



# DIAMOND SYSTEMS CORPORATION

For Immediate Release  
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## Diamond Mints “World’s First” FeaturePak DAQ Module

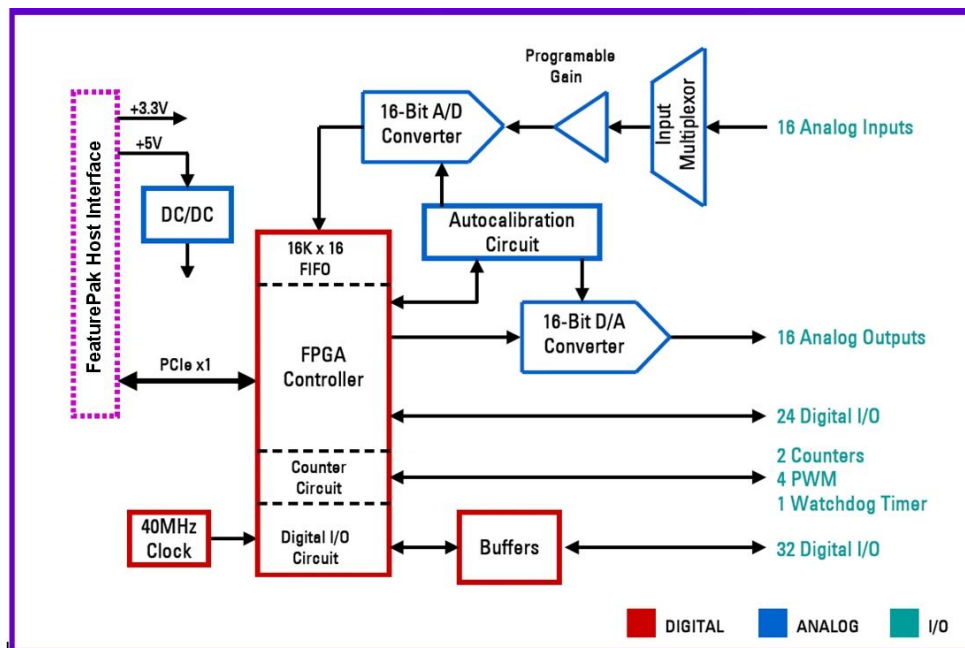
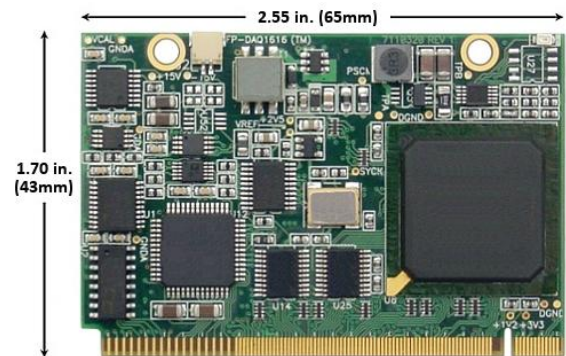
*Tiny, high-accuracy data acquisition module provides snap-in A/D, D/A, and DIO functions for COM baseboards, SBCs, and full-custom electronic designs*

**March 2, 2010; Nuremberg, GERMANY** -- Diamond Systems Corp., a leading supplier of ruggedized single-board computers (SBCs) and I/O expansion modules targeting real-world applications, today unveiled the world’s first data acquisition I/O module compatible with the newly-introduced FeaturePak embedded I/O expansion module standard. Despite its diminutive size (see actual size photo, below), the FP-DAQ1616 integrates Diamond’s newest and fastest analog I/O technology, and interfaces to host systems via the FeaturePak host interface’s high-speed PCI Express bus interface.

The FP-DAQ1616 provides sixteen 16-bit A/D inputs, sampling at 2MHz and supported with a generous 16K-sample FIFO for reliable data collection in any environment. Advanced A/D features include programmable input ranges, polarity, mode, and FIFO threshold. The module also offers sixteen 16-bit D/A output channels, with programmable range and polarity.

Another important of the FP-DAQ1616 is its industry-leading autocalibration technology, with independent calibration factors for each input and output range, which ensures maximum A/D and D/A accuracy across all operating modes and throughout the entire -40°C to +85°C extended operating temperature range.

Other features provided by the tiny FeaturePak module include seven 8-bit digital I/O ports (with a mix of bit-wide and byte-wide direction control), two 32-bit up/down counter/timers with programmable input source and gate, four 24-bit pulse-width modulation circuits with 0-100% duty cycle, and a watchdog timer.



FP-DAQ1616 Architecture

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Diamond supplies a Universal Driver software toolkit at no extra charge with the FP-DAQ1616 FeaturePak module, to ease the task of supporting its data acquisition functions in applications under Linux, Windows XP, Windows Embedded Standard, and Windows Embedded CE. The toolkit also includes demo programs and example code for each supported OS, to further accelerate application development.

## About the FeaturePak I/O Module Standard

The FeaturePak specification defines tiny, application-oriented personality modules – three-fifths the size of a credit card – that snap into low-cost, low-profile sockets on single board computers (SBCs), computer-on-module (COM) baseboards, and full-custom electronic circuit boards. FeaturePak modules interface to the host system via a single low-cost, high-density, 230-pin connector, which carries PCI Express, USB, I<sup>2</sup>C, and several other host-interface signals, plus up to 100 points of application I/O per module. The FeaturePak host interface is CPU agnostic and is compatible with both Intel- and RISC-architecture systems. Additionally, the modules can easily be integrated into embedded designs along with Qseven, COM Express, SUMIT, PCI/104-Express, EBX, and EPIC. For more information, visit [www.featurepak.org](http://www.featurepak.org).

## FP-DAQ1616 Pricing and Availability

Small quantities of the FP-DAQ1616 data acquisition FeaturePak module are available in 60 days, in both analog I/O and output-only models, priced at \$495 and \$325, respectively.

## About Diamond Systems

Founded in 1989, Diamond Systems Corporation is a leading supplier of compact, rugged, wide-temperature embedded computing solutions for a wide range of applications in fixed and mobile environments. The company is the originator of the FeaturePak I/O modules standard, was an early adopter of PC/104 technology and today is one of the leading worldwide suppliers of embedded I/O modules and highly integrated single board computers combining CPU and data acquisition on a single board. Diamond's extensive product line includes A/D, D/A, digital I/O, serial communications, wired and wireless networking, and power supply modules as well as single-board computers and enclosures. Diamond also offers a full range of system solutions, including the capability to customize boards or systems to meet the needs of a particular application. The privately held company is based in Mountain View, California, in the heart of Silicon Valley. For more information, visit [www.diamondsystems.com](http://www.diamondsystems.com) or call 1-800-36-PC104.

### MEDIA RESOURCES

- [FP-DAQ1616 web page](#)
- [FP-DAQ1616 data sheet](#) (pdf)
- [FP-DAQ1616 photo](#) (jpg)
- [FP-DAQ1616 with dimensions](#) (jpg)
- [FP-DAQ1616 block diagram](#) (jpg)