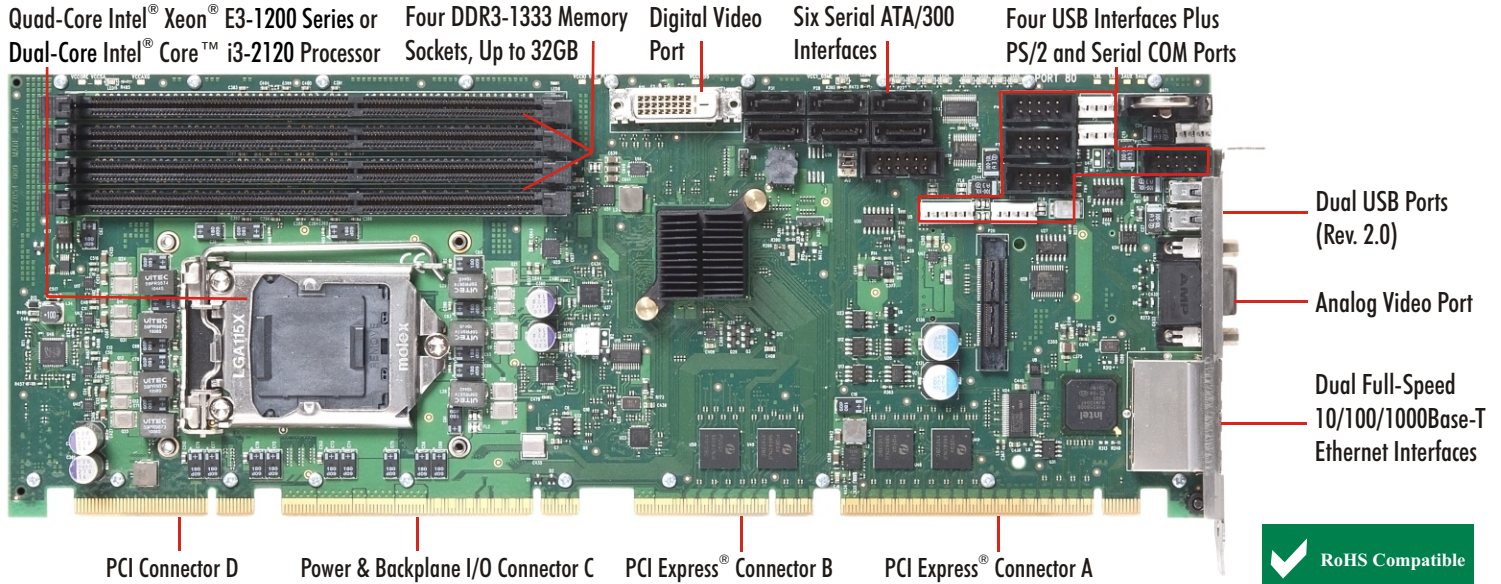


SYSTEM HOST BOARD SUPPORTS FLEXIBLE SYSTEM DESIGNS



Trenton's TSB7053 single board computer is packed with features that enable engineers to design industrial computer system solutions that support a wide range of applications. Here's a brief list of the SBC highlights:

- System performance boost with Sandy Bridge micro-architecture
- Processor features and on-board TPM enhance system security
- Network interfaces & storage maximizes system capability
- Digital and analog video ports deliver system flexibility
- 5-year product warranty maximizes system ROI
- Deployment risks lowered with extended-life board design

PROCESSORS:

Quad-Core Intel® Xeon® E3-1200 Series, 3.1GHz - 3.4GHz
Dual-Core Intel® Core™ i3 - 2120, Dual-Core 3.1GHz (with ECC)
Processor Package: LGA1155

*Higher speed processors as available

Trenton's TSB7053 features the 2nd generation Intel® Core™ and Intel® Xeon® processors developed under the Sandy Bridge micro-architecture. These processors offer improved system performance, enhanced platform security and significant CPU efficiency gains. Here's a compelling list of CPU features supported on the TSB7053:

- Extended-life, embedded components provide longevity
- CPU power control unit dynamically manages core utilization to save system power
- Enhanced graphics controller supports multiple video ports
- Intel® Advanced Vector Extensions (Intel® AVX) boosts processor performance

PLATFORM CONTROLLER HUB (PCH):

The Intel® C206 is a Platform Controller Hub or PCH that takes the place of the traditional multi-component chipset. The PCH design approach saves power while providing enhanced system host board I/O, PCI Express and Ethernet interface capabilities.

VIDEO:

Trenton's TSB7053 utilizes the processor's integrated graphics controller to make two independent video interfaces available to the system designer. The I/O bracket video port supports analog video while the on-board DVI-D connector supports digital video.

PCI EXPRESS® 2.0/1.1 INTERFACES:

Trenton's TSB7053 SHB supports PICMG® 1.3 server or graphics-class systems with either a x16 or two x8 PCI Express® links. An additional x4 PCIe link and eight PCIe reference clocks are also supplied on edge connectors A & B of the SHB. Trenton's optional IOB33 can be used on the board to provide an additional x4 PCIe link to a backplane. The TSB7053 automatically configures all direct PCIe links out the processors to operate as either PCIe 2.0 or PCIe 1.1 link interfaces based on the type of PCI Express endpoints such as option cards, PCIe switches and bridge chips. The SHB features PCI Express auto-negotiation for x1, x4, x8 and x16 PCIe card communications and PCIe 2.0 link repeaters for maximum signal integrity.

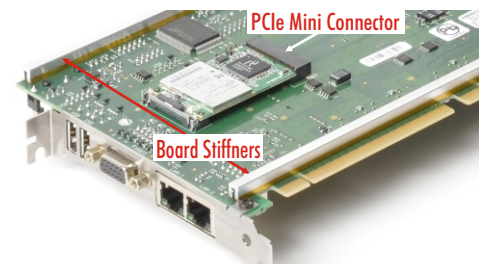
DDR3-1333 MEMORY INTERFACE:

The DDR3-1333 memory interface is made up of two, dual-channel interfaces with two channels on each Intel® Xeon® processor E3-1200 series. The TSB7053 uses unbuffered ECC, PC3-8500 or PC3-10600 DDR3 DIMMs. A maximum memory capacity of 32GB is supported when using standard 8GB DDR3 DIMMs and 16GB with 4GB DDR3 DIMMs. The peak memory interface bandwidth per channel is 21GB/s when using the PC3-10600 DIMMs. [Memory population rules](#) are available in the downloads area of the TSB7053 product detail web page.

THREE ETHERNET INTERFACES - 10/100/1000BASE-T:

The TSB7053 SHB supports two Gigabit Ethernet ports on the board's I/O bracket. A third Gigabit Ethernet interface is routed to edge connector C for use on PICMG 1.3 backplanes or the LAN may be used over a cable for Intel® AMT 7.0 implementations.

PCI EXPRESS® MINI CARD SUPPORT & BOARD STIFFENER BARS:



The rear of the TSB7053 SHB features a PCIe mini-connector that supports industry standard PCI Express Mini Cards. Standard PCIe mini cards are available to add WiFi capability to system designs or for additional SSD storage, video or I/O.

Two stiffener bars located on the back of the TSB7053 maximize system integrity by ensuring proper SHB alignment within the card guides of the computer chassis. The stiffeners provide reliable SHB operation by protecting sensitive board components from mechanical damage and assist in the safe insertion and removal of the SHB from the system.



