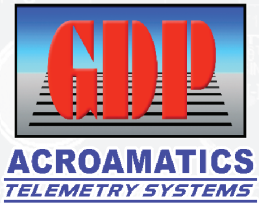# TELEMETRY PROCESSING CARDS
Product Overview


PCIe

Model 1632AP Dual Channel PCIe multi-function telemetry data processing module features the fastest end-to-end decom processing speeds in the industry and supports data format and mission project setup interchange with existing Acroamatics PCI TDP products and systems. Utilizing the latest in FPGA component technology, the Model 1632AP provides increased decom & stream processing rates while consuming less power (1/3 that of the preceding generation) and delivering improved functionality.

Model 674DM is a Dual stream range quality PCM Bit Sync companion mezzanine for use with the Model 1632AP. The 674DM is a compact 'mezzanine' design that mounts flush to the Model 1632AP. The 674DM utilizes the latest techniques in FIR filtering, digital phase locked loop, NCO clock reconstruction, and digital amplitude and offset control to deliver high performance, reduced parts count and improved reliability. The 674DM supports a full array of user selectable input/output codes and modes, including both frame and BERT validation loop test options.
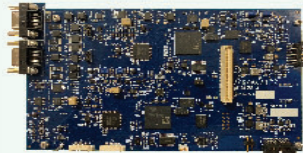
Model 1635AP is a powerful low-latency DSP based multi-stream telemetry Programmable Data Stream Processor (PDSP). With 3rd generation card embedded PDSP technology, it serves as the hub of Acroamatics' industry leading real-time range Telemetry Data Processing (TDP) line. The 1635AP supports EU, complex nested derived, and up to 7th level polynomial data processing at nearly three times the rate of its predecessor. With no reliance on Windows OS application based processing, the Model 1635AP boasts a dedicated high-speed 64 bit bus connection for the deterministic transfer of data from up to 8 Acroamatics companion Dual Stream PCM Decom modules.

PCI

Model RDM207 Digital RF Receiver is an integrated solution consisting of an RF Signal Processor, 2 Demodulators, 2 Bit Synchronizers and 2 Frame Synchronizers (Pattern Detectors) contained on a single slot 6U VME/PCI card. Available in both VME and PCI form factors, this module provides a compact, cost competitive, flexible solution to a wide variety of communications link scenarios.

In use supporting Standard Missile & Minuteman ICBM programs

Model 1612AP Card Embedded Telemetry Decom and Multi-function Processing Module is the cornerstone of our multi-stream TDP system product family, featuring the fastest processing speed, highest data rate, and the most powerful dynamic programmable processing capabilities in the industry. It retains 100% "drop-in" backward compatibility with legacy Acroamatics PCI TDP products and systems. The Model 1612AP features a unique Windows application independent, card embedded real-time stored program processing technology. A powerful integrated PCM Simulator/Encoder and onboard PCM Bit Sync option enable the 1612AP to meet your entire full range of telemetry decom needs.

Model 474DM is a Single Stream version of the Model 674DM Dual Bit Sync mezzanine, the 474DM is designed to flush mount to all of Acroa-matics single stream multi-function PCM Decom cards.

Model 1615AP PCI card is the core element of the Acroamatics TDP integrated multi-stream processing systems architecture. The low latency DSP based Multi-stream Telemetry Programmable Data Processor and Distribution (PDSP) real-time system processing card supports EU and complex nested derived processing to 7th level polynomial expressions, performed at nearly three times the rate of its predecessor (to 6 MS/sec) - with no reliance on Windows OS application based processing. TDP systems can be configured with single or dual PDSP cards to double aggregate processing potential, or to establish a second independent TM data processing and output distribution thread.

ACROAMATICS
TELEMETRY SYSTEMS
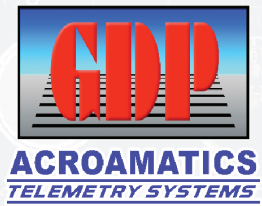
PCI

Model 1622P is a single PCI card multi-function PCM telemetry processing solution based on Acroamatics unique card embedded real-time stored program "soft decom" driven frame sync and processing technology. The 1622AP features multiple onboard data and conditional stored memory program locations, and is capable of processing the most complex conditionally switched, concatenated, asynchronous frame embedded formats - including those with embedded packet, CCSDS, and similar unique asynchronous complex data formats. Model 1622P supports transparent use of standard Windows driven PCI bus and system peripherals in support of data recording, data display and networked data distribution - making it an extremely reliable and effective all-in-one telemetry decom quick-look and complex format processing solution. The Model 1622P card includes powerful integrated programmable PCM Simulator and IRIG Time Code Reader/Generator features, and accepts the Model 474DM PCM bit sync mezzanine module as an integrated option.

Model 1650 PCI from factor FSVU (Frame Synchronization Verification Unit) contains eight PCM Decommutators that are designed for PCM stream quality verification rather than data processing. Each decommutator contains a minor frame synchronizer with a 64 bit pattern correlator, a 16 bit counter that counts the number of bits per frame, and a programmable synchronizer strategy providing Search, Verify and Lock states. A programmable watchdog timer returns decommutation to search if the input clock is lost. The status of each of the eight decommutators can be read over the PCI bus to determine the quality of the input data to each channel.
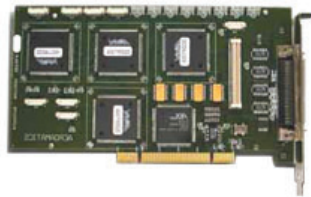
Model 482M Dac Mezzanine Card is a modular companion to the telemetry data processing system (TDP) product family programmable data stream processor and data distribution (PDSP) card, the Models 1615AP & 1635AP.
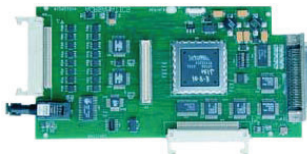
Model RDM207-C (PCI) is a diversity combiner card designed for use with two companion Model RDM207 receiver cards to form a dual diversity ARTM Tier 0 & I receiver cardset. Features include a fully integrated GUI set-up and operations user interface, IRIG compliant RF/IF combiner modes, optional performance features include Adaptive Equalization, TMoIP, DQE/ DQM, BERT link test, and an array of user assignable signal I/O options to meet almost any requirement.

Model BSM202 is a tunable Dual Channel 40 Mbps PCM Bit Synchronizer on a single PCI card (single channel configs also available). The BSM202 is designed to extract usable digital data from a noise contaminated baseband PCM receiver, recorder, or data communications signal environment. The optimized digital design of the BSM202 affords the highest performance characteristics available in the industry.

Model 1611AP PCI Bit Synchronizer supports data rates from 8 bps to 40 Mbps. The 1611AP design uses the latest techniques in FIR filtering, digital phase-locked loops, NCO clock reconstruction, and digital amplitude and offset control. Use of leading-edge FPGAs results in reduced part count, increased reliability, and design flexibility which accommodates future customization to meet future requirements.

Model 470M Time Code Mezzanine Card reads, translates, and generates IRIG A / B/ G and NASA-36 amplitude modulated time code signals. It is capable of translating and generating all IRIG time codes. The 470M is a companion flush mount mezzanine for use with the 1612AP PCI multi-function decom card primarily.