



PRODUCTS

Fully-Integrated Systems for Advanced Signal Applications

Signatec's scalable real-time data acquisition, recording, signal processing and waveform playback systems can be configured to meet the most demanding applications. This effective real-time system creation from otherwise non-real-time performance components is the real brilliance behind Signatec's engineered system solutions and is what separates Signatec's systems from other commercially available options.

Signatec can also develop custom solutions. So, if we don't already have it, we can build a solution with you!

Added Value Software and Services

For customers wishing to perform their own programming development, whether it is FPGA, DSP or CPU-based, Signatec offers software and FPGA development kits designed to accelerate both program development and execution. These development kits include tools for system control and real-time data processing applications primarily geared to utilize FFT, DDC and FIR filter algorithms, but are also well suited to serve other general purpose processing requirements.

To offer even greater flexibility, Signatec's standard board-support software package now includes Client/Server capabilities to control the hardware remotely via standard TCP/IP. Whether controlling applications in near proximity, within a hazardous environment or a system on the other side of the world, Signatec delivers the tools and means for success.

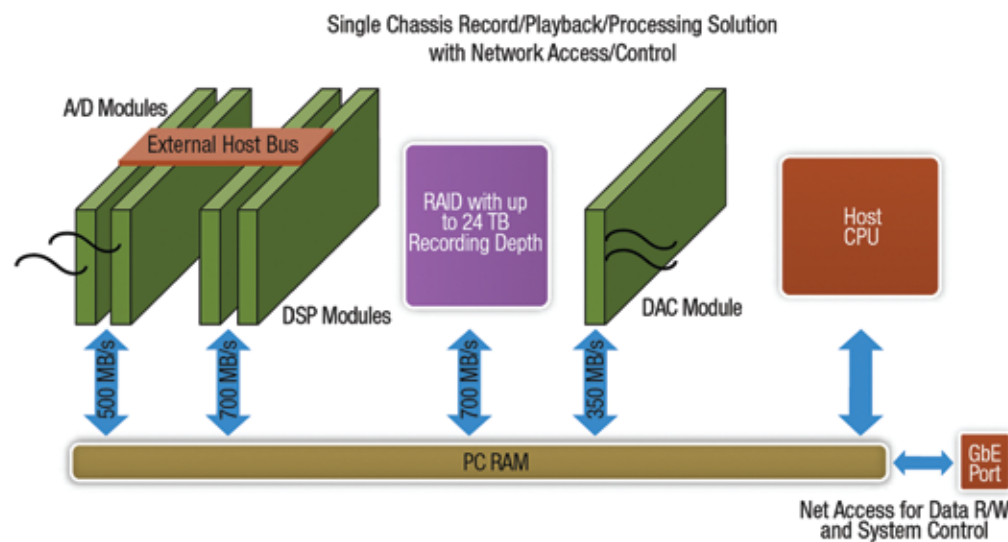
Signatec is a member of the Xilinx Alliance Program and Texas Instruments Third Party Program. These elite programs are composed of companies with the most advanced technologies in the areas of IP cores, digital signal processing (DSP), embedded development tools, board-level products and fully-integrated system solutions.

When you factor in all of Signatec's performance capabilities, and note the comparable low cost of its advanced solutions, Signatec delivers exceptional value for developers in the high-speed signal technology community.

Contact Signatec today to deliver best-of-industry system solutions for your most demanding signal technology applications.

www.signatec.com

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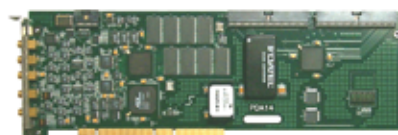


HIGH-SPEED DIGITIZERS



NEW! - PDA16

- 2 Channels, 160 MHz Sample Rate Each
- 16-bit A/D Resolution
- Link 4 Boards for 8 Channels
- Bandwidth from DC-700 MHz
- 512 MB Onboard Memory
- 500 MB/sec SAB (640 MB/s Pending)
- 500 MB/sec 64-bit PCI-X
- Onboard Clock Synthesizer Accurately Tunes all Frequencies from ~0 to 125 MHz and Most Other Frequencies up to 160 MHz
- Onboard Gigabit Ethernet Port
- Xilinx Virtex-4 FX20/60 FPGA
- Full Length PCI 64-bit Board



PDA14 / PDA14-200

- 2 Channels, 100 MHz Sample Rate Each or 1 Channel, 200 MHz Sample Rate
- 14-bit or 8-bit A/D Resolution
- Link 6 boards for 12 Channels or Link 6 boards for 6 Channels
- Bandwidth from DC-50 MHz
- 512 MB Onboard Memory
- 500 MB/sec SAB
- 266 MB/sec 64-bit PCI
- Full Length PCI 32/64-bit Board



PDA1000

- 1 Channel, 1 GHz Sample Rate
- 8-bit A/D Resolution
- Link 6 Boards for 6 Channels
- Bandwidth from DC-500 MHz
- 256 MB Onboard Memory
- 500 MB/sec SAB
- 266 MB/sec 64-bit PCI
- Full Length PCI 32/64-bit Board

DIGITAL SIGNAL PROCESSING



PMP1000

- Up to 72 GIPS Peak Processing Power
- Continuous Input Data Processing up to 640 MB/s (Depending on Application)
- Parallel Processing with up to 9 TI C6414 DSPs
- 64MB of memory mapped into each of the 8 main processing DSPs
- (>512 MB of total DSP memory)
- Unique Program Execution Processor for Dynamic Thread Allocation
- Advanced Parallel DSP OS Simplifies User Programming
- Customizable External Interface for Accommodating any Type of User Data Channels
- Designed to create true high-speed, real-time systems in otherwise non real-time environments
- 2.5 GB/s of Total External I/O via 3 Interfaces
- 2,000 MB/s Internal I/O via Switching Network
- 500 MB/sec 64-bit PCI-X
- Full Length PCI 64-bit Board



XPORT

PMP1000 Plug-in Module with Customizable FPGA Gives Customer Applications All Around Flexibility for General Purpose Communications with:

- High Speed Direct Data I/O for PMP1000
- RJ45 Connectors for Gigabit Ethernet and RS232
- Definable Multi-pin Digital I/O Header with Direct Pin Connections to Onboard FPGA
- Open Source Virtex-4 FX12/20/60 FPGA with Power PC
- Logic Files Provided for Interfacing to PMP1000 Board



Signatec is a member of the Xilinx Alliance Program to deliver powerful embedded solutions.

We encourage you to contact us and discuss your application in more detail with our engineering team. We welcome your comments on our existing products or possible future products. On behalf of the entire Signatec team, we look forward to the opportunity to serve you. Thank you.

SIGNAL GENERATION / WAVEFORM PLAYBACK



PDAC4000

- 4 16-bit DAC Outputs at 1000 MSPS
- 512 Megabytes DDR RAM
- Modular Plug-in for PMP1000 Base Board
- Easy Interface to DSP Functionality
- Wide Selection of Output Filters
- Based on Analog Devices AD9779
- Interpolation at 2, 4, or 8x Data Rate
- Digital Quadrature Modulator
- >User Specified Analog Output
- 1 GB/sec SAB and 532 MB/sec PCI

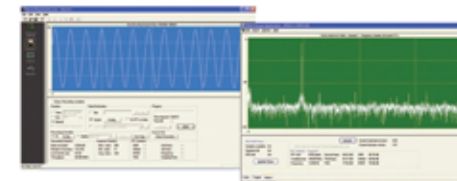
WAVEFORM RECORDING

DR250
DR350
DR500
DR700
DR1000



- 250 MB/s, 350 MB/s, 500 MB/s, 700 MB/s & 1 GB/s Recording Rate Options
- Up to 32TB of Integrated Storage
- Rates and Capacity are Scalable
- Multiple Digitizing Channels
- 8-bit, 14-bit & 16-bit Resolution Options

SOFTWARE



Use our powerful Maestro System and Scope Software to operate Signatec products at the board or at the system level right out of the box. Signatec software can be used to set up all hardware settings, record data from arbitrary data acquisition boards, recreate analog signals, view large amounts of signal data, run DSP applications, and much more. LabVIEW drivers available for certain products.



High-Speed, Real-Time Signal Technologies for Advanced RADAR, SIGINT & Imaging Systems





Your Turnkey System Provider

Delivering advanced system solutions since 1988, Signatec is a leading designer and manufacturer of high-speed, PC-based data acquisition, parallel digital signal processing, continuous signal data recording and arbitrary waveform generation systems. Signatec differentiates itself by being one of the only single-source suppliers that works with its customers to build affordable, real-time signal technology systems for advanced radar, SIGINT, ultrasound, imaging and other high-speed communications systems.

High-Speed Data Acquisition (DAQ) and Continuous Signal Waveform Recording

What separates Signatec's products from any other similar product in the industry is the ability to acquire and transfer data simultaneously with no breaks in the analog record for data rates up to 1,000 million bytes per second, when transferring to the PC, and up to 640 MB/s when acquiring to the Signatec Auxiliary Bus (SAB) to other system devices, such as Signatec's DSP products, for real time processing. Combined with the Signatec Auxiliary Bus and PC computer, Signatec's products offer a unique, total system solution.

Signatec's data acquisition products are also designed with a master-slave operation feature that allows for connecting multiple DAQ boards together to create a simultaneous multi-channel acquisition system. In master-slave operation, the master board drives the clock and trigger signals for the slave boards so that data on the slave boards align sample-for-sample with the data on the master board.

Finally, as a member of the Xilinx® Alliance Program, Signatec's advanced digitizers now offer powerful, on-board embedded FPGA processing capabilities for turnkey, real-time application solutions.

Advanced Parallel Digital Signal Processing (DSP)

Signatec's parallel DSP product, the PMP1000, offers the ability to combine any number of customer-specific channels of data for up to 640 MB/s of continuous data input for 72 GIPs of real-time processing performance using nine of TI's C6414 DSPs. This parallel DSP product, which also delivers over 2,000 MB/s of concurrent onboard I/O, is the perfect solution for many demanding processing applications, as well as problems in combining many channels of information into a single coherent source.

Signatec's XPORT product is a plug-in module for the PMP1000 with a customizable FPGA. XPORT is ideal for applications that must inject time or position information into digitized signal data records that the PMP1000 is processing.

Arbitrary Signal Waveform Generator (DAC)

Signatec's arbitrary signal waveform generator and playback PDAC4000 board provides four 16-bit digital to analog conversion DAC channels to accurately produce output signal frequencies up to 400 MHz, with each 16-bit converter capable of outputting up to 1000 MegaSamples per second.

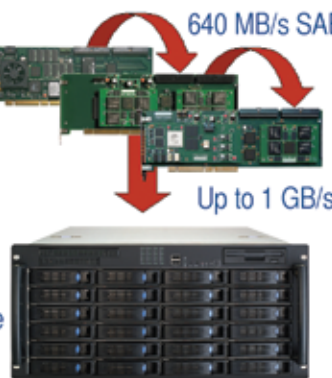


Create a synchronized multi-channel acquisition recording system with linked digitizers; acquiring and transferring data simultaneously to disc storage in real-time with no loss in data



HIGH-SPEED DATA RECORDER WITH MULTIPLE SYNCHRONIZED CHANNELS

Add 72 GIPS DSP power and 4 GSPS DAC playback products for a complete system with even higher sustained transfer rates with optional channel inputs including Gigabit Ethernet, RS-232, or multiple pins of definable digital I/O



POWERFUL REAL-TIME ACQUISITION, PROCESSING, RECORDING & PLAYBACK

DR250

DR350

DR500

DR700

DR1000



DR-Series Recording Solutions with Real-Time Parallel Processing and Waveform Generation Options

With ever-increasing performance features, PC workstations and server-class computer systems can serve as affordable, real-time recording systems. Signatec leverages the latest COTS computer components and engineers best-of-class waveform digitizers to stream data continuously to disk storage systems without any break in the analog record, and for a fraction of the cost of proprietary recording systems.

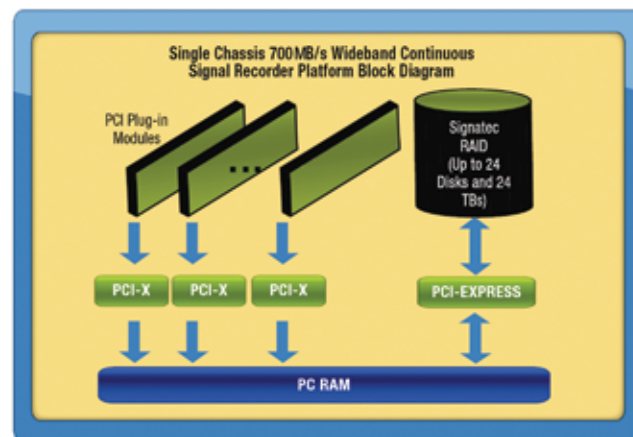
In addition to recording at high rates, signal data can also be processed at very high rates, effectively converting the PC into a signal acquisition, real-time processor and recorder solution. Furthermore, users wishing to play back their collected data for analysis can employ the same Signatec recording platform populated with Signatec's acquisition, parallel processing and playback modules to create a

continuous signal playback solution based upon Signatec's signal recording model. By integrating Signatec's DAC modules with buffering techniques similar to those engineered on the DAQ modules, digital data can be streamed direct from disk storage at the same high rates for continuous playback capabilities. In short, Signatec's systems are the fastest, most flexible, scalable and affordable signal technology solutions on the market.

DR700 Recording Systems

Signatec's DR700 signal recording system was created for developers of advanced SIGINT, radar and medical imaging applications. These systems continuously record up to 700 MegaSamples per second of data through the PC to disk storage without any break in the analog record.

Multiple data acquisition boards can be integrated within the systems to create a synchronized, multi-channel acquisition systems with accommodations for large-bandwidth and high-resolution applications, along with an extremely large memory capacity.



DR250 System Configurations

Max. Sampling Rate	A/D Resolution	Max. # of Channels	Real-Time Processing	Real-Time Playback	RAID Size (TB)
250 MSPS	8-bit	1	Yes	Yes	4.0 to 32.0
100 MSPS	14-bit	1	Yes	Yes	4.0 to 32.0
100 MSPS	8-bit	2	Yes	Yes	4.0 to 32.0
80 MSPS	16-bit	1	Yes	Yes	4.0 to 32.0
62.5 MSPS	14-bit	2	Yes	Yes	4.0 to 32.0
62.5 MSPS	8-bit	4	Yes	Yes	4.0 to 32.0

DR350 System Configurations

Max. Sampling Rate	A/D Resolution	Max. # of Channels	Real-Time Processing	Real-Time Playback	RAID Size (TB)
350 MSPS	8-bit	1	Yes	Yes	4.0 to 32.0
160 MSPS	16-bit	1	Yes	Yes	4.0 to 32.0
100 MSPS	8-bit	3	Yes	Yes	4.0 to 32.0
80 MSPS	16-bit	2	Yes	Yes	4.0 to 32.0
62.5 MSPS	8-bit	5	No	No	4.0 to 32.0

DR500 System Configurations

Max. Sampling Rate	A/D Resolution	Max. # of Channels	Real-Time Processing	Real-Time Playback	RAID Size (TB)
500 MSPS	8-bit	1	Yes	Yes	6.0 to 32.0
250 MSPS	8-bit	2	Yes	Yes	6.0 to 32.0
200 MSPS	14-bit	1	Yes	Yes	6.0 to 32.0
100 MSPS	14-bit	2	Yes	Yes	6.0 to 32.0
100 MSPS	8-bit	4	Yes	Yes	6.0 to 32.0
80 MSPS	16-bit	3	Yes	No	6.0 to 32.0
62.5 MSPS	14-bit	4	Yes	Yes	6.0 to 32.0

DR700 System Configurations

Max. Sampling Rate	A/D Resolution	Max. # of Channels	Real-Time Processing	Real-Time Playback	RAID Size (TB)
350 MSPS	8-bit	2	Yes	Yes	12.0 to 32.0
200 MSPS	8-bit	3	No	No	12.0 to 32.0
160 MSPS	16-bit	2	Yes	Yes	12.0 to 32.0
100 MSPS	14-bit	3	No	No	12.0 to 32.0
80 MSPS	16-bit	4	Yes	Yes	12.0 to 32.0

DR1000 System Configurations

Max. Sampling Rate	A/D Resolution	Max. # of Channels	Real-Time Processing	Real-Time Playback	RAID Size (TB)
160 MSPS	16-bit	3	Yes	No	12.0 to 32.0
80 MSPS	16-bit	6	Yes	No	12.0 to 32.0

SIGINT Example Application

SIGINT systems require vast amounts of real-time processing capability, and aerospace and defense communities demand high quality, efficiency and affordability from COTS systems.

Signatec's systems form the backbone of many advanced SIGINT systems architectures, providing high-performance subcomponents for the most challenging applications behind the antenna.

