

# NEWS RELEASE

For Immediate Release

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## **TRENTON Technology Qualifies Quad-Core Processor Option**

### ***The Intel® Core™2 Quad Processor Q9400 Adds Long-life Quad Core processing capability to the Trenton TQ9 System Host Board***

Atlanta, GA – The TQ9 system host board (SHB) has supported various quad-core processor options since the SHB was introduced in early 2008. The challenge for many customers has been that these previous quad-core CPU options were not available with long-life support. The introduction of the Intel® Core™2 Quad Processor Q9400 changes all of that with a 7-year long lifecycle support capability from the Intel® Embedded Computing Division. The processor's long-life support makes this CPU option an ideal choice for TQ9 applications where computing platform stability and longevity is desired.

“The ability to deploy the same identical board hardware in new systems designs over a long period of time is crucial in successful computing applications with our medical diagnostics, pharmaceutical manufacturing, military and aerospace customers”, said Jim Renehan, Trenton’s Director of Marketing. “Many of our customers in other market segments have told us over the years that the cost to re-engineer new system designs due to accelerating computer obsolescence cycles is cost prohibitive. Often times the hidden price of re-engineering adds a tremendous cost burden to their organizations that could have been avoided by utilizing long lifecycle embedded computing hardware.”

Trenton’s TQ9 system host board offers the edge-card computing segment of the embedded computing industry a platform built with the latest multi-core processing and PCI Express® chipset technology from Intel®. The combination of long lifecycle dual- and quad-core technology built into the Intel® Core™2 Processor family coupled with the Intel® Q35 Express Chipset and the Intel® ICH9DO I/O controller provides our TQ9 customers with a stable and validated high performance computing platform to meet their long-term application challenges.

#### **Intel® Core™2 Quad Processor Q9400 Validation Test Results - Thermals**

Trenton’s validation testing of the Intel® Core™2 Quad Processor Q9400 on the TQ9 was completed on September 12, 2009.

The processor itself has a maximum thermal design power rating of 95W with a very good  $T_{case}$  rating of 71.4°C. With this combination of CPU specifications we were able to validate the following TQ9 thermal operating characteristics in simulated system operating conditions:

Demonstrated Operating Temperature Range with Q9400 = 0°C to 50°C (standard TQ9 cooling solution)

Demonstrated Operating Temperature Range with Q9400 = 0°C to 40°C (low-profile TQ9 cooling solution)

## Intel® Core™2 Quad Processor Q9400 Validation Test Results - Power

The worst-case power draw numbers for a Q9400 processor running on Trenton TQ9 boards are:  
Typical Values - CPU Idle State:

CPU Speed	Intel® No.	+5V	+12V	+3.3V
2.66GHz	Q9400	1.10A	1.75A	2.30A

Typical Values - CPU 100% Stress State:

CPU Speed	Intel® No.	+5V	+12V	+3.3V
2.66GHz	Q9400	1.20A	4.50A	2.40A

Your actual power draw numbers will vary according to your specific system design parameters.

Contact Trenton for additional detail on our validation testing program and other performance testing results using the TQ9 and the Intel® Core™2 Quad Processor Q9400.

### Other TQ9 Features

The TQ9's LGA775 socket supports a wide variety of additional Intel® processor options. The front side bus on the TQ9 supports 800MHz, 1066MHz and 1333MHz processor options.

The four DDR2 DIMM sockets on the TQ9 have a maximum capacity of 8GB. The dual channel memory interface supports non-ECC PC2-5300, or PC2-6400 DIMMs.

The x16 PCI Express and x4 links on edge connectors A and B of the TQ9 support PCI Express video and graphics cards and ADD2 cards. A new feature of the Trenton TQ9 enables customers to use the internal video connection on the SHB and simultaneously use the x16 PCI Express link as a general-purpose PCI Express interface to non-video PCIe option cards. The internal TQ9 video option is driven by the chipset's Intel® Graphics Media Accelerator 3100 feature.

The TQ9 is a graphics-class PICMG 1.3 SHB that supports a variety of PICMG 1.3 standard backplane I/O interfaces including a 10/100Base-T Ethernet LAN, and four USB 2.0 and two eSATA interfaces on edge connector C of the SHB.

The TQ9 coupled with a PICMG 1.3 industry standard backplane can support multiple system designs that use the latest PCI Express®, PCI-X and PCI option cards. The TQ9 supports the optional edge connector D defined in the PICMG 1.3 specification. Edge connector D provides a 32-bit/33MHz PCI interface to the backplane to support legacy 32-bit/33MHz PCI option card slots and PCI-to-ISA bridge chips. This capability is useful when it is cost prohibitive to design out an older or purpose-built ISA option card. A TQ9 and a Trenton BPG6544 backplane support PCI Express, PCI-X, PCI and legacy ISA option cards.

### About Trenton

Trenton is a specialized designer and manufacturer of system host boards, single board computers, backplanes and industrial computers for critical embedded computing applications such as telephony, imaging, instrumentation, control and others that require performance, precision and reliability. Trenton is an Associate Member of the Intel® Embedded and Communications Alliance.

Trenton offers PCI Express, PCI-X/PCI/ISA, MicroTCA® and CompactPCI® products manufactured in the USA to ISO 9001:2000, CE and UL standards, satisfying the industry's increasing demands for features and performance. All Trenton Technology PICMG 1.3 products are backed by a full five-year warranty and Trenton's engineer oriented technical support.

For more information about our TQ9 system host board, or any other Trenton product, call (800) 875-6031 or (770) 287-3100. You can also visit our website at [www.TrentonTechnology.com](http://www.TrentonTechnology.com) or e-mail us at [TQ9@TrentonTechnology.com](mailto:TQ9@TrentonTechnology.com).

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