DELTA TELEMETRY SYSTEMS

DATA ACQUISITION

# Real-Time Telemetry Data Processor

## MODEL 2900AP

ACROAMATICS TELEMETRY SYSTEMS

## KEY FEATURES

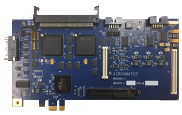
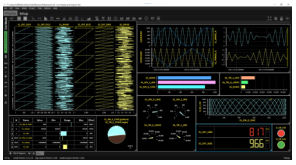
- 1 to 16 PCM Stream Processor
- Real-time, OS Independent Telemetry Processing
- Industry-leading ADAT widget based Display, Analysis, and user system dashboard
- Card Level, Micro-coded Software Decommutation
- Powerful real-time SHARC® DSPEU & Derived Processor
- Deterministic Network Data Services and Remote Client Software
- IRIG 106 Standards - Ch 4 Class 1 & 2, Ch 7, 8, 10/11, TMATS, CVSD, CCSDS, 218-20 TMoIP
- Advanced Real-time Raw and Processed Mission Data Recording
- NEW 1M Fixed/64K Dynamic Word 40+ Mbps Programmable PCM Simulator/Encoder
- NEW 50% faster PCM Decom Processing Rates
- NEW 3x faster Low Latency EU and Derived Processing and Da-ta Distribution Rates

## GENERAL DESCRIPTION

Model 2900AP TDP systems easily accommodate requirements that range from one to sixteen (16) IRIG 106 Chapter 4 Type 1 & 2 PCM stream decommutation, real-time EU processing, and analysis. Each individual telemetry input stream is definable as to its unique stream attributes, such as rate and format definition, lossless PCM format switching, conditional async embedded frame decommutation, packet protocol PCM processing (CCSDS) and merged low-latency EU and derived processing. COTS 2900AP hardware and system desktop management software deliver a uniquely powerful and flexible Windows application independent end-to-end low latency telemetry processing solution.

A variety of State-of-the-Art Acroamatics PCIe form factor TM acquisition, formatting, and processing modules provide a scalable, integrated low latency card embedded processor framework from which to create the optimum range and engineering lab telemetry processing and data delivery tool. User friendly Acroamatics Telemetry Software Suite desktop tools enable users to set-up TDP processing modules to handle even the most complex PCM formats in real-time with ease, delivering thousands of complex derived polynomial (to 7th order) values and supporting critical safety of range output functions with deterministic reliability and accuracy.

## RELATED PRODUCTS

| Decom PCM Processing Card | Real-time PCIe PDSP | PCI Card Receiver | ADAT |
|---|---|---|---|
|  Model 1632AP | Model 1635AP | Model RDM207 |  |

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A DELTA INFORMATION SYSTEMS COMPANY

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## PCIe Telemetry Cards

Acroamatics cards can process anything from a single PCM stream to sixteen streams of complex telemetry data simultaneously in a single chassis, and now include the option of a new generation integrated high performance RF receiver/demod PCI module. The following descriptions of the functions supported by the individual cards is summary in nature only.

*Refer to specific module data sheets for complete capabilities descriptions. Assistance prior to ordering is recommended to ensure proper configuration.*

### TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Physical: | 4U aircraft quality aluminum Rack Mount PCI Chassis (22.5" depth), 38 lbs Avg Weight |
| Backplane: | 12-Slot Passive Backplane (PCIe or mixed PCIe/PCI on request) |
| Host CPU: | CPU Intel Gen 9+ i7tm w TPM2, hosted by choice of : Windows 11 Pro 64-bit OS, ENT LTSC or LINUX RHL7/8 |
| Networking: | Dual Ethernet 10/100/1000/2500 |
| USB: | 6 USB 3.0 (2 front panel & 4 rear panel mounted) |
| Memory: | Minimum 64 GB (min) |
| Storage: | Quad 1TB (two populated) SSD SATA-III 2.5" Front Panel Removable Drive System. |
| | SSD options to 4GB/drive in capacity |
| Video: | SBC embedded hi-res dual Display Port (DP) monitor – or HDMI on special order. |
| | Optional accelerated graphic card available |
| Power: | Dual Hot Swappable 800W PS/2 Power Supplies |
| DVD: | Slim CD/DVD/Blu-ray R/W drive |
| Indicators: | LED System Telemetry Status Array, HDD Carriers, Power Switch, and CD/DVD/Blu-ray drive. |
| Front Panel: | 77 ea. Rear Panel Flush-mount BNC / Twinax Type, to customer specifications with Bi-color Power Supply Alarm/Reset status Additional customer specified front and rear panel options and layouts quoted on request. |
| Mounting: | 24" Depth 19" Ball bearing Rack Slide Kit included |
| 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 |
| Altitude: | 30,000 ft., Operating |

## Software Included

Acroamatics Telemetry Software Suite (ATSS) software set-up and ADAT (Acroamatics Display and Analysis Tool) Data Display, Analysis, System Dashboard Operations system software are provided installed in each TDP as the integrated operations hub of your new telemetry acquisition and processing solution. ATSS consists of a closely integrated pre-mission TDP system set-up program (TDPSet), and Acro Display and Analysis Tool (ADAT) user configurable desktop data and operations dashboard programs combine with a variety of real-time and post mission output data tools, which include recorder, networking, ADAT integrated system diagnostic, analysis, and customer data publishing tools & widgets. Supported Operating Systems include Windows 11 Pro 64-bit, Win 10 Enterprise LTSC, and RHEL 8.x, off the shelf.

## Customer Configurations and Special Designs

Acroamatics has the hardware and software expertise necessary to meet the most complex processing challenges. Our system and card-level product capabilities allow us to quickly and effectively configure, enhance, and field solutions in response to individual requirements and evolving range and aircraft testing standards. Aircraft data bus, receiver, communications modules, and a wide variety of software application tools are supported by the Model 2900AP with no special modification. Acroamatics is an experienced integrator of large multi-vendor systems, with facilities and expertise to assemble, test, and deliver solutions specifically tailored to your needs, from individual portable to large integrated rack-based solutions.

*Recognizing that no standard product fits every mission, Delta Telemetry Systems is ready to deliver tailored solutions for your unique application requirements. Specifications subject to change without notice.*

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