Smallest Footprint

The Tsi382 BGA package has the smallest footprint of any PCIe-to-PCI device on the market. The device is offered in a 10 x 10 mm package with a standard 0.8 mm ball pitch, making it ideal for PCI ExpressCard applications or similar designs that have limited component space. For cost-sensitive applications, the Tsi382 is also available in a LQFP package.

In addition, by providing sufficient clock outputs for up to four PCI devices, board space is further reduced by eliminating the need for an external clock buffer.

Low Power Consumption

The Tsi382 has typical power consumption of less than 0.7W, and it incorporates advanced power management modes to minimize consumption during operation.

High Performance

In addition to low-latency operation, the Tsi382's superior queueing architecture and rich feature set allow designers to optimize their overall system performance. Features such as short-term caching also enable designers to tune the device's performance for different applications.

Transparent, Non-transparent, and Opaque Bridging

Transparent mode operation is available for efficient, flow through configurations. Non-transparent bridging also enables multi-host systems and is used in applications such as intelligent adapter cards. Opaque mode provides semi-transparent operation for multi-processor configurations and enhanced private device support.

Typical Applications

The Tsi382 is suited to applications that need to bridge PCIe to downstream PCI devices. Its flexibility, high performance, small footprint, and low power consumption, make it ideal for a wide range of applications, including:

- Digital video recorders
- ExpressCards for laptop computers
- Motherboards (PC, ultra-mobile PC, server, SBC, industrial PC)
- PC adapter cards (communications, graphics, imaging, and multimedia)
- Multifunction printers
- Line cards and NICs

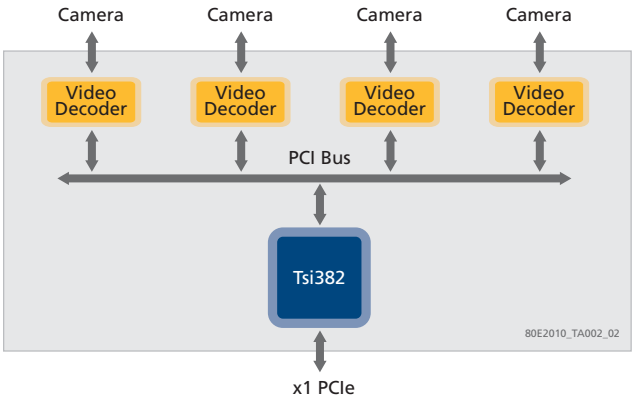

Figure 2 DVR Application

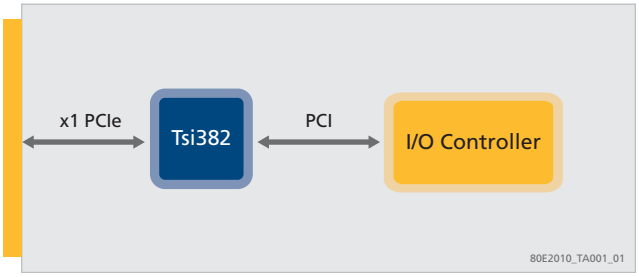

Figure 3 ExpressCard Application

IMPORTANT NOTICE AND DISCLAIMER

RENESAS ELECTRONICS CORPORATION AND ITS SUBSIDIARIES (“RENESAS”) PROVIDES TECHNICAL SPECIFICATIONS AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for developers skilled in the art designing with Renesas products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. Renesas grants you permission to use these resources only for development of an application that uses Renesas products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Renesas intellectual property or to any third party intellectual property. Renesas disclaims responsibility for, and you will fully indemnify Renesas and its representatives against, any claims, damages, costs, losses, or liabilities arising out of your use of these resources. Renesas' products are provided only subject to Renesas' Terms and Conditions of Sale or other applicable terms agreed to in writing. No use of any Renesas resources expands or otherwise alters any applicable warranties or warranty disclaimers for these products.

(Rev.1.0 Mar 2020)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

Contact Information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:
www.renesas.com/contact/

Trademarks

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Renesas Electronics:

TSI382-66IL TSI382-66ILV TSI382-66CQY