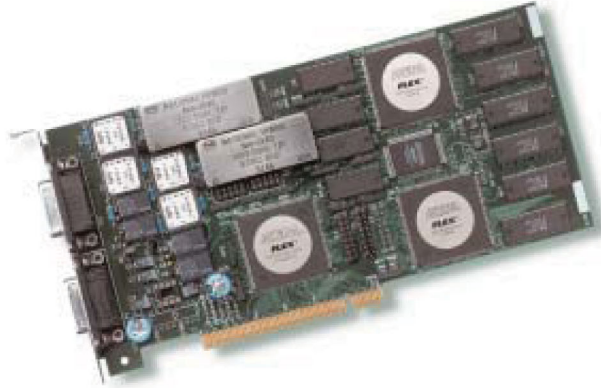


# VTC288507

## Interface for PCI

### FEATURES

- > Simultaneous Bus Controller, 31 Remote Terminals and Bus Monitor
- > Easy-to-use *BusTools/1553* Windows-based GUI bus analyzer is available
- > Advanced, high-level software API libraries
- > 1 or 2 independent MIL-STD-1553 dual-redundant channels
- > Multi-function and single-function versions
- > Conditional BC branching on real-time message data or status
- > Aperiodic message insertion
- > Real-time bus playback with RT edit mode
- > I/O triggering and error injection/detection
- > 1 Mbyte shared RAM per channel
- > Supports MIL-STD-1553A and B Notice II
- > MacAir support available
- > Variable output voltage



The VTC288507 provides the highest level of performance and flexibility for MIL-STD-1553A/B or MacAir protocols on the PCI bus. The VTC288507 is integrated with powerful software that reduces development time. All databus functionality is supported from our advanced API (Application Programming Interface). Standard features include real-time bus playback (with ability to edit out RTs), aperiodic message insertion, error injection/detection, conditional BC branching, 45-bit timetags and "Oneshot" BC operation. Provides host software synchronization to pulses from external timing sources (IRIG, GPS, etc). The Bus Monitor mode provides 100% bus monitoring of fully loaded 1553 or MacAir buses.

### Multi-function Interfaces

One or two multi-function interfaces are available on a single PCI board. They can operate simultaneously as a BC, up to 31 RTs and as a BM. It can emulate an entire dual-redundant channel internally, eliminating the need for external hardware to simulate missing nodes.

### Single-function Interfaces

The VTC288507 can provide one or two single-function interfaces with all the features and functionality of the multi-function versions, but only one major operational mode is enabled at a time - emulating either a Bus Controller or 31 Remote Terminals or Bus Monitor.

### Software

Included with the VTC288507 is Vox's flexible, high-level API which supports up to 10 independent 1553 channels. Windows XP, 2000, Me, NT, 98, 95, Linux, VxWorks, LabWindows/CVI, Visual Basic and source code support is provided. LabVIEW and Solaris support are optionally available. *BusTools/1553*, Vox's GUI bus analysis, simulation and data logging solution for 1553, is available. Vox's high performance and intuitive software solutions provide complete and simplified access to MIL-STD-1553 functionality for development, integration, test, embedded and maintenance applications.

**SPECIFICATIONS**

**Physical**

- 3/4 length desktop PCI card (8.4" x 4.2")

**Environmental**

- Operating temperature range: 0°C to +70°C

**Software**

- API - Includes high-level API libraries for Windows XP, 2000, Me, NT, 98, 95, Linux, VxWorks, LabWindows/CVI and Visual Basic
  - Source code API library provided
- GUI - Optional *BusTools/1553* GUI bus analyzer
- LabVIEW - Support optional
- Solaris - Support optional

**On-board Shared RAM**

- 1 Mbyte (per dual-redundant channel)

**Connections**

- Programmable direct or transformer coupling
- Input and output triggers
- Transition cabling to 1553 cable jacks included

**Multi-function Operational Modes**

- Simultaneous BC, 31 RTs and BM

**Single-function Operational Modes**

- BC or 31 RTs or BM

**Power (two channels, 50% duty cycle)**

- + 5 VDC: 1.5 A
- + 12 VDC: 222 mA
- - 12 VDC: 50 mA

**PCI Signal Compatibility**

- 5V Signaling

**Warranty:** 3 year limited hardware warranty

**AVAILABLE CONFIGURATIONS**

VTC288507	MIL-STD-1553B multi-function, single channel PCI interface board
VTC288508	MIL-STD-1553B multi-function, two channel PCI interface board
VTC288509	MIL-STD-1553B single-function, single channel PCI interface board
VTC288510	MIL-STD-1553B single-function, two channel PCI interface board

**DESCRIPTION**

**Bus Controller**

- Programmable control over:
  - Major and minor frame content and timing
  - Intermessage gap times
  - Response time-out and late response
- Modify messages, data or setup while card is running
- Insert aperiodic messages into a running BC list
- "Oneshot" mode for simplified BC operation
- Conditional message sequencing based on real-time message data or status
- Selectable interrupt generation and status messages
  - Full range of system conditions
  - All detected errors
- Full error detection
  - Invalid word - Late response
  - Bit count error - Early response
  - High word - No response
  - Low word - Incorrect RT address
  - Inverted sync - Parity error
  - Manchester
- Extensive programmable error injection (on a per word basis)
- Synchronize BC operation to external time source

**Remote Terminal**

- Multiple RT simulation (up to 31 RTs)
- Programmable error injection (on a per word basis)
- Modify data, status words or setup while card is running
- Programmable message content (linked message buffers)
- Interrupts can be generated on a per message basis upon End of Message and error conditions

**Bus Monitor**

- Capture 100% fully loaded bus traffic with:
  - Time-tagging - Error status
  - Word status - Message status
  - RT response time
- Interrupts can be selected by RT/SA/WC
- Extensive filtering and triggering options
  - By individual RT/subaddress
  - Transmit, receive or broadcast mode codes
  - Internal or external triggering
  - Trigger output on user specified data
- Real-time bus playback with RT edit mode
- 45-bit, microsecond resolution timetagging
- Host software synchronization to external timing sources