

**PROMISE**  
**TECHNOLOGY, INC.**

***Product Launch***

# **Ultra100 TX2**

***Ultra ATA/100 Drive Controller Card  
for 66MHz PCI Bus Motherboards***

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## Executive Summary

### Product Positioning

Ultra100 TX2 is the world's first 66MHz PCI controller card that fully supports new Ultra ATA/100 drives offering 100MB/sec burst data transfers. The broader bandwidth of the 66MHz PCI bus assures maximum drive performance with CRC error-checking, greater data reliability, and faster transfers. Ultra100 TX2 uses the world's best-selling Promise Ultra ATA/100 BIOS for proven compatibility with your new drive(s).

### Target Audiences

All desktop PC users who want to purchase new 66MHz PCI systems and desire Ultra ATA/100 support. This includes users of home and small office PCs, desktop users, home video, and basic graphics workstations. Ultra100 TX2 further allows users to attach up to 8 IDE/ATAPI devices to their PC (4 devices supported on Ultra100 TX2 card, 4 using the system's onboard controller). For users who aren't quite ready for 66MHz PCI, Ultra100 TX2 is completely backward-compatible with 33MHz PCI systems or slower Ultra ATA/66/33 drives.

**NOTE: *Promise Ultra100 TX2 makes all system drives perform faster under Windows 98/ME/NT4/2000. Internal software drivers boost performance up to 40% for all drives (ATA and SCSI) that exist in a user's system.***<sup>1</sup>

### What's Special About This Product

Tested by major OEMs and drive manufacturers to ensure compatibility, Ultra100 TX2 is the first Ultra ATA/100-capable controller card for 66MHz PCI motherboards. Ultra100 TX2 supports up to four lightning-fast UDMA/100 drives or any combination of UDMA/100, UDMA/66 or older EIDE/ATAPI devices. The card's two IDE ports offer separate device timing to permit users to attach different speed drives and/or devices to the same channel without adversely affecting the device speed. Each device will run at their highest-rated speed.

Ultra100 TX2 is fully backward compatible with common 33MHz PCI bus motherboards and older UDMA/66/33, EIDE, and ATAPI technologies. It co-exists with onboard IDE ports to support multiple devices. Ultra100 TX2 technology presents a significant speed and price challenge to Ultra2 SCSI drive technology.

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<sup>1</sup> According to Winbench '99 Business Winmark test. Use 128MB or more RAM for best results. Some limitations apply.

Special Features are:

- First controller card for 66MHz PCI bus that supports new Ultra ATA/100 drives
- Supports up to 100MB/sec burst data transfers of Ultra ATA/100 drives
- Fully backward-compatible with UDMA/66 and older IDE drives
- Provides CRC error-checking during high-speed data transfers
- Bundles FREE 80-wire/40-pin IDE cable required for high-speed 100MB/sec data transfers.
- Handles high capacity drives up to 128GB and larger
- For Windows 2000/NT/ME/98/95; Netware 3.12/4.1x/5.0
- Increases Windows performance for onboard ATA and SCSI drives by up to 40%<sup>2</sup>
- Allows attachment and full support of ATAPI devices

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<sup>2</sup> According to Winbench '99 Business Winmark test. Use 128MB or more RAM for best results. Some limitations apply.

## **Key Facts, Features and Benefits**

### **66MHz PCI Bus Support**

The TX2 card was designed specifically for use on 66MHz PCI bus motherboards, though it is backward-compatible with 33MHz PCI. The card allows the faster motherboards to fully support Ultra ATA/100 drives at their maximum data transfer rate. As drive speeds increase, the advantages of the 66MHz PCI will become more pronounced.

### **Ultra ATA/100 Support**

Ultra100 TX2 implements complete Ultra ATA/100 specifications. This means it offers full support of Ultra ATA/100 drive speeds of 100MB/sec burst data transfers, and CRC error-checking. The card also bundles the 80-wire/40-pin Ultra ATA cable required to support the new drive.

### **Backward Compatibility**

Ultra100 BIOS auto-recognizes and optimizes older IDE drives – including Ultra ATA/66, Ultra ATA/33, EIDE, and Fast ATA-2 drives. This is important because most new buyers of Ultra ATA/100 drives are likely to already own at least one older drive which they will wish to keep.

### **Independent Data Channels**

Ultra100 TX2 co-exists with motherboard IDE ports, adding two independent IDE ports to a PCI system. For best results, users should attach their hard drives to the Ultra100 TX2 card and attach all ATAPI devices (CD-ROMs, DVDs, CD-RWs, Zip, LS-120, etc...) to the onboard IDE ports. This allows users to attach up to 8 drives and/or devices inside a system and permits greater flexibility and expandability.

### **Independent Device Timing**

Each IDE port on Ultra100 TX2 supports independent timing for each attached drive or device. This allows the Ultra100 TX2 to run each attached device at their highest-rated speed. This is especially important because of the backward-compatibility of Ultra100 TX2 to slower drives and devices. Ultra ATA/100 drives will not be slowed down by a slower drive or device attached to the same cable.

### **Plug & Play**

Ultra100 TX2 supports easy installation with jumperless Plug & Play compatibility and auto-recognition of card by system.

### **Bus Mastering**

Ultra100 TX2 offloads I/O management to optimize CPU processing for data handling which improves overall performance.

### **CRC Data Protection Support**

For all Ultra ATA/DMA drives, Ultra100 TX2 supports enhanced data protection called Cyclical Redundancy Checking which improves data reliability of these drives – particularly since they run at a higher transfer rate.

**80-wire/40-pin Ultra ATA Cable Recognition**

Ultra100 TX2 auto-recognizes and assures use of 80-wire/40-pin IDE Ultra ATA cable with an Ultra ATA/100 drive. The card automatically adjusts the burst data transfer rate accordingly to allow 100MB/sec burst data transfers. Should Ultra100 TX2 detect the use of a standard 40-pin IDE cable with an Ultra ATA/100 drive, it adjusts the drive speed to just Ultra ATA/33 burst data transfers of 33MB/sec -- while maintaining integrity of data to prevent possible system lockups or data loss.

**Operating System Support**

Compatible with Windows 2000, Windows NT4, Windows ME/98/95, Netware 3.12/4.1x/5.0. Ultra100 TX2 provides major OS support for a virtually instant PC upgrade or new system solution.

## **What It Means For Customers**

With Ultra100 TX2, buyers of Ultra ATA/100 drives will be able to support the full speed and data reliability specifications of Ultra ATA/100 technology on 66MHz PCI bus motherboards. Faster storage performance coupled with complete IDE backward-compatibility makes Ultra100TX2 an ideal upgrade solution for new or existing PCI systems.

## **The Leader in ATA**

Since 1988 Promise Technology, Inc. has offered high performance IDE controllers for PC storage and has been recognized as the creator and leader of ATA RAID since 1997. The world's biggest OEMs and resellers look to Promise for ongoing innovations in ATA controller design as the company continues to create the most powerful ATA-based controllers today.

Unlike other companies, Promise Technology controls all the technology it creates. Promise designs, manufactures, services and markets each of its products, giving the company an edge over the competition.

There are many reasons to choose Promise Technology:

- First company to produce Ultra ATA/100, Ultra ATA/66, and IDE caching controllers
- Leading developer of EIDE/ATAPI controller technology
- Focused on ATA RAID and Ultra ATA controller technology
- Committed to uncompromising quality, reliability and compatibility
- Dedicated to customer satisfaction
- Unmatched service and technical support

## **Service and Support**

Promise Technology not only prides itself on providing customers with high-quality, leading edge controller products but also strives to provide the service and technical support its customers deserve. Customers are protected under the Promise Technology support umbrella.

- ❑ *Two-Year Limited Warranty* covering parts and labor.
- ❑ *Free Technical Support* is available at 408/452-1180 or via Promise's web site at [www.promise.com](http://www.promise.com).
- ❑ *Web site* ([www.promise.com](http://www.promise.com)) includes latest drivers and utilities for storage.
- ❑ *On-line Support* at Promise Technology's web site ([www.promise.com](http://www.promise.com)).



## Specifications/Standard Features

The following table summarizes key product features for the Ultra100 TX2 controller card.

<b>Hard Drive Support</b>	Ultra ATA/100/66/33, EIDE
<b>PCI Bus</b>	Compatible with 66MHz PCI motherboards; automatically backward compatible with 33MHz; PCI 2.2 compliant
<b>Drive Mode</b>	Ultra DMA 5/4/3/2/1/0; DMA 2/1/0
<b>Data Transfer Rate</b>	Up to 100MB/sec data transfers (with Ultra ATA/100 drives)
<b>Onboard BIOS</b>	Auto-identifies & configures drive type; auto-detects & supports Ultra ATA mode transfers; easy conflict-free installation; recognizes drives up to 128GB and larger
<b>Advanced Data Features</b>	Bus mastering offloads data I/O handling from host CPU; supports CRC error-checking of Ultra ATA drives
<b>Cable Support</b>	Includes single Ultra ATA 80-wire/40-pin cable; cable required for Ultra ATA/100 drives to reduce signal noise (“crosstalk”) during transfers
<b>Device Support</b>	Dual IDE ports support separate timing and optimum speeds of attached drive(s) or ATAPI device(s)
<b>Operating Systems</b>	DOS 5.x, Windows 3.1x, Windows 95/98/ME, Windows NT4/2000, Netware 3.12/4.1x/5.0
<b>Supports ATAPI</b>	Yes <sup>3</sup>
<b>Limited Warranty</b>	2 Years

<sup>3</sup> ATAPI devices not supported in DOS or Windows 3.1x

### **Speed Comparison**

Ultra100 TX2 with Ultra ATA/100 drives exceeds Ultra2 SCSI data transfers and doubles data transfers of older IDE drive technologies as follows:

