

Model 2900P

Real-time Telemetry Data Processor

1 to 8 PCM Stream Processor

**Real-time, OS Independent
Telemetry Processing**

**Card Level, Micro-coded
Software Decommulation**

**Powerful real-time SHARC®
Mission Data Processor**

Network Extendable

**OS Independent Networked
Data Services**

**Local and Remote Data
Displays**

**Real-time Raw and Processed
Mission Data Recording**

**NEW 8 bps to 40 MHz
Digital Bit Synchronizers**

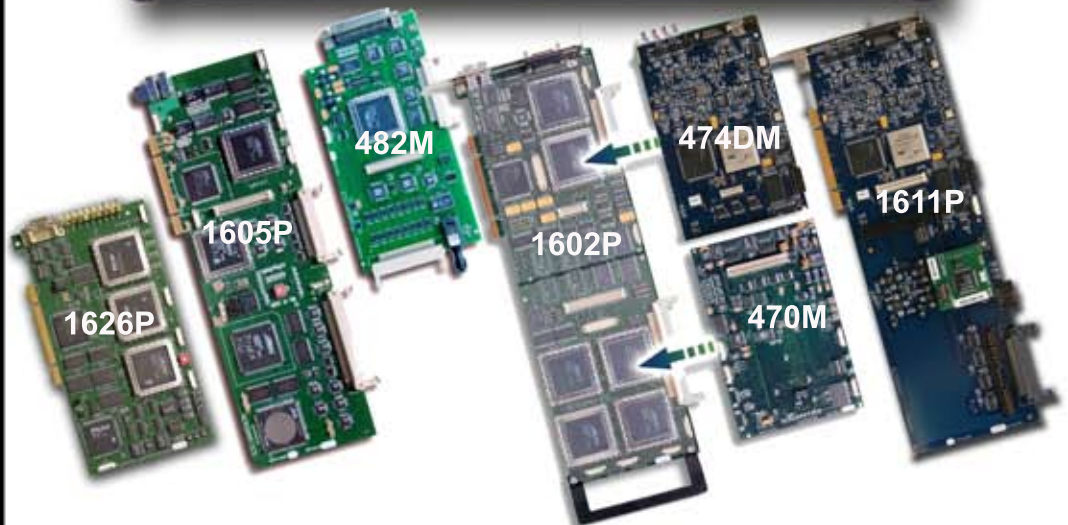
**Powerful 0-32 Mbps PCI
Frame Sync/Decoms**

Programmable PCM Simulator

**NEW Real-time card level
CVSD Voice Processor**

**RF Receivers, Analog, DAC,
Aircraft Data Busses,
Discrettes, GPS, and more**

**All-Steel Rugged Purpose
Design Chassis - LED Mission
Display Panel, Rear Panel BNC
I/O**



Model 2900P TDP systems easily accommodate requirements that range from one to many streams, each with varied rates and formats. Lossless PCM format switching, embedded frames, and concatenated data processing are accommodated in real-time using our standard decom hardware and mission processing set-up tools. Choose from a variety of Acroamatics and 3rd party vendor PCI form factor modules to add receivers, aircraft buss, or to accommodate future data interface needs.

User friendly Acroamatics Telemetry Software Suite tools enable users to set-up TDP processing modules to process extremely complex PCM formats in real-time by means of our Windows OS independent card level embedded "soft-decom" processing methods. IRIG Chapter 4, 5, 8, 10 and NASA CCSDS format standards compliant.

ACROAMATICS

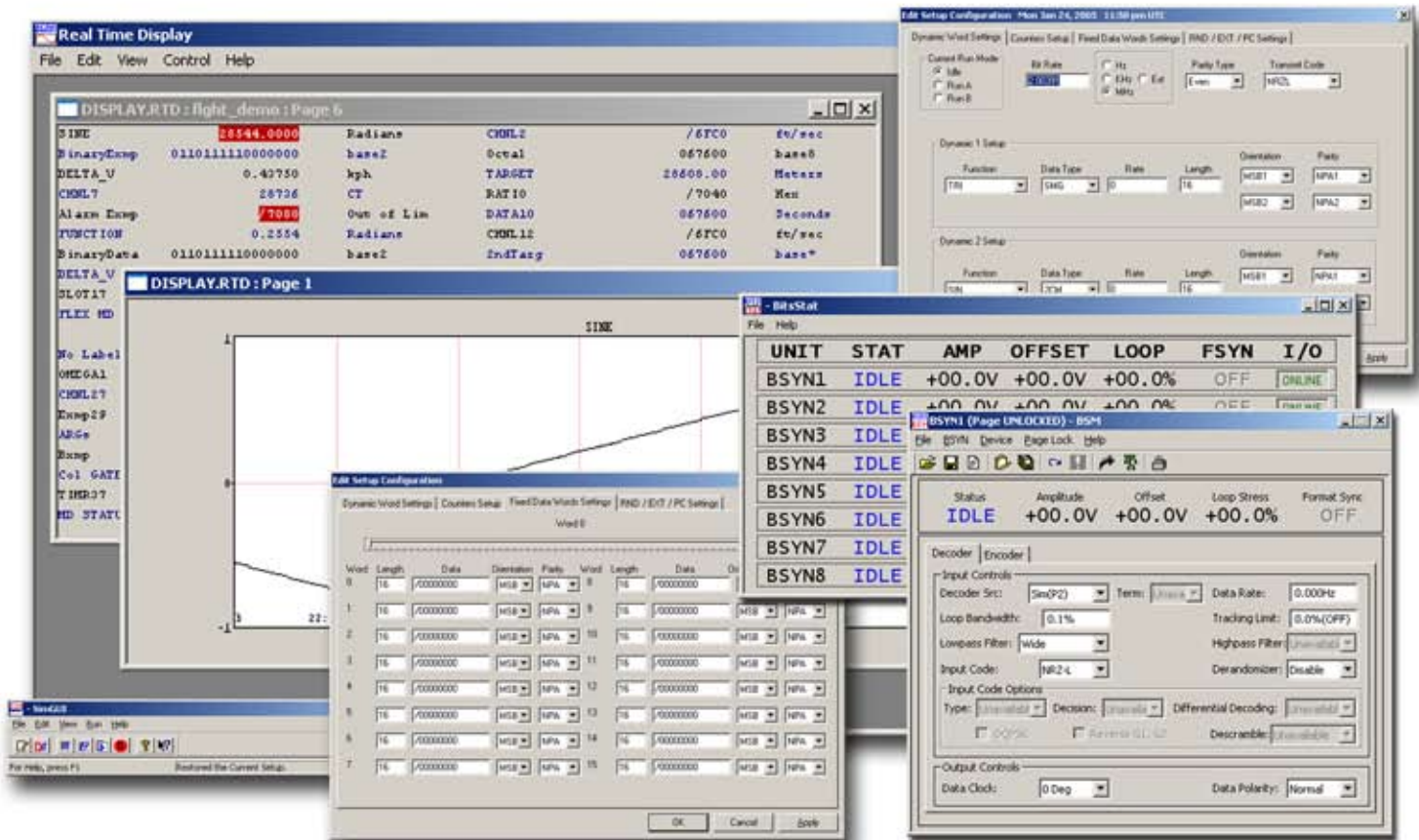
TELEMETRY SYSTEMS

Overview

The Acroamatics 2900P Telemetry Data Processor (TDP) provides ample processing power to meet current and future system real-time mission data display, recording, and data network services needs. The TDP is built to comply with PCI buss standards, accepts standard PCI cards of all types, and uses your choice of Windows 7 or XP Pro operating systems. Requirements that range from single to multi stream, from simple to extremely complex formats, and from standalone to a server with multiple networked client display and analysis workstations may be addressed by the Acroamatics 2900P TDP platform. A 2900P Acroamatics TDP can also be easily tailored to incorporate real-time data input of data types other than PCM. By combining high-performance Acroamatics telemetry interface and processing cards with select 3rd party PCI modules we have enabled the Model 2900P TDP to support a wide variety of range and lab test applications with turn-key convenience.

System Software

Acroamatics Telemetry Software Suite (ATSS) TDP system software includes GUI applications to set up and operate the range of system hardware configurations available. Operators can store and instantly configure the system using project setup libraries managed by ATSS, or alternatively use convenient Excel or TDP script files to define their own mission TDP configuration management scheme. Using ATSS users can configure and initiate an entire acquisition from the Mission Management Menu, or can control individual TDP functions through specific GUI tools, such as the Data Recording GUI.



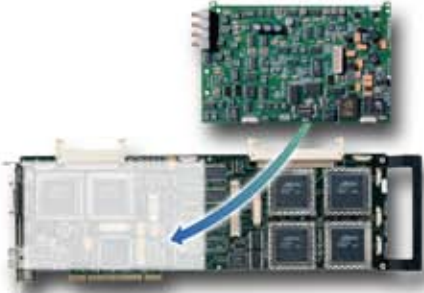
PCI Chassis

The standard Model 2900P is based on a purpose designed, rugged industrial 4U RETMA rack-mounted 12-slot PCI chassis configured to specifically meet the demands of rigorous T&E TM groundstation applications. Lightweight and shock resistant models are available on special order - such as the Model 2900AP, featuring lightweight and corrosion resistant all aluminum construction. The Model 2900P includes as standard features a built-in LED PCM status display panel, rear panel bulkhead mount BNC I/O, dual hot-swappable 500W Power Supplies, rugged internal card cage, and enhanced thermal management. The base Model 2900P provides a total of 12 PCI card slots, 2 removable hard drives and a CD/DVD drive. For applications requiring just one or two slots to accommodate their data interface requirements, a compact (2u) Single-Stream Telemetry Data Processor chassis or our Model 4000 CTS are alternatives which may be considered and configured to meet your needs. See product data sheets for more information.

Processor

Standard Model 2900P include Core-2 Quad Q9400 based host processing configured with 4 GB RAM operating under your choice of Windows 7 64-bit or XP Pro operating systems. Custom host processor options include accelerated graphics support, and dual-head displays. 2900P host processor options are routinely updated to include the latest INTEL processor technology.

PCI TELEMETRY CARDS



You can select a set of Acroamatics cards to process anything from a single PCM stream to eight streams of PCM telemetry data simultaneously in a single TDP chassis. The following brief descriptions of the functions provided by the individual cards is summary in nature only. Please refer to specific module data sheets for complete capabilities descriptions, Please consult us prior to order placement for assistance in configuring a TDP to best suite your requirements.

Model 1602P PCI PCM Data System

The Model 1602P is a stored program card level PCM frame synchronizer and data decommutator, capable of real-time decommutation and processing of the most complex computer generated, high rate PCM formats, at rates to 32 MHz. The Model 1602P utilizes user defined micro-coded "soft-decom" processing techniques run within card resident real-time processors to provide six sub-frame decommutators each with dual buffered memories for execution of instructions and data processing algorithms with absolute determinism and timing correlations. The Model 1602P is designed to accept two mezzanine cards: the 474DM PCM Bit Synchronizer module and the 470M Time Code Generator/Translator and PCM Format Simulator. Please see the product data sheet for more detailed information.

Model 1605P PCI Programmable Data Stream Processor and Data Distribution Module

The Model 1605P allows merging and processing of PCM streams from up to eight Model 1602P Frame Syncs, including IRIG time, network fed and HOTLink inputs, and external messages. The 1605P supports complex data merging and distribution, outputs multiple data products via dedicated card resident network interfaces, and provides low latency / real-time processing of stream data using it's powerful on-board SHARC® DSP, embedded processor. A library of over 300 telemetry algorithms is provided, sequential algorithm chaining and derived "if-then-else" processing is supported, as is processing of user-defined expressions. Please see the product data sheet for more detailed information.

Model 1611P PCI 40 MHz Advanced Digital Bit Synchronizer

The 1611P Bit Synchronizer is a state-of-the-art Advanced Digital Bit Synchronizer featuring tunable data rates from 8 Hz to 40 MHz for all codes, supports all IRIG standard and randomized codes, and provides "best-in-class" bit error performance well below 1 dB of theoretical - typically in the 0.5 to 0.75 db range. Optional features include: Viterbi encoding/decoding, full featured Bit Error Rate Tester & PCM Format Verifier. See the product data sheet for more information.

Model 470M Time Code Generator/Translator Mezzanine

The Model 470M is a mezzanine card that converts amplitude modulated IRIG time code signals to a digital representation for downstream analysis. Combines time code translation, generation and format simulation on a single plug-on mezzanine module. The card also generates an amplitude modulated serial IRIG A, B, or G output for use by external equipment, and a slow code output for annotating strip charts. The Model 470M mezzanine can be attached to the 1602P card. See the product data sheet for more information.

Model 474DM 32 MHz Bit Synchronizer Mezzanine

The 474DM PCM Bit Synchronizer is a state-of-the-art Bit Synchronizer featuring tunable data rates from 8 Hz to 32 MHz for all codes. The card contains selectable input sources, AGC and DC restoration circuitry, and programmable digital filtering for optimum data recovery. Sophisticated PLL (phase-locked loop) circuitry synchronizes a clock to the incoming signal to extract digital data from input PCM stream data. The Model 474DM provides bit sync performance and noise specifications comparable to full size PCI card and the best range chassis based units, using Acroamatics Advanced Digital elements similar to the high performance Model 1611P, but sized to attach to the Model 1602P and 1626P modules to provide a single card TM stream processing solution. The 474DM unit accepts all IRIG standard PCM input codes and has a bit error performance better than 1 dB of theoretical in all modes, at all frequencies of operation. The Model 474DM can be attached to any Model 1602P, 1626P, or 1611P Bit Sync and Processing modules. See product data sheets for more information.

Model 1626P Multi-Channel Frame Synchronizer / Decom / IRIG Time / PCM Simulator / CVSD

The 1626P is a 3/4 length PCI module developed to support less complex real-time PCM processing tasks in a low-cost, integrated single card package. The 1626 is a versatile companion within the TDP card set for it's ability to process higher rate (to 64Mbps) fixed format PCM, support low-latency decoding and output of IRIG Chapter 5 CVSD voice data, and provide 3rd party developers a cost effective interface from which to develop PCM processing and analysis products.

Model 482M D to A Converter Mezzanine (Companion to Model 1605P PDSP)

Model 482M is a mezzanine card for the PCI-bus Model 1605P. Two configurations of Model 482M are available. Model 482M-8 provides a total of 8 channels of 12-bit D-to-A output. Model 482M-32 provides a total of 32 channels of 12-bit D to A output plus 16 channels of 12-bit A-to-D input with a 400 KHz sample rate. See the product data sheet for more information.

Model 2900P Specifications

Physical	4U all-steel Rack Mount PCI Chassis (22.5" depth), 46 lbs
Backplane	14-Slot Passive Backplane (12 PCI, 1 PICMG, 1 ISA)
Processor	Intel Core™ 2 Duo
Networking	Dual Ethernet 10/100/1000
USB	4 USB 2.0 (2 front panel & 2 rear panel mounted)
Memory	2.0GB (min) DDR2 SDRAM
Storage	Dual 500GB (min) SATA mounted in 5.25" Rhino (Kingston) Removable Drive System options include single or dual Quad 2TB RAID mounted in 3.5" Removable Drive System Removable Drive System
Power	Dual Redundant 500W PS/2 Power Supplies
DVD	Pioneer DVR-K06 Slot Loading Slim DVD-RW
Indicators	LED Status for installed telemetry components Bi-color Power Supply Alarm/Reset status
Signal I/O	70 ea. BNC Type (labeled with J numbers)
Mounting	Ball bearing Rack Slides
Cooling	Active cooling, dual 5" fans (CPM 51 spec.)
Environmental	Shock 6G, Non-operating 50G Vibration Operating 0.5G, 5 to 2000 Hz, Non-operating 1.2G, 5 to 500 Hz
Temperature	Operating 0 to +40° C, Non-Operating -40 to +86° C

Model 2900AP Specifications

Physical	4U all-aluminum Rack Mount PCI Chassis (22.5" depth), 34 lbs
Backplane	14-Slot Passive Backplane (12 PCI, 1 PICMG, 1 ISA)
Processor	Intel Core™ 2 Duo
Networking	Dual Ethernet 10/100/1000
USB	4 USB 2.0 (2 front panel & 2 rear panel mounted)
Memory	2.0GB (min) DDR2 SDRAM
Storage	Dual 500GB (min) SATA mounted in 5.25" Rhino (Kingston) Removable Drive System options include single or dual Quad 2TB RAID mounted in 3.5" Removable Drive System
Power	Dual Redundant 500W PS/2 Power Supplies
DVD	Pioneer DVR-K06 Slot Loading Slim DVD-RW
Indicators	LED Status for installed telemetry components Bi-color Power Supply Alarm/Reset status
Signal I/O	70 ea. BNC Type (labeled with J numbers)
Mounting	20" Ball bearing Rack Slides
Cooling	Active cooling, dual 5" fans (CPM 51 spec.)
Environmental	Shock 6G, Non-operating 50G Vibration Operating 0.5G, 5 to 2000 Hz, Non-operating 1.2G, 5 to 500 Hz
Temperature	Operating 0 to +40° C, Non-Operating -40 to +86° C.

SOFTWARE INCLUDED

Acroamatics Telemetry Software Suite II (ATSS-II) software set-up and operating environment is provided installed in each TDP system without additional charge

CUSTOM CONFIGURATIONS AND SPECIAL DESIGNS

Acroamatics has the hardware and software expertise necessary to solve even the most complex problems. Our system and card level product capabilities allow us to quickly and effectively design new or modify existing card level modules in response to individual requirements and evolving range and aircraft testing standards. Third party aircraft data buss, receivers, graphics, modules and a wide variety of software application tools are accepted by the Model 2900P with no special modifications. Acroamatics is an experienced integrator of large multi-vendor systems, with facilities and expertise to assembly, test, and deliver solutions specifically tailored to your needs.

CUSTOMER SERVICE

When you call Acroamatics for support you won't have to work your way through an automated system or an anonymous help desk. You'll be connected directly to the engineers and programmers who designed your system to quickly resolve problems.

WHY ACROAMATICS

Over thirty years of experience, far-ranging expertise, excellent products, and outstanding support make Acroamatics not just a telemetry system supplier, but a partner you can rely on to meet your needs.

Specifications subject to change without notice