



Product Change Notification

108219 - 00

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Product Change Notification

Change Notification #: 108219 - 00
Change Title: Intel® TXN13600 Tunable Optical Transceiver, PCN 108219-00, Product Design, Manufacturing Site and Order Code Change
Date of Publication: January 18, 2008

Key Characteristics of the Change:

Product Design
Manufacturing Site
Order Code

Forecasted Key Milestones:

	TXN1362773AATS3 (L-band)	TXN136277300TS5 (C-band)
Date of Samples Availability:	Nov 10, 2007	Nov 10, 2007
Date of Qualification Data Availability:	Apr 04, 2008	Apr 04, 2008
Date Customer Must be Ready to Receive Post-Conversion Material:	Jul 08, 2008	May 02, 2008
Date of First Availability of Post-Conversion Material:	Jul 08, 2008	May 02, 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:

The TXN13620 full band tunable laser based transponder is the next generation Platform for TXN13600 series. It is similar in form and fit to the TXN13600 series. The function is designed to be backward compatible. The primary focus is on building a common platform approach to improve availability. At the same time the common platform is customizable for a wide variety of custom features ranging from network features like SBS thresholds to alarm and monitor behaviors.

The Intel® TXN13620 300-pin optical transceiver product family will be manufactured in Thailand.

TXN13620 also focused on leveraging next generation optics for better performance. The next generation components are based on sub components and packages that are more commonly used in the industry.

TXN13620 offers enhanced features for more robust operation like enhanced Avalanche Photo Diode (APD) protection and overload as standard.

TXN13620 platform supports key network enablers like 25GHz spacing for a reasonable premium. Several TXN13600 features like enhanced APD protection and overload are now standard on TXN13620 platform. More details are available in the product datasheet.

Hardware changes

1. TXN13620 series is based on next generation tunable laser from Intel. Major changes compared to tunable laser used in TXN13600 are:

Front surface Germanium coated end mirror with a Piezoelectric (PZT) actuator for dithering and frequency control

Use of two discrete tunable filters for vernier tuning of wavelength. The discrete filters are mounted on a glass plate for thermal isolation.

Second sources on sub components like gain chip, thermoelectric coolers (TEC) and Resistive thermal detectors (RTD).

The new laser has a dithering frequency at 20 KHz vs. 62 KHz.

The laser operates at slightly different bias and temperature settings.

2. Other major component changes are:

Receiver Optical Sub-Assembly (ROSA) based receivers

Second source on modulators

Second source on radio frequency (RF) drivers

3. TXN13620 is based on a new printed circuit board(PCB) manufactured by the same vendor as TXN13600. The high speed material is NELCO-12.

4. Printed Circuit Board Assembly (PCBA) and tests are done at a CM in Thailand

5. Reconfigurable SKU specific functions are managed thru Custom Programmable Logic Device (CPLD).

6. 2 rate jitter filter is available at 9.953 Gb/s and 10.31Gb/s

7. Option available to support data rates at 11.27Gb/s

8. Enhanced features may enable additional control circuitries in the module.

Mechanical:

1. TXN13620 housing has a clear anodized finish.

2. The labels for receive and transmit fibers are engraved in the case.

3. Base Label includes additional RoHS compliance markings.

4. The second source modulator has a different boot design. Detailed mechanical drawings are available in the datasheet.

Firmware Upgrade (to enable):

1. Non traffic affecting firmware upgrade thru I2C command interface.

2. APD protection shutdown control for increase in damage level thresholds (please refer to datasheet for further information).

3. If the transponder detects a failure which could cause the output power to increase to levels above +10Bm, a protection mechanism reduces the power level to Class1 safety levels.

4. Internal control schemes modified to control the changed components like next generation tunable laser, APD ROSA et. al.

5. Reconfigurable SKU specific functions through CPLD, including control, monitor and alarm settings.

6. Firmware control may be modified to support enhanced features on M3. This should not impact the I2C command interface.

7. Laser alarms thresholds have been modified to be consistent with the modified laser.

8. New features like LsTweak (fine tune wavelength within +/-5Ghz) and 25GHz spacing will result in added commands available thru I2C interface. These features are optional.

Test reports

1. The test reports have been simplified to reduce test time. Critical Performance metrics like OSNR vs. BER will be measured as GO/NO GO. Sample reports are available for review.

Customer Impact of Change and Recommended Action:

Intel has initiated the design verification tests and qualification and reliability tests of the next generation tunable laser and tunable transponder. Intel is currently sampling TXN13620 for customer qualification.

Intel will continue to supply TXN13600 series products thru calendar Q1'08. The target is to complete the transition by Q2'08.

Products Affected / Intel Ordering Codes:

Affected Product Code	Pre-Change MM#	Post-Change Product Code	Post-Change MM#	Comment on Post Change MM#
TXN1360773AATS3	884135	TXN1362773AATS3	889398	L-Band

Affected Product Code	Pre-Change MM#	Post-Change Product Code	Post-Change MM#	Comment on Post Change MM#
TXN136077300TS5	884136	TXN136277300TS5	889399	C-Band

Reference Documents / Attachments:

Document:

Intel TXN13620 DVT report

Intel TXN13620 Qualification and Reliability report

Intel TXN13620 product datasheet

Intel TXN13620 samples and sample test report

Location #:

Please contact your local Intel Field sales representative available after 1/31/08

Please contact your local Intel Field sales representative after 3/29/08

Please contact your local Intel Field sales representative is available now

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PCN Revision History:

Date of Revision:

January 18, 2008

Revision Number:

00

Reason:

Originally Published PCN