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Data Sheet

August 15, 2026

BITTWARE

BittWare Octal TigerSHARC CompactPCI Board

Aumictech offers NIST-traceable calibration and repair for the BittWare T2-6U-cPCI.

Calibration covers analog input channel accuracy and offset at all gain settings, analog output accuracy, digital I/O logic threshold verification, sample rate and timing accuracy, and trigger and synchronization bus functional verification. NI CompactRIO and PXI chassis also undergo backplane trigger line integrity check.. All calibrations ship with a NIST-traceable certificate. Turnaround is typically 1–3 business days after receipt. Common BittWare T2-6U-cPCI faults: power supply failure (cRIO-9073/9074), C-series slot connector wear, PXI chassis fan failure, GPIB interface failure on VXI controllers, BIOS/EEPROM corruption. NI CompactRIO most common faults are power supply failure on older cRIO-9073/9074 chassis and C-series module slot connector wear from repeated hot-swap cycles. PXI chassis fan fa



MODEL

BittWare T2-6U-cPCI

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

T2-6U-cPCI

LISTING

<https://aumictechlabs.com/products/t2-6u-cpci-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

BittWare T2-6U-cPCI Octal ADSP-TS201S TigerSHARC CompactPCI Board Technical Overview

The BittWare T2-6U-cPCI is a 6U CompactPCI board engineered for demanding computational tasks. It integrates eight Analog Devices ADSP-TS201S TigerSHARC processors, each capable of operating at up to 600 MHz, delivering significant floating-point and fixed-point processing power. The architecture is further enhanced by two Xilinx Virtex-II Pro FPGAs, which provide

extensive flexibility for I/O routing, protocol translation, and algorithm implementation. This board can offer high-bandwidth, low-latency off-board I/O capabilities and high-speed interprocessor communications, making it suitable for applications such as radar and sonar processing.

Technical Specifications

Processors

Digital Signal Processors (DSPs): Eight Analog Devices ADSP-TS201S TigerSHARC processors. * Clock Speed: Up to 600 MHz per processor. * Peak Processing Power (Floating-Point): 3.6 GFLOPS per DSP. * Peak Processing Power (16-bit Fixed-Point): 14.4 BOPS per DSP. * Total Processing Power (Floating-Point): 28.8 GFLOPS (8×3.6 GFLOPS). * Total Processing Power (16-bit Fixed-Point): 115.2 BOPS (8×14.4 BOPS). * On-chip RAM: 24 Mbits per DSP. * Architecture: Static superscalar with dual computation blocks. * Data Formats: Single-precision IEEE 32-bit, extended-precision 40-bit floating-point, and 8-, 16-, 32-, 64-bit fixed-point.

FPGAs: Two Xilinx Virtex-II Pro (XC2VP30) FPGAs. * Functionality: Routing communications, protocol translation, algorithm implementation, I/O interfacing.

Memory

SDRAM: Up to 512 MBytes of on-board SDRAM. The board features two large on-board banks of SDRAM.

Flash Memory: Two 8 MByte banks of Flash memory for hostless boot.

Interconnects and Communications

DSP Clusters: Processors are arranged in two clusters of four. * Cluster Bus: 64-bit, 83.3 MHz bus shared by the four processors in each cluster.

LVDS Link Ports: Each DSP has four high-speed LVDS link ports. * Throughput: Up to 500 MBytes/s per channel (4-bit transmit and 4-bit receive) for a total maximum throughput of 1 GByte/s per link port. * Interprocessor Communication: Two link ports per DSP are used to form an interprocessor communications ring. * FPGA Connection: Remaining two link ports per DSP are routed to the ATLANTiS FPGA, operating at 250 MBytes/s (125 MBytes/s per channel).

SharcFIN PCI-DSP Bridge: Two SharcFIN chips, one per DSP cluster. * Functionality: Provides low-overhead access to the host via the PCI interface, and access to peripherals like Flash and FPGA control registers. * Interface: 64-bit, 66 MHz PCI interface.

ATLANTiS Architecture: BittWare's architecture combining TigerSHARC processing with Xilinx FPGAs for high performance and I/O bandwidth.

RocketIO Transceivers: Eight RocketIO high-speed serial transceivers.

Interfaces

CompactPCI (cPCI) Interface: 6U CompactPCI form factor. * PCI Interface: 64-bit, 66 MHz PCI interface via SharcFIN bridge.

PMC Sites: Two PMC sites. * PMC+ Extensions: Support BittWare's PMC+ I/O extensions for adding additional processors and I/O capabilities.

Off-Board I/O: High-bandwidth, low-latency, reconfigurable I/O capabilities. * Total Potential I/O Bandwidth: Greater than 6 GBytes/s. * FPGA to Off-Board: Each FPGA can communicate off-board at greater than 3 GBytes/s using its eight RocketIO transceivers and digital I/O blocks.

Software and Development Tools

BittWorks II Toolkit: Provides drivers, libraries, utilities, and example projects for software and FPGA development. * Supported Platforms: 64-bit Windows and Linux. * API: Consistent, intuitive API for system integration. * Utilities: Includes BwHIL, BmcLib, BwConfig, BwServer, BwShell, BwMonitor for board control and monitoring.

Development Environments: Support for Analog Devices VisualDSP++ and potentially third-party tools like SDL's DSPdeveloper with MATLAB integration.

Real-Time Operating Systems (RTOS): Support for Analog Devices' VisualDSP Kernel (VDK) and Enea's OSEck RTOS

T26UCPCI Characteristics / Specifications

PARAMETER	VALUE
Model	T2-6U-cPCI
Instrument Type	6U CompactPCI octal TigerSHARC DSP
Family	BittWare T2 ATLANTiS
Dsp Count	eight Analog Devices ADSP-TS201S
Cluster Arrangement	two clusters of four DSPs
Floating Point	28.8 GFLOPS
Fixed Point	115 BOPS 16-bit
On Chip Ram	24 Mb per processor
Link Ports	four LVDS link ports, up to 1 GB/s each
Fpga	two Xilinx Virtex-II Pro
Pmc Sites	two PMC with PMC+ extensions
Host Interface	64-bit 66 MHz CompactPCI via SharcFIN PCI-DSP bridge
Sdram	up to 512 MB on-board
Flash Memory	two 8 MB banks
Io Bandwidth	9.6 GB/s I/O interfaces
Form Factor	6U CompactPCI
Architecture	ATLANTiS (Advanced Transfer Link Architecture for New TigerSHARC)
Manufacturer	BittWare Inc., Concord NH
Literature	Electronic Design T2-6U-cPCI coverage and BittWare T26U datasheet bullets
Part Overlay	92236-01 / 92236-02 with 512 MB SDRAM
System Role	octal DSP compute with FPGA I/O on cPCI
Host Bridge	BittWare SharcFIN ASIC
Bandwidth	9.6 GB/s I/O interfaces

T26UCPCI Specifications

PARAMETER	VALUE
Applications	High-rate radar, sonar, and SIGINT CompactPCI DSP where eight 600 MHz-class TigerSHARC nodes plus dual Virtex-II Pro FPGA I/O are required.
Key Features	Eight ADSP-TS201 TigerSHARC in two clusters of four
Technical Specifications	Model: T2-6U-cPCI

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes	
From Electronic Design T2-6U-cPCI articles (eight ADSP-TS201, 28.8 GFLOPS, 115 BOPS, Virtex-II Pro, 512 MB, 8 MB flash, 64/66 cPCI) and Artisan T26U overlay. Clock millihertz ofaspecific TS201 speed grade belongs on the nameplate.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.