmware Upgrade: The following features in the bullet points below

1. If a transponder is switched from hard mode to soft mode, any threshold voltage applied to RxDTV pin is converted into appropriate percentage setting in the corresponding I2C registers.
2. Individual power supply alarm register reports alarm in absence of the corresponding power supply only.
3. Firmware handles incoming command overflow without interface lockup.
4. Laser control firmware revised to prevent accidental laser emission prior to laser temperature becoming stable.
5. Laser control firmware revised to ensure laser turned on during intense inter-processor communication
6. RxPOWMON response time has been improved to <100 ms.

Customer Impact of Change and Recommended Action:

Intel has already started builds at the CM in Malaysia with all the changes discussed in this PCN and has completed qualification testing. The qualification testing confirmed that there is no performance differences between the modules built at either manufacturing facility.

Customers will be expected to accept product built at either CM manufacturing facility (Intel Newark or CM Malaysia) through the transition timeframe. This means customers will have 2 parts numbers that need to be accepted by incoming inspection. Intel is expecting to transition all the tunable transponder manufacturing to the CM in Malaysia over the course of 2006.

Products Affected / Intel Ordering Codes:

System Products Table	
Affected Product Code	Affected MM#
TXN136037200DP1	869023
TXN136077200D03	877614

Reference Documents / Attachments:

Document:	Location #:
Quality and Reliability Report (1000hr testing)	Please contact your local Intel Field Sales Representative
TXN13600-10Gb/s Full C/L Band Tunable DWDM Optical Transceiver Firmware Upgrade Application Note. Order Number 313748-001US	Please contact your local Intel Field Sales Representative

PCN Revision History:

Date of Revision:

May 22, 2006

January 26, 2007

Revision Number:

00

01

Reason:

Originally Published PCN

to add note on custom firmware